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AI Professional Role Profiles and Educational Profiles

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Foreword

This CEN Workshop Agreement (CWA 18398:2026) has been developed in accordance with the CEN-CENELEC Guide 29 “CEN/CENELEC Workshop Agreements – A rapid way to standardization” and with the relevant provisions of CEN/CENELEC Internal Regulations - Part 2. It was approved by the Workshop CEN AI “Professional Role Profiles and Educational Profiles”, the secretariat of which is held by UNE consisting of representatives of interested parties on 2026-05-22, the constitution of which was supported by CEN following the public call for participation made on 2025-04-16. However, this CEN Workshop Agreement does not necessarily include all relevant stakeholders.

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Introduction

0.1 General

Artificial Intelligence (AI) constitutes a highly dynamic field, characterised by continuous technological advances, shifting application domains, and changing societal and regulatory expectations. The pace of innovation in AI methods, architectures and tools remains exceptionally high, driven by progress in data availability, computational capacity and algorithmic development. As a result, the professional landscape surrounding AI is in constant evolution: new roles, specialisations and skill requirements emerge, while others evolve, merge or decline in relative importance.

This CWA is intended to function as a living reference point: a common baseline that can support dialogue, alignment and comparability, while remaining open to revision as the AI field continues to mature and transform. Readers and users of this document are encouraged to interpret and apply it with this dynamic context in mind, recognising both its value as a shared framework and its limitations in a field defined by rapid and ongoing change.

This CWA is partially based on the results of the Artificial Intelligence Skills Alliance (ARISA) project, funded under the Erasmus+ programme 'Partnerships for Innovation; Alliances for Sectoral Cooperation on Skills' of the European Commission.

0.2 Aim

This CEN/CENELEC Workshop Agreement (CWA 18398:2026) seeks to provide a common language and create a common ground between different stakeholders to discuss the needed roles, competences, skills and knowledge necessary to develop a professional workforce in the field of AI.

It does not seek to provide a definitive or exhaustive taxonomy of AI professions. Instead, it offers a structured snapshot of the current state of play, capturing roles, competences and learning needs that are considered relevant and representative at the time of drafting. It reflects a synthesis of current practice, expert consensus and observable trends, rather than a fixed or future-proof classification. The intrinsic impermanence of the AI field underscores the importance of flexibility, continuous learning and adaptability as core professional attributes. AI professionals are expected to engage in ongoing upskilling and reskilling, while organisations and education providers must regularly reassess and update role definitions, curricula and training pathways.

The work performed by the workshop participants to arrive at this workshop agreement is one of CEN's standardisation processes. The CWA focuses on the AI professional and further and ongoing shaping of the AI field as a professional field. It does so by the identification of key roles, tasks, competences and skills that are presented in a structured AI professional role profiles framework and an AI educational profiles framework. The workshop itself and this resulting document are part of this codification and systematisation process of the AI profession, in coherence with the ongoing professionalisation of the whole ICT field and IT professionalism in general. The adherence to a formal CEN process amplifies this.

This CWA supports the professional development of a skilled European AI workforce aligned with market needs, addressing existing skills gaps and skills shortages. It also supports the further development of professionalism in the AI field, not only by highlighting the technical competences and skills, but also by explicitly addressing cross-cutting skills and including concepts such as critical evaluation, validation, ethics and governance at different levels throughout the document.

0.3 Relevance

It goes without saying that AI is currently considered a highly relevant topic. There are several reasons for this, but some of the most important ones are its intrusive nature, the possibilities it offers and, at the same time, its disadvantages and risks.

AI extends beyond basic automation and is not confined to routine tasks. It is increasingly embedded in everyday life, ranging from personalised recommendations to fully autonomous systems. The field of AI is developing at a rapid pace, with its applications expanding across a wide range of industries and organisations. The adoption of AI provides a substantial competitive advantage, not only for individual organisations or industries, but also at regional, national, and international scales.

This is also reflected in the definition of an AI system and its key characteristics, set out in the European Union's Artificial Intelligence Act (AI Act) [\[9\]](#): "A machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments" (Art. 3(1)). In the first considerations of the AI Act, the key characteristics of AI systems are laid down (Recital 12): their goal-oriented nature, their capacity to generate outputs that shape real-world outcomes, and their operation across different levels of autonomy. It also deliberately encompasses a broad range of techniques and approaches, reflecting the diversity and rapid evolution of the field.

While AI offers significant benefits, it also introduces numerous risks and challenges. Issues like accountability, bias, privacy, and security pose serious concerns. Besides, there are also more fundamental threats such as the use of AI in creating disinformation and social manipulation, a decline in critical thinking based on a belief in the correctness of results, human disempowerment, the amplification of socio-economic inequalities, and the possibility of uncontrollable self-conscious AI, to name just a few.

Given its transformative potential and huge competitive advantages, the stakes are high, and it has become imperative to address these concerns and mitigate the risks in order to maintain confidence in AI's capabilities and exploit them in a harmless manner. Currently, one of the most fundamental challenges is striking the right balance between fostering innovation and ensuring safety and ethical use.

This essential issue is clearly reflected in the first statement of the AI Act (Recital 1), describing the purpose of the regulation: "[...] to improve the functioning of the internal market [...] to promote the uptake of human centric and trustworthy artificial intelligence (AI) while ensuring a high level of protection of health, safety, fundamental rights [...] to protect against the harmful effects of AI systems in the Union, and to support innovation".

In this uncertain environment, companies are struggling to find the right personnel and train their existing staff with the right skills. Given the wide range of risks and concerns and their severity, it is also clear that it is not just a matter of keeping pace with technological advances. There are regulations, ethical principles and safety considerations that must be taken into account. Not in the least to gain and maintain the trust of the general public and of controlling authorities, like regulatory and auditing bodies. The people sought are largely professionals working in the information and communication technology (ICT) sector, but they need to be trained not only as ICT professionals but also as AI professionals with the right competences, skills and knowledge.

Although universities are producing a pool of highly skilled AI professionals, Europe still faces the challenge of retaining talent and having enough diversified AI-related profiles. This is part of a broader problem: the gap between the available number of ICT professionals versus the number of ICT professionals that is actually needed. The gap is perceived from 8 currently to 20 million professionals required in 2030. The EU has set itself two main goals for the digital transformation of businesses by 2030: more than 90% of SMEs should reach at least a basic level of digital intensity, and 75% of EU companies should use cloud computing services, perform big data analysis or use artificial intelligence.

The demand for AI-related positions is increasing. A flexible, modular approach to education and training that responds to rapid technological change is essential. This must begin with early-age AI literacy so that young learners develop a foundational understanding of how AI works and how it affects their lives. Strengthening teacher professional development is also crucial to ensure educators are equipped to teach emerging AI concepts confidently and responsibly. Policymakers and decision-makers need a basic understanding of the moral, ethical and legal dimensions of AI. Moreover, a societal approach to AI skills development is needed to promote diversity and inclusion within the AI sector. As AI technologies

expand, organisations need to create a welcoming environment and prioritise retraining programmes for workers in lower-paid, shrinking occupations.

Despite current initiatives, there remains a gap between educational supply and market demand. Cooperation between academia and other education institutes and the labour market, rapid retraining programmes and better access to existing initiatives are necessary steps. In addition, sectors that rely heavily on AI technology should actively support AI skills development.

Guidelines on how to translate the needed competences, skills and knowledge into learning outcomes that fit different AI roles at various levels are essential tools for trainers and educators. Such guidelines ensure uniformity and comparability between courses and training providers and are also beneficial for learners and employers. Therefore, this CWA includes educational profiles with learning outcomes at different levels, directly linked to a set of role profiles for AI professionals that outline the necessary competences as demanded by the market. The set of role profiles provides a clear orientation and common reference point to public and private stakeholders on AI professional needs from organisation and workplace perspective, with their related missions, tasks, deliverables, competences and performance levels. These role profiles will contribute to a shared reference language for developing, planning, and managing AI professionals' needs, thereby supporting the maturity of the AI profession as an important specialising field within the broader digital and IT professional domain overall.

0.4 Target audience

This document is addressed to a broad range of stakeholders involved in the development, deployment, use and governance of AI, as well as in the education and professional development of the AI workforce. It is intended to serve as a common reference point across organisational, professional, educational and policy contexts.

For *organisations and human resources departments*, the CWA provides structured insight into the capabilities associated with different AI professional roles. It supports workforce planning, recruitment and talent management by enabling a clearer understanding of required competences and by facilitating the comparability of individual qualifications across roles, organisations and sectors.

For *professionals* working in, or aspiring to work in, the field of AI, the document offers a framework for self-evaluation and professional reflection. It supports the identification of training and upskilling opportunities, continuous professional development and career progression, and facilitates mobility across organisational and national boundaries by providing a shared reference language for roles and competences.

For *education, training and certification providers*, as well as *learning and development departments*, this CWA supports the design, development and quality assurance of learning programmes, training courses, assessments and certifications. By linking professional role profiles to educational profiles and learning outcomes, it enables the design of coherent learning and development trajectories, including modular pathways and individualised learning routes aligned with labour market needs.

For *students and learners*, the document provides guidance for understanding current AI-related roles and competence requirements. It supports self-assessment, the definition of learning goals, and informed decision-making when selecting appropriate learning programmes or training courses, while also facilitating mobility across educational institutions.

Finally, for *social partners and policy makers* at regional, national and European level, the CWA offers insight into the AI and ICT labour market and emerging professional needs. It supports the identification of skills gaps and shortages and informs the targeted design of skills, education and labour market policies and initiatives. In doing so, it contributes to building confidence in the availability of a competent, ethical and trustworthy AI workforce in Europe.

0.5 Use of this CWA

[Clause 5](#) describes the AI professional in general terms and sets out a number of key characteristics. It examines the differences between lay users and professional users and relates this to professionalism. The relationship between AI professionalism and AI literacy is also explored.

Further details are provided in [Annex N](#), which clarifies the distinction between lay users, professional users and AI professionals, and [Annex O](#), which clarifies the distinction between AI literacy and AI professionalism.

[Clause 6](#) introduces the AI role profiles framework. It describes the basis of this framework and outlines how it relates to labour market developments, organisational size, trustworthy AI and the AI Act.

Clause 6 is closely linked to: [Annex B](#) that contains the full descriptions of the AI professional role profiles defined in this CWA; [Annex D](#) which explains the template used to structure and present the AI professional role profiles and [Annex H](#), which provides an overview of the role profile titles and their related titles.

A number of annexes address the development of the framework: [Annex F](#) provides a description of how the AI Role Profiles were created and [Annex G](#) gives a list of criteria for adding roles to the framework.

A number of summary tables with mappings is provided: [Annex I](#) maps the AI professional role profiles to the competences of the European e-Competence Framework (e-CF)[\[1\]](#), including indicative proficiency levels; [Annex J](#) contains a table that links each e-CF competence to its AI descriptors at the relevant proficiency levels; [Annex L](#) links the e-CF competences to AI skill areas, with [Annex K](#) containing the descriptions for each AI skill area; [Annex M](#) links role profiles to personal skills; [Q](#) links role profiles to interpersonal skills.

[Clause 7](#) addresses the educational profiles. It describes the basic principles and the benefits of using these profiles.

[Clause 7](#) is closely linked to [Annex C](#), which contains the full descriptions of the educational profiles corresponding to the AI professional role profiles and [Annex E](#), describing the template used to describe the AI Educational Profiles with.

Finally, [Annex P](#) provides an example of application in a specific sector, i.e. the health sector; [Annex Q](#), describes the relationship between this CWA and existing standards and frameworks; [Annex R](#) contains a detailed mapping between the AI skill areas distinguished in this CWA and ESCO skills [\[30\]\[31\]](#), and [Annex S](#) contains a mapping between the AI Role Profiles and the roles distinguished in context of the AI Act [\[9\]](#). [Annex A](#) provides an overview of all the annexes, including short descriptions.

The Bibliography is included at the end of this CWA.

1 Scope

This document provides a set of professional role profiles as typically applied in an organisation in the area of artificial intelligence (AI) and a set of educational profiles that translate these organisation needs into educational terms. It builds on existing CEN reports, specifically the European e-Competence Framework ("e-CF"; EN 16234-1), the ICT Professional Role Profiles (CWA 16458), and the Guidelines for Developing ICT Professional Curricula (CEN/TS 17699).

It provides a high-level framework for AI role profiles, outlining elements such as tasks, deliverables, competences (aligned with the e-CF), AI descriptors, and AI skill areas. It is intended as an illustrative and exploratory resource rather than a prescriptive standard. The profiles and components presented here are designed to inspire and support organisations in shaping their own approaches, allowing them to select, adapt, and combine elements in ways that best fit their specific context. Recognising that real-world applications vary widely, this document encourages flexible use and interpretation rather than strict adherence.

Within this framework, tasks describe the key activities associated with a role, while deliverables capture the expected outputs or results. Competences, based on the e-CF, provide a structured view of the knowledge and capabilities required. AI descriptors and AI skill areas further contextualise these roles by highlighting AI-specific responsibilities and domains of expertise. Together, these elements offer a modular structure that can be tailored to different organisational needs.

In addition, the document extends these role profiles into an educational perspective by translating roles and competences into indicative learning outcomes and approaches to assessment. This linkage is intended to support education and training providers in designing programmes that align with emerging AI roles, while remaining adaptable to different pedagogical models and contexts.

This CWA aligns with activities and standards developed in the context of [ISO/IEC JTC 1 SC 42](#) and [CEN-CENELEC JTC 21](#) for *Artificial intelligence*. JTC 21 produces and adopts standardization deliverables to address European market and societal needs and to underpin primarily EU legislation, policies, principles, and values. JTC 21 plays a pivotal role in implementing the EU AI Act by developing harmonized standards.

This CWA has been developed at the intersection of AI and ICT professionalism, which is the focus of [CEN/TC 428](#) *ICT Professionalism and Digital Competences* the committee that supports the development of digital skills across sectors. It focuses on competences, education, ethics, and knowledge frameworks, helping to close the digital skills gap in Europe.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp/>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1 information and communication technology

ICT

<technical> technology for gathering, storing, retrieving, processing, analysing and transmitting information

[SOURCE: ISO 9241-20:2008 [\[11\]](#), 3.4]

3.2

information and communication technology

ICT

<economic and political> cross sector of enterprises, including manufacturers, product suppliers or service providers relating to the ICT field

[SOURCE: EN 16234-1:2019 [\[1\]](#), 3.2]

3.3

artificial intelligence

AI

<discipline> research and development of mechanisms and applications of AI systems (3.4)

Note 1 to entry: Research and development can take place across any number of fields such as computer science, data science, humanities, mathematics and natural sciences.

[SOURCE: ISO/IEC 22989:2022(en) [\[10\]](#), 3.1.3]

3.4

artificial intelligence system

AI system

machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments

[SOURCE: Regulation (EU) 2024/1689, “Artificial Intelligence Act (AI Act)” [\[9\]](#), Art. 3(1)]

Note 1 to entry: A complementary reference is ISO/IEC 22989:2022, that defines an AI system as an: engineered system that generates outputs such as content, forecasts, recommendations or decisions for a given set of human-defined objectives; noting that (1) The engineered system can use various techniques and approaches related to artificial intelligence to develop a model to represent data, knowledge, processes, etc. which can be used to conduct tasks and (2) AI systems are designed to operate with varying levels of automation. [SOURCE: ISO/IEC 22989:2022(en) [\[10\]](#), 3.1.4]

Note 2 to entry: Currently this is part of the ongoing harmonization work under CEN-CENELEC JTC 21

3.5

ICT professional

person having the competence to plan, build, run, enable and/or manage information and communication technology and having a professional ICT qualification and/or ICT occupational experience; they include both employees of ICT companies and ICT employees of organisations in all other sectors

[SOURCE: EN 16234-1:2019 [\[1\]](#), 3.3]

3.6

AI professional

person having the competence to plan, build, run, enable, manage and/or govern AI systems in a professional way and having a professional qualification and/or significant occupational experience in the field of AI

3.7

ICT user

person having the competence to use devices, software and systems to support his/her private, educational, civic or work activities and normally having no professional ICT qualification or ICT occupational experience

Note 1 to entry: They are not in the scope of this document.

[SOURCE: EN 16234-1:2019 [\[1\]](#), 3.4 — modified, note 1 to entry adjusted]

3.8

role

function, specific duties, responsibilities, or part performed especially in a particular operation or process

3.9

role profile

an outline or general document which demonstrates clearly the relationship between specific activities and tasks in a role and the individual skills, competences and knowledge required to undertake them

[SOURCE: CWA 16458-2:2018 [\[4\]](#)]

3.10

educational profile

structure that provides a link between competences needed in a professional environment and learning outcomes of education and training

[SOURCE: CEN/TS 17699:2022 [\[5\]](#), 3.18]

3.11

task

assigned piece of work that arise from one's position to achieve a result within a broadly defined context; it may be associated with deadlines, resources, goals, specifications and/or the expected results

3.12

attitude

representing the human element of an e-competence and reflecting the way a person integrates knowledge and skills and applies them in a contextually appropriate manner

[SOURCE: EN 16234-1:2019 [\[1\]](#), 3.8]

3.13

competence

demonstrated ability to apply knowledge, skills and attitudes for achieving observable results

[SOURCE: EN 16234-1:2019 [\[1\]](#), 3.5]

3.14

proficiency level

level indicating the degree of mastery that allows a person to meet requirements in the performance of a competence

Note 1 to entry: Proficiency levels in the e-CF are characterised by a combination of levels of influence within a community, context complexity, autonomy, and typical behaviour expressed by examples of action verbs. EN 16234-1 (e-CF) incorporates proficiency levels e-1 through to e-5.

[SOURCE: EN 16234-1:2019 [\[1\]](#), 3.11]

3.15

learning level

level indicating a grading and may be represented by a formal qualification; they generally derive from an education system or indicate a grading in a taxonomy of intellectual or learning behaviours (like memorising, applying, interpreting) and having a relationship with proficiency levels but are to be distinguished from these

Note 1 to entry: Learning levels in the European Qualifications Framework (EQF) are defined by a set of descriptors indicating the learning outcomes relevant to qualifications at that level in any qualifications system. Learning outcomes are defined in terms of knowledge, skills and responsibility and autonomy.

Note 2 to entry: There are eight EQF learning levels, of which EQF levels 3 to 8 correspond to e-CF proficiency levels e-1 to e-5 as follows: e-1=EQF3; e-2=EQF4+5; e-3=EQF6; e-4=EQF7; e-5=EQF8.

[SOURCE: EN16234-1:2019 [\[1\]](#), 3.12]

3.16

<general>knowledge

theoretical or practical understanding and awareness of phenomena such as facts, terminology, concepts, models or theories

[SOURCE: EN 17748-1:2022 [\[6\]](#), 3.6]

3.17

specialised knowledge

detailed knowledge required at a high level of proficiency for an area of ICT expertise as represented by CWA 16458-1 “ICT Professional Role Profiles”

[SOURCE: EN 17748-1:2022 [\[6\]](#), 3.9]

3.18

skill

ability to carry out managerial or technical activities and tasks, and this may be cognitive or practical (know how to do it)

[SOURCE: EN 16234-1:2019 [\[1\]](#), 3.7]

3.19

Skill area

broad category or domain that groups together related skills

3.20

curriculum

inventory of activities related to the design, organisation and planning of an education or training action, including definition of learning objectives, content of programmes, methods (including assessment of learners and evaluation of programmes) and material, as well as arrangements for training teachers and trainers

Note 1 to entry: The term ‘curriculum’ refers to the design, organisation and planning of learning activities; the term ‘programme’ refers to the implementation of these activities.

[SOURCE: Cedefop, 2024 [\[12\]](#), 74, p122]

3.21

learning programme

inventory of activities, content and methods implemented to achieve education or training objectives (acquiring knowledge, know-how, information, values, skills and competences), organised in a logical sequence over a specified period

Note 1 to entry: The term ‘programme’ refers to the implementation of learning activities whereas ‘curriculum’ refers to the design, organisation and planning of these activities.

[SOURCE: Cedefop, 2024 [\[12\]](#), 316, p536]

3.22

learning unit

elements of which a learning programme is composed of, e.g. a course, a module, an assignment

[SOURCE: CEN/TS 17699:2022 [\[5\]](#), 3.29]

3.23

learning objective

statement of the teacher’s or instructor’s purpose for creating and teaching a specific learning unit or a learning activity

[SOURCE: CEN/TS 17699:2022 [\[5\]](#), 3.32]

3.24

programme learning outcome

statement that describes what a person knows, understands, and is able to do on completion of a learning programme

[SOURCE: CEN/TS 17699:2022 [\[5\]](#), 3.34]

3.25

learning outcome

statement of what a person knows, understands, and is able to do on completion of a learning process

[SOURCE: CEN/TS 17699:2022 [\[5\]](#), 3.33]

3.26

unit learning outcome

learning outcome of a learning unit

3.27

deliverable

predefined observable result of a process or of one or several tasks in a working context

[SOURCE: CWA 16458-2 [\[4\]](#):2018]

3.28

assessment

act of judging or deciding the amount, value, quality, or importance of something

[SOURCE: CEN/TS 17699:2022 [\[5\]](#), 3.36]

4 Abbreviations and acronyms

The abbreviations and acronyms used in this document are listed in the following table.

Table 1 — Abbreviations and acronyms

AI	Artificial Intelligence
BI	Business Intelligence
Dev	Development
DL	Deep Learning
e-CF	e-Competence Framework
EQF	European Qualification Framework
FRIA	Fundamental Rights Impact Assessment
GPAI	General-Purpose AI
ICT	Information and Communication Technology
IT	Information Technology
LLM	Large Language Model
ML	Machine Learning
NLP	Natural Language Processing
Ops	Operations
PLO	Programme Learning Outcome
ULO	Unit Learning Outcome
UX	User eXperience
XAI	Explainable Artificial Intelligence

5 The AI professional

5.1 General

The role and educational profiles presented in this CWA are focused on professionals, specifically AI professionals. Obviously, AI belongs to the field of IT¹ and AI professionals are IT professionals², specialised in AI technology. While this seems fairly straight forward, some explanation may be needed as it may seem that the boundaries between an AI professional and an AI user become blurred. This is inherent to the evolution of technology in general, as today users have access to all types of applications and tools enabling them to do various tasks, some of which used to be performed only by professionals.

5.2 The AI user

5.2.1 General

AI-based applications are used for many purposes by many different people in many different ways and contexts. Users can be categorised as lay users and professional users.

¹ Major standards families, especially ISO/IEC and IEEE, treat AI as a distinct subdomain within IT (information processing), while still situating it inside the broader ICT ecosystem (by deployment).

² See also: IT Professionalism Europe (ITPE): <https://itprofessionalism.org/professionalism/>

5.2.2 Lay users

Lay users are non-professionals that can be novice or very experienced, but the common denominator is that they use AI applications in a non-professional context. Lay users are individuals who interact with AI systems without having deeply specialised technical knowledge of how those systems are designed, built, or governed. In general, they engage with AI through consumer applications, workplace tools, or public services, often without being fully aware that AI is involved. Examples include a patient using an AI-powered health chatbot, a job applicant screened by an automated recruitment platform and a citizen receiving services based on AI-assisted eligibility systems. Lay users are not expected to understand the internal workings of AI, but they should be 'AI literate': able to recognise when AI is involved, interpret its outputs with caution, and understand its limitations and potential biases.

5.2.3 Professional users

Professional users apply AI in a professional context to enhance or streamline their work. They are characterised by strong domain expertise and the ability to integrate AI outputs into their own decision-making, even though they are not responsible for developing, training, maintaining or managing the AI systems they use. In essence, a professional user is someone who uses AI as a specialised tool within their field, understands its opportunities and limits, and remains accountable for how its outputs shape their professional judgement.

Professional users interact with AI as part of sector-specific workflows or decision-making processes, whether in healthcare, law, education, finance, public administration, or other fields. They use AI tools to augment their professional practice and possess a solid understanding of the tasks for which they rely on AI applications. Examples include a marketing researcher using AI for trend analysis, a security specialist using an AI fraud-detection system, a doctor relying on diagnostic decision support, a financial analyst interpreting AI-generated risk scores, or a teacher using adaptive learning platforms to tailor instruction.

To work effectively, professional users need the skills to operate AI applications appropriately for their tasks and require a deeper level of AI literacy than lay users. This includes the ability to critically assess the reliability, relevance, explainability, and fairness of AI outputs within their domain. They must also understand the boundaries of their responsibility, especially in high-stakes or regulated environments, since accountability ultimately remains with the human professional.

In some cases, AI may perform parts of their work autonomously, and certain tasks or even roles, may be significantly reshaped or replaced by AI systems. AI professional users operate along a spectrum within their specific professional context ranging from AI assisted to fully automated tasks and even roles. See figure 1. Professional users may therefore employ AI in ways that are advanced, pervasive, and closely integrated into their workflows, but this does not make them AI professionals in the technical sense; rather, they are experts in their field who effectively and responsibly leverage AI as a powerful tool within it.

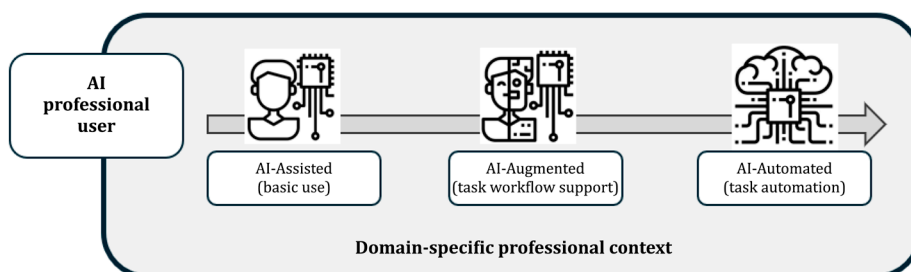


Figure 1 — The professional user of AI

5.3 The AI professional

5.3.1 General

In the rapidly evolving field of AI, where AI shapes critical decisions, transforms industries, and affects many aspects of public and private life, the need for professionalism and the role of the AI professional are both critical and distinct.

5.3.2 Professionalism and professionals

AI professionals are first and foremost professionals. Generally, professionalism is described as the standard of behaviour, conduct and attitude expected of someone in a professional role. It encompasses a set of (written and unwritten) values, standards, and practices that distinguish competent professionals across all sectors with qualities such as accountability, integrity, respectfulness, ethical judgment, and respect for others. Professionalism is reflected in the consistent application of specialised knowledge, ethical standards, and thoughtful decision-making in practice.

An important element of professionalism is the formal recognition and validation of knowledge, skills, and attitudes. This is often achieved through credentialing, such as certifications, licenses, degrees, or professional memberships. These credentials provide external assurance of a professional's competence and ethical standing, and help maintain standards across a field. They also support accountability and foster trust.

A professional is someone whose actions are grounded in a body of specialised knowledge and skills that is derived from formal education, rigorous training, and ongoing research. This foundation creates a deep awareness of the underlying principles, concepts, and theories that inform their field. Because they master the theoretical foundations of their discipline, professionals are equipped to identify and weigh implications, advantages, and disadvantages of different approaches, recognise the trade-offs involved in making decisions and exercise judgment in applying solutions to varied or evolving scenarios. Professionals are not only capable of applying this expertise in familiar situations, they are also able to transfer and adapt their knowledge across a broad range of contexts, often navigating unfamiliar or complex environments. Professionals not only know what to do, they understand why it matters and how to do it responsibly, effectively, and adaptively in a broad range of contexts. All these elements can also be found in the following definition of an ICT professional [\[13\]](#):

- possess a comprehensive and up-to-date understanding of a relevant body of knowledge,
- demonstrate on-going commitment to professional development, via an appropriate combination of qualifications, certifications, work experience, non-formal and/or informal education,
- adhere to an agreed code of ethics/conduct and/or applicable regulatory practices and,
- through competent practice deliver value for stakeholders.

This level of understanding allows professionals to act with autonomy and responsibility, maintaining high standards even in uncertain or dynamic conditions. Their professionalism is evident in how they communicate, collaborate, solve problems, and uphold both the ethical and technical dimensions of their role.

5.3.3 The role of the AI professional

The AI professional operates at the intersection of advanced computational methods, ethical responsibility, and real-world impact. Like other professionals, AI professionals draw upon a robust body of specialised knowledge, including machine learning, data science, statistics, and systems design. Their expertise is grounded in rigorous education, research, and training, and is continuously updated to keep pace with the evolving AI landscape.

An AI professional is **competent to plan, build, run, enable, manage, and/or govern AI systems**, depending on their specific role and area of expertise. This requires a deep understanding of AI principles, algorithms, and technologies, as well as the broader social, legal, and organisational contexts in which AI is deployed, combined with the ability to evaluate trade-offs, mitigate risks, and anticipate consequences across diverse contexts.

To uphold professional standards, the market increasingly emphasizes the formal recognition of competences and skills. This may include certifications, professional accreditations, or adherence to recognised codes of conduct that validate not only technical capabilities, but also ethical awareness and responsible practice. Credentials and credentialing frameworks provide structure and clarity, defining what it means to be a professional in AI and supporting trust among employers, regulators, and the public that an individual possesses the knowledge, skills, and ethical grounding necessary to contribute responsibly to the development and deployment of AI.

In a complex and high-stakes environment, professionalism in AI requires certified expertise, critical judgment, ethical conduct and a commitment to public benefit through the responsible development and governance of AI technologies.

Unfortunately, the terms *professional users* and *professionals* are often used interchangeably in practice. Especially when the use of AI tools becomes profound and causes significant changes in tasks and functions people perform. An entire role can become AI-based in which the user must therefore be very adept at being able to handle AI. Yet, this then still concerns the professional use of AI. Anyone who uses AI-based tools to support their work is an AI user. That probably means that they are able to interact with it in such a way that it produces solid results and this may even mean that they need to modify the tool. All these actions have to do with dealing with a tool, a piece of equipment that has to be used in a certain way to get desired outcomes.

So, a programmer who uses an AI tool to develop an application (not an AI-based application) is an AI professional user. The programmer who develops an AI application (with or without the help of an AI tool) is an AI professional. The same goes for a project manager, for example. If the project manager uses AI-based project management tools, then they are an AI professional user. But once they manage a project to develop or implement AI in an organisation (whether or not AI-based tools are used to do so), then they are an AI professional. A project manager who uses AI-based project management tools is an AI user, because they apply AI to support their own tasks. However, when a project manager is responsible for managing an AI development or implementation project, they are not simply a generic project manager working in an AI setting. An AI project manager, by definition, possesses sufficient knowledge of AI concepts, risks, data requirements, techniques, tools and implementation processes to plan, coordinate, and make informed decisions throughout the project lifecycle. This distinguishes them from a manager who oversees experts without understanding their domain.

In other words, just as an ICT project manager leading a software engineering project must understand the fundamentals of software, even if they do not code, an AI project manager must understand the fundamentals and technical aspects of AI. It is this AI-specific knowledge and responsibility that makes them AI professionals, besides the fact that they work on an AI-related project. Whereas lay users and professional users apply certain AI tools and consume AI outputs for their domain, AI professionals are the ones that plan, build, run, enable, manage, and/or govern AI systems.

In addition, there are several other aspects that distinguish the AI professional from the professional user, as discussed above.

[Annex N](#) compares lay users, professional users and AI professionals and how they relate to AI systems depending on their role and level of responsibility.

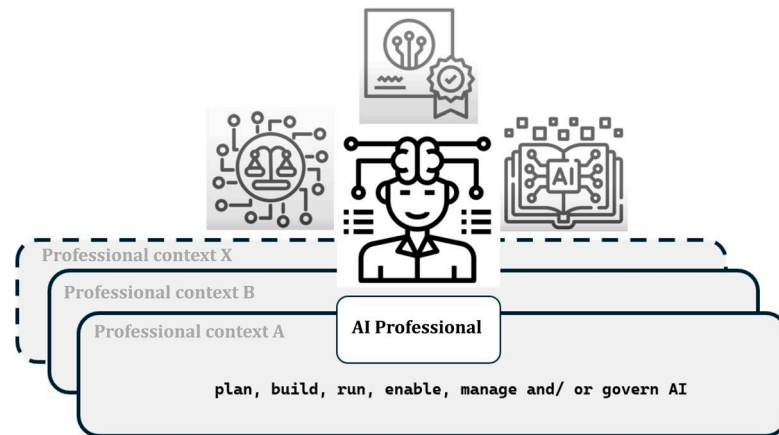


Figure 2 — The AI professional

5.4 AI literacy

As AI systems become increasingly embedded in society, the ability to understand and interact with them responsibly is no longer limited to technical experts. Just like computer literacy and digital literacy have become essential to everyday life, AI also has entered the realm of everyday life, becoming a goal of basic literacy that all individuals need to understand and engage in a context that is shaped to a more or lesser extent by AI. While the term AI literacy can be used in a very general sense, the AI Act [9] provides a specific reference point. It defines AI literacy as the “skills, knowledge and understanding that allow providers, deployers and affected persons, ..., to make an informed deployment of AI systems, as well as to gain awareness about the opportunities and risks of AI and possible harm it can cause” [AI Act, 3:56]. This definition covers not only lay users and affected persons but also professionals involved in the provision, deployment, operation, or oversight of AI systems.

There are several AI literacy frameworks available³, which differ in detail and audience, but in general they have the following elements in common: the ability to understand what AI is and how it works at a conceptual level, recognise common uses and limitations of AI in everyday life, identify potential ethical, legal, and social implications of AI use and make informed decisions when interacting with or being affected by AI systems.

It is important to distinguish AI literacy from AI professionalism. Unlike AI professionalism, which involves deep, specialised expertise in designing, building, managing, or governing AI systems, AI literacy is about broad, foundational understanding. It empowers individuals, citizens, workers, managers, educators, and policymakers, to ask critical questions about AI’s role and impact, interpret AI-driven outputs with appropriate scepticism and participate meaningfully in discussions about AI-related policy, ethics and rights.

The AI Act makes clear that AI literacy is not just a general societal aspiration. Article 4 is dedicated to AI literacy and encourages all providers and deployers of AI systems to ensure “a sufficient level of AI literacy of their staff and other persons dealing with the operation and use of AI systems on their behalf, taking into account their technical knowledge, experience, level of education and training and the context the AI systems are to be used in ...”. Article 95 (c) further emphasises the importance of promoting AI literacy “in particular that of persons dealing with the development, operation and use of AI”, with high-risk deployers of AI systems have training obligations of their staff in AI literacy. Taken together, these recommendations and obligations clarify that AI literacy spans multiple groups, each with different needs and responsibilities. Lay users are individuals who encounter AI in everyday life and must understand its opportunities, limitations, and potential harms. Professional users are employees who use,

³ The frameworks of UNESCO [14][15] and OECD [16][17] are widely recognised.

supervise, or rely on AI systems in organisational settings but are not AI professionals. The AI professionals are a diverse group of developers, data scientists, system architects, directly involved in development and operations and experts in legal, ethical, compliance, HR, managerial and other roles involved in the governance, procurement, risk assessment or oversight of AI systems for whom AI literacy complements, and not substitutes, specialised competence.

AI literacy therefore complements but does not replace the role of AI professionals. Both AI literacy and AI professionalism are essential: a broadly AI-literate society supports transparency, accountability, and meaningful participation, while competent AI professionals ensure that AI systems are designed and deployed in ways that are safe, ethical, and aligned with European values. By integrating general awareness with tailored professional obligations, the AI Act positions AI literacy as a shared foundation for responsible AI across society and organisations. With AI literacy gaining importance, the relation to AI literacy and AI professionalism must be explained clearly. In [Annex O](#) the key differences between AI literacy and AI professionalism are clarified further.

6 AI professional role profiles

6.1 General

To effectively meet and anticipate the market's workforce needs, it is essential that professionals are trained for roles that align with these needs. While a general understanding of a job exists, variations arise based on context. Especially in an emerging field like AI, job titles can vary widely, with similar titles describing different roles and vice versa. This scenario promotes career opportunities in all occupational groups and professional fields, particularly in technological profiles, with a special focus on frequent retraining or further training of ICT professionals to meet current demand in the field of AI. The comprehensive set of AI professional role profiles provided by this CWA which is based upon in-depth analysis of latest market requirements, can help to dynamically address the staffing needs of this domain.

6.2 Professional role profiles basic principles

6.2.1 General

Role profiles offer structure and clarity by grouping common job elements into a consistent description. They are broader and less specific than job descriptions. Because of their higher level of abstraction, well-defined role profiles serve as archetypes, from which specific job functions can be derived. Role profiles are formulated in such a way that they cover a wide range of roles that may have different names and differ slightly in tasks and specific characteristics in practice. Generally, these roles share the same key competences required to fulfil the role.

A clear set of role profiles provides a useful foundation for various activities, including strategic AI professional workforce planning and development in the organisation and the creation of educational programmes for training purposes. The challenge is to define key roles that are both broad enough to be simple, flexible and widely applicable and specific enough to align with job market details.

It is essential to understand that a role differs from a job. This is an important distinction, that is easily overlooked. Roles people fulfil may not always be reflected by their formal job titles. For example, a person working formally as the information security specialist can also be the AI security specialist in an organisation. So, a person can fulfil a job that encompasses several roles. The word “AI” may not even be part of their formal job title, but nevertheless AI can be a very important part of their formal job description and as a consequence, their tasks and responsibilities will be related to AI to a substantial extent. If this involves the planning, building, running, enabling, managing and/or governing of AI, this person is very likely to fulfil the role of an AI professional.

6.2.2 Relationship between roles and organisational size

The way roles are defined, distributed, and fulfilled within an organisation is strongly influenced by organisational size. While the distinction between roles, jobs, and functions applies across all organisations, its practical implications become particularly visible when comparing smaller and larger organisations.

In smaller organisations, roles are often combined within a single job or function. Due to limited resources and headcount, individuals frequently fulfil multiple roles simultaneously, sometimes spanning technical, managerial, operational, and governance-related responsibilities. As a result, a single person may be involved in the planning, development, deployment, operation, and oversight of AI systems, in addition to other non-AI-related duties. In such contexts, AI-related roles may not be explicitly defined or formally named, yet they are nonetheless real and significant. The absence of a dedicated AI job title does not imply the absence of AI roles; rather, these roles are embedded within broader job descriptions and day-to-day responsibilities.

In larger organisations, roles tend to be more clearly delineated and specialised. A single role may be fulfilled by one dedicated individual, or by multiple individuals working collaboratively within a team or across functions. Moreover, the same role may be subdivided into specialised sub-roles, each addressing a specific aspect of the overall responsibility. For example, within the broader role of an AI professional, different individuals may focus separately on model development, data governance, AI security, compliance, risk management, or operational monitoring. This specialisation allows for greater depth of expertise, clearer accountability, and more formalised governance structures.

Consequently, organisational size affects not only how many roles exist, but also how explicitly they are defined and how they are distributed across people. In smaller organisations, AI roles are more likely to be implicit, overlapping, and multifunctional, whereas in larger organisations they are more likely to be explicit, specialised, and distributed across multiple individuals. [Annex Q](#), section 2 contains a figure depicting the relation between role profiles and job descriptions. Regardless of organisational size, however, the underlying principle remains the same: roles are determined by the responsibilities a person fulfils in relation to AI, not by their formal job title alone.

The absence of a dedicated AI job title does not imply the absence of AI professional roles in an organisation; rather, these AI roles with underlying skills, knowledge and competences can be very well embedded within broader job descriptions and day-to-day responsibilities, often within a broader digital or ICT professional performance context.

6.3 AI professional role profiles

This CWA aims to enhance transparency and alignment within the European AI competences and skills landscape by introducing a set of European AI professional profiles, with their underlying main missions, deliverables, tasks and competences. To address the current diversity in AI job descriptions and functions and the ongoing emergence of new AI jobs, a comprehensive set of representative AI profiles has been designed, covering the entire AI life cycle and business processes. Starting from the organisation and workplace viewpoint and consistent with the broader IT domain, these profiles serve as a common reference for European stakeholders that can be further contextualised and used for multiple purposes. The full descriptions of all AI professional role profiles are presented in [Annex B](#).

Comprising seven main families, the profiles are designed to evolve and cater to specific stakeholder needs, akin to the passing of genetic traits through generations. The 30 role profiles, alongside e-competences from the e-CF [\[1\]](#), AI skills groups and cross-cutting transversal skills, form a “gene pool” for customised profile development in the European AI field with increased granularity and context specificity.

The 37 AI professional role profiles are divided into 7 main groups or ‘families’: (1) Data Processing & Analysis, (2) Development, (3) Operations, (4) Support, (5) Guidance, (6) Management and (7) Governance.

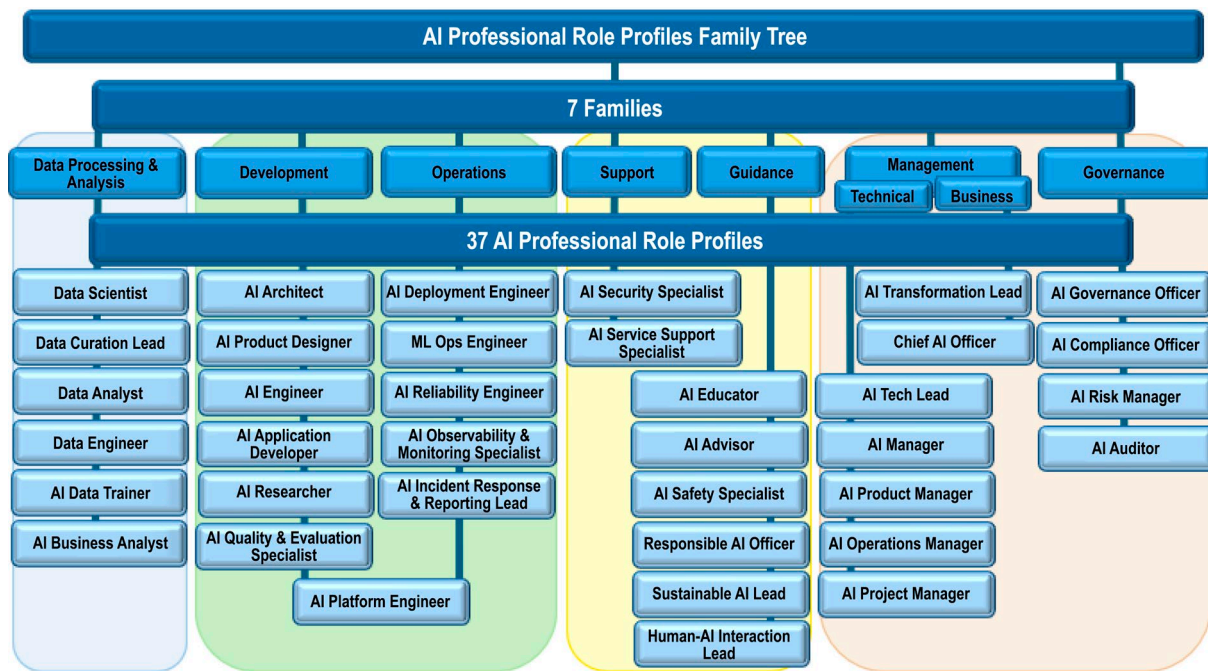


Figure 3 — AI professional role profiles family tree

The seven AI professional families collectively span the full OECD AI System Lifecycle [18]. 'Data Processing & Analysis' and 'Development' address the early lifecycle phases, including data collection, preparation, system design, model development, and validation. 'Operations' and 'Support' cover deployment, operation, monitoring, and continuous improvement of AI systems in real-world settings. 'Guidance' provides a cross-cutting function by embedding ethical, legal, risk, and quality considerations throughout all lifecycle phases, while 'Management' ensures coordinated planning, resourcing, and value delivery across the lifecycle. 'Governance' sits above the lifecycle as an overarching function, establishing accountability, oversight, and control mechanisms to ensure AI systems remain compliant.

It is important to emphasise that the families *do not represent an organisational structure, like departments*. The families are a *purely* conceptual classification. They can be described as follows:

Data Processing & Analysis: Roles focused on sourcing, preparing, analysing, and translating data into insights and training assets that are the input for AI systems

Development: Roles responsible for designing, building, testing, and validating AI systems before deployment

Operations: Roles ensuring AI systems are deployed, operated, monitored, and maintained reliably in production

Support: Roles that protect, support, and maintain AI systems and users post-deployment

Guidance: Roles providing strategic, ethical, educational, and human-centred guidance for AI adoption, development and application

Management (business): Senior leadership roles driving AI strategy, value realisation, and enterprise transformation

Management (technical): Roles managing AI teams, products, operations, and delivery execution

Governance: Roles ensuring AI systems comply with laws, policies, standards, and risk controls.

The AI professional role profiles as presented in this document are derived from the generic set of European ICT professional role profiles (CWA 16458)[3]. This is a European agreed and practice-driven

ICT role profiles description scheme and by adopting the most suitable elements of this scheme, the AI professional role profiles become comparable and provide a unique, easily accessible and comprehensive overview of the requirements for European AI professionals. These AI role profiles have direct or indirect links to the generic roles incorporated in the overall European ICT Professional Profiles. The relation to this framework is explained in [Annex F](#). [Annex G](#) describes the criteria used for adding a role.

From the user perspective of this CWA, confidence can be established in the sustainability of the structure through its association with these European ICT role profiles but with focused application for the AI field. Likewise, fast connections can be established across the European ICT and digital professional ecosystem with further specifications made available from specialising sub-domains⁴.

The AI professional role profiles are described in detail in [Annex B](#). A template is used to ensure consistency between the profiles. [Annex D](#) provides a short explanation of this template. An overview of all AI professional role profiles and their alternative titles can be found in [Annex H](#). Separate overviews are provided of AI role profiles mapped to e-CF competences ([Annex I](#)), and e-CF competences with their related AI skill areas ([Annex L](#)), AI role profiles mapped to personal skills ([Annex M](#)) and to interpersonal skills ([0](#)).

6.4 The model of an AI role profile

6.4.1 General

The model used in this CWA for AI professional role profiles is based on a structured linkage between AI role profiles, their associated tasks and deliverables, relevant e-CF competences and their proficiency levels, AI-specific skill areas, and the underlying knowledge and skills required for effective performance.

Within this model, an AI role is defined by the activities performed and the outcomes for which the role is accountable and responsible. Tasks describe the operational, technical, managerial, or governance-related activities carried out by the role, while deliverables represent the measurable outputs or results produced through those activities. Each role profile is mapped to several e-CF competences, together with the proficiency levels required in terms of autonomy, complexity, responsibility, and business impact.

To contextualise the generic e-CF competences for the AI domain, the model includes AI-specific level descriptors for each proficiency level. These descriptors refine and interpret the e-CF competence requirements in relation to AI-related activities. They provide AI-oriented specifications of expected performance and capability at each level, thereby supporting consistent interpretation of competences across AI professional roles and organisational contexts.

The model further incorporates AI-specific skill areas related to the e-CF competences, such as machine learning, data engineering, MLOps, AI governance, AI ethics, natural language processing, and AI security. These skill areas provide additional granularity regarding the specialised capabilities needed for AI-related work. They are provided in a separate table in [Annex K](#) and linked to the e-CF competences in [Annex L](#).

At the foundation of the model are the underlying knowledge and skills that enable competence development and professional performance. Knowledge includes theoretical understanding such as mathematics, statistics, AI algorithms, software engineering, data governance, ethics, and regulatory frameworks, while skills refer to the practical ability to apply this knowledge using appropriate methods, tools, and technologies. It goes beyond the scope of this role profile framework to provide more detailed information on the skills and knowledge level.

The model provides traceability between professional activities, competence requirements, and learning needs, by translating each role profile into its educational counterpart with learning outcomes and assessments, thereby supporting harmonisation across workforce planning, education and training, certification, and organisational capability development in the AI domain.

⁴ Such as the ENISA European Cybersecurity Skills Framework (ECSF) and EDISON Data Science Framework.

6.4.2 Labour market demand and emerging AI professional roles

Labour market demand for AI professionals continues to grow rapidly, but not uniformly across all roles. Demand is strongly shaped by the maturation of AI from experimental use to large-scale, operational deployment, as well as by increasing regulatory and societal expectations. As a result, roles that enable organisations to build, deploy, manage and govern AI systems in a reliable and compliant manner are particularly prominent.

Current quantitative and qualitative evidence indicates sustained high demand for development- and operations-oriented roles, including AI Engineers, Data Scientists, AI Architects and MLOps Experts. These profiles are critical for translating AI research and prototypes into scalable, production-grade systems and for ensuring their robustness, performance and maintainability over time. At the same time, organisations increasingly require management-oriented roles such as AI Project Managers, AI Product Managers and AI Managers to coordinate multidisciplinary teams, align AI initiatives with business objectives and manage AI across its full lifecycle. This shift reflects a broader transition from isolated pilots towards organisation-wide AI adoption. In parallel, governance-, risk- and ethics-related roles are gaining strategic importance. Regulatory developments, most notably the EU Artificial Intelligence Act, have intensified demand for profiles such as AI Compliance Officer, AI Risk Manager, AI Ethics Officer and AI Auditor. This trend is consistently highlighted in policy and workforce analyses by the OECD and the European Commission, and is further reinforced by industry-led initiatives. In particular, the work of the AI Workforce Consortium [\[29\]](#) underscores the growing recognition that AI capability is not limited to technical excellence, but depends equally on governance, trust, accountability and cross-functional skills. The Consortium's findings point to a widening gap between AI adoption ambitions and the availability of professionals with combined technical, ethical and organisational competences.

Looking ahead, several roles can be considered emerging rather than fully established. These include profiles related to AI safety, trust and reliability, human-in-the-loop processes, evaluation and monitoring, and observability of complex AI systems, particularly in the context of generative and foundation models. While demand for these roles is still uneven, expert consensus suggests that they will become increasingly critical as AI systems are deployed in high-impact and high-risk contexts.

These trends confirm that demand for AI professionals is both expanding and diversifying. The role profiles presented in this CWA are therefore not intended as a static or exhaustive list, but as a structured reflection of current and emerging labour market realities, supporting stakeholders in anticipating skills needs and designing resilient, future-oriented AI workforce strategies.

6.4.3 Trustworthy AI in the AI professional role profiles

The European vision of trustworthy AI is based on ethical principles set out in the AI Act, the EU Ethics guidelines for trustworthy AI [\[19\]](#), and, ultimately, in the Charter of Fundamental Rights of the European Union. This ethical dimension is reflected in the proposed AI professional role profiles in various ways at different levels, which requires a brief explanatory note for better understanding.

The ethics dimension of trustworthy AI is mainly addressed through the terms “responsible AI”, “AI ethics” and “AI impact” (e.g. as part of AI business application & impact). It should be considered that all terms can potentially encompass any aspect related to ethical issues, social concerns, and the impact on fundamental rights. However, in this document, when the term “AI ethics” is used, the intention is to focus directly on the ethical principles mentioned in the AI Act, whereas when the terms “responsible AI” or “AI impact” are used, the aim is to broaden the focus toward the AI impact on protection and risk management, including those of an ethical nature and those affecting fundamental rights. For example, specific aspects such as the degree of autonomy of an AI system or its use for recommendations or decisions, which are closely linked to the legal definition of an AI system, are considered better covered under the terms “responsible AI” or “impact”, while aspects such as human oversight are addressed by both “responsible AI” and “AI ethics”. This CWA uses *deliverables* such as “Legal and Ethical Considerations” and “AI Ethics KPI’s”; *AI skill areas* such as “AI Ethics”, “Safe & Responsible AI” and “AI Business Application & Impact”; *tasks* such as “Comply with ethical guidelines” and “Identify and mitigate ethical and safety risks” and *interpersonal skills* such as “Exert ethical behaviour”, “Comply with regulations” and “Demonstrate trustworthiness”.

In addition, AI ethics aspects are also connected with general ICT professional ethics, as outlined for example, in the European standardisation document CEN/TS 17834:2022 [7], that provides a European Professional Ethics Framework for the ICT Profession. Ethics is an important transversal, cross-cutting aspect, relevant to the whole of the ICT workplace. Ethics in ICT deals with the procedures, values and practices that govern ICT and its related disciplines without damaging or violating the integrity, moral values or beliefs of any individual, organisation or humanity. In practice, it is concerned with how ICT professionals should make decisions regarding professional conduct⁵.

6.4.4 AI Act compliance

The introduction of the AI Act [9] has a significant impact on skill needs, particularly due to the explicit reference in Article 4 of the need for a sufficient level of AI literacy among all staff and other persons dealing with the operation and use of AI systems. This includes lay users and professional users, as well as AI professionals which are the focus of this CWA. [Clause 6](#), together with [Annex N](#) and [Annex O](#), provide more details on AI literacy and the differences between AI users and professionals.

There are two roles defined as part of this CWA which stand out in terms of their direct link to the AI Act:

The AI Educator. The aim of this role is to educate and train professionals to reach optimal AI competence to support organisation performance. As such, the AI Educator would be responsible for developing and delivering an AI Literacy programme to support compliance with Article 4.

The AI Compliance Officer. The aim of this role is to assure compliance of the development, deployment, and use of AI systems with relevant laws, regulations, standards, internal policies and ethical practices. As such, the AI Compliance Officer is directly accountable for compliance to all areas of the AI Act, as well as with other relevant legislation. For example, the strong link between data and AI means that the GDPR is also particularly relevant.

However, compliance with the AI Act can only be achieved if staff at all levels of an organisation, and across all relevant roles, possess knowledge of the ethical and legal aspects of AI. Therefore, the AI Act touches upon all roles to some degree. Nevertheless, certain roles from each category are more likely to have a particular focus on the ethical and legal aspects of AI:

- *Data Processing & Analysis roles:* The Data Scientist, due to the accountability for judging the suitability of models and algorithms; and the Data Curation Lead, due to data governance responsibilities.
- *Development & Operations roles:* The AI Architect and AI Product Designer, due to their accountabilities in the design phase; and the AI Quality, Test & Evaluation Specialist, due to their

⁵ EN 16234-1:2019, p.15: description of transversal aspect T2 Ethics.

accountabilities for evaluating aspects of Trustworthy AI. Engineering roles also have a strong focus on ensuring safety, reliability, and operational robustness.

- *Support & Guidance roles:* In addition to the AI Educator, several other roles in this category have a strong focus on ethical aspects of AI that align closely with the AI Act, including the AI Safety Specialist, Responsible AI Officer, Human-AI Interaction Lead, and AI Advisor.
- *Management roles:* The Chief AI Officer, due to their accountability for AI strategy, policy, governance, and organisational oversight.
- *Governance roles:* In addition to the AI Compliance Officer, all governance-related roles have a strong role in ensuring compliance with the AI Act due to their governance accountabilities, including the AI Governance Officer, AI Risk Manager, and AI Auditor.

The AI Act defines several categories of organisational actors: *provider*, *deployer*, *authorised representative*, *importer*, *distributor*, and the broader category of *operator*. These categories define legal and operational responsibilities associated with AI systems and general-purpose AI models. By contrast, the roles defined in this CWA describe professional functions, competencies, and responsibilities carried out by individuals and teams within organisations.

Consequently, there is not a one-to-one relationship between the AI Act actor categories and the professional roles defined in this CWA. Rather, the relationship is inherently many-to-many:

- A single AI Act actor category, such as a provider, may involve many professional roles working across the AI lifecycle.
- A single professional role may contribute to multiple AI Act actor categories depending on the organisational context and business model.

For example, an organisation may simultaneously act as a provider of one AI system, a deployer of another third-party AI system, and a distributor of a general-purpose AI capability. Likewise, an AI Product Manager or AI Compliance Officer may support obligations associated with both provider and deployer activities.

It should be recognised that the AI Act assigns obligations primarily to organisations and legal entities, whereas this CWA defines professional capabilities and responsibilities at the role level. [Annex S](#) provides a mapping that illustrates likely areas of contribution and accountability support, rather than formal legal designation under the AI Act.

Several observations can be made:

- **Governance and compliance roles are highly transversal.** Roles such as the AI Compliance Officer, AI Governance Officer, AI Risk Manager, Responsible AI Officer, and AI Auditor contribute across nearly all AI Act actor categories because governance, oversight, risk management, and accountability obligations apply throughout the AI value chain.
- **Development and operational roles align strongly with provider obligations.** Roles involved in architecture, engineering, testing, deployment, monitoring, and data governance are particularly relevant where organisations develop AI systems or place them on the market.
- **Operational and business-facing roles align strongly with deployer obligations.** Deployer responsibilities are frequently associated with human oversight, organisational controls, operational monitoring, workforce readiness, and ensuring the appropriate use of AI systems in practice.
- **Management roles provide strategic accountability and coordination.** Roles such as the Chief AI Officer, AI Manager, AI Product Manager, AI Operations Manager, and AI Transformation Lead are

important in aligning organisational strategy, governance, operational implementation, and regulatory obligations.

- **AI literacy obligations span all actor categories.** In accordance with Article 4 of the AI Act, all operator types require an appropriate level of AI literacy among staff and other persons dealing with AI systems. Consequently, the AI Educator role supports compliance across the entire AI ecosystem rather than only a single actor category.

It should be noted that while ethics and compliance are not the same thing, giving attention to the ethical aspects of AI, and particularly creating an ethical mindset amongst AI professionals across all types of roles, will greatly facilitate compliance to the AI Act. For this reason, a consistent and comprehensive approach to ethics has been considered as part of this CWA, see Section 6.4.3. It is also worth noting that all management and governance related roles are likely to be involved in the activities of AI ethical decision-making bodies and tools, and this is reflected in the role profiles.

7 AI Educational Profiles

7.1 General

To provide organisations with the professionals they need, educational providers must take these needs into account. As professional role profiles and competences reflect those market needs, it is imperative that educational providers take these role profiles and competences into account when (re)designing their learning programmes and curricula, learning materials and ways of delivery.

Educational profiles offer a comprehensive structure that translates the market requirements expressed by the professional role profiles into educational terms. They provide a valuable common reference for localised application and implementation according to specific needs, supporting transparency and mobility.

7.2 Educational profiles basic principles

Educational profiles offer a structure that enables competence-based design and development of learning programmes, establishing a link between the competences needed in a professional environment and the learning outcomes of education and training. While professional role profiles and competences are closely linked to market needs, educational profiles provide the link to learning programmes. Educational profiles are an aid to translate the contents of a professional role profile, a set of competences, a single competence or other inputs like knowledge and skills into educational terms that can be used as a blueprint for learning programme (re)design.

An educational profile is not based on an existing learning programme. It is based on current market demands and should regularly be evaluated on being up to date. So, it functions as a “desired state” that for example, can be compared to the current state of an existing learning programme.

Applying educational profiles has a number of benefits. Learning programme designers can use them as guidance in their training and curriculum design and underpin the choices made in that design, for example towards accreditation committees or other stakeholders. Educational profiles support learners to define their position on their personal learning path, to make decisions on their direction and support them in their decision to enrol in a certain learning programme or not. They enhance a programme’s interoperability and make it easier to compare it to other programmes internally and externally, stimulating the mobility of students and learners across institutes and boundaries. Because the educational profile is focused on results (being the outcomes of a learning process), it acknowledges a diversity of different learning paths, while at the same time requirements regarding qualifications are guaranteed. As such, it is an instrument that supports the validation of prior learning, continuous professional development and lifelong learning policies. It also enables a modular learning programme

design that can be adapted to different needs and flexibly offered in smaller and larger ‘portions’, without losing coherence or logic. This is useful to fulfil the need for short learning courses in up- and reskilling.

It is important to note that there may be several educational profiles that relate to a single professional role profile. For a professional role described in this CWA at a typical level of competence performance within the organisation, the related educational profile may be specified at various learning (EQF) levels. This corresponds to the role profiles’ underlying concept that a role is described at a typical level of competence performance, whilst in organisation practical context the role may be implemented across various levels of seniority (as defined by the organisation) and applying competence proficiency e-CF levels.

For example, the professional role AI Manager can have the educational profiles Junior AI Manager, AI Manager and Senior AI Manager, depending on the level of complexity of the learning programme. Usually, this level of complexity is expressed in EQF levels [\[20\]](#)⁶, describing what a learner knows, understands and is able to do. Given that the AI field is still undergoing significant development, and with it the role profiles presented in the first part of this document, it has been decided to only provide those educational profiles that directly correspond to the average proficiency level of a particular role profile. Once the market has become more crystallised, the set of educational profiles can also be further refined.

The relationship between e-CF levels and EQF levels as illustrated in [Annex Q](#), section 7 provides a consistent bridge and tool for mutual understanding between organisational demand and educational practice.

7.3 Creating AI educational profiles

The AI educational profiles are derived from the AI professional role profiles as presented in this document. The way in which an educational profile is created is based on the CEN Technical Specification (CEN/TS 17699)[\[5\]](#), that contains guidelines for developing ICT professional curricula. Usually, an educational profile contains a general description, a set of programme learning outcomes, a set of unit learning outcomes and summative assessments.

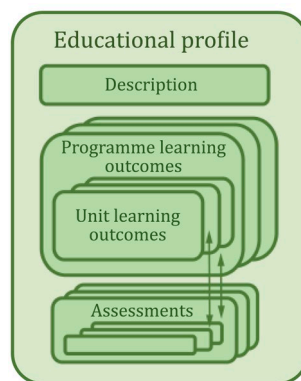


Figure 4 — Elements of an educational profile

SOURCE: CEN/TS 17699:2022 [\[5\]](#)

An educational profile can be constructed in different ways. It can be based upon a professional role profile, on one or more competences or on specific knowledge and/or skills sets. The intended goal of an educational profile determines this starting point. If a learning programme aims at educating people for a full professional function or a specific professional field or specialism within AI, then the starting point

⁶ The European Qualification Framework (EQF) provides eight learning levels, each defined by a set of descriptors indicating the learning outcomes relevant to qualifications at that level in any qualifications system.

to formulate an educational profile is a full professional role profile. Most of the times it will be an extensive programme because a role requires multiple competences, knowledge and skills.

In cases where it is not necessary to educate for a complete role profile, it is also not necessary for the educational profile to match a complete role profile. In such cases, the educational profile can be based on one or more competences as a starting point. Also inputs like specific knowledge and skills can form the basis of an educational profile. Because of the modular structure of an educational profile, it is easy to see where certain gaps between current competences and needed ones are. The set can also be easily adapted to local, context-specific requirements. For a detailed explanation of the educational profile and a detailed description of how role profiles can be converted into educational profiles, please see CEN/TS 17699:2022 [5]. The set of educational profiles presented in this document is based on full role profiles in order to provide a complete overview of a profile.

Context-independent educational profiles with clearly defined learning outcomes, aligned to standardized AI role profiles derived from broader frameworks, such as the e-CF, offer a consistent and transferable way to design and evaluate AI education. By decoupling curricula from specific institutions or technologies, they ensure that skills remain relevant despite rapid changes in AI tools and methods. Because these profiles reflect real market demand, learners gain competences that map directly to industry roles, improving employability and mobility across sectors and regions. At the same time, educational providers and employers benefit from a shared language for skills, making it easier to compare qualifications, identify gaps, and support lifelong learning.

The full descriptions of all AI educational profiles are presented in [Annex C](#). A template is used to ensure consistency between the profiles. The template is based on the educational profile template from CEN/TS 17699:2022[5]. [Annex E](#) provides a short explanation of this template. The AI educational profiles are derived from the AI professional role profiles as presented in [Annex B](#) of this document.

Annex A (informative)

Overview of the Annexes

[Annex B](#). Role profiles for AI professionals

The full descriptions of the AI professional role profiles defined in this CWA. A structured and consistent overview of all identified AI professional roles, covering their purpose, core responsibilities, tasks, required competences and associated skills.

[Annex C](#). Educational profiles for AI professionals

The full descriptions of the educational profiles that correspond to the AI professional role profiles defined in this CWA. It articulates how the competences, skills and responsibilities associated with professional practice in AI can be translated into education- and training-oriented structures, describing learning outcomes, levels of proficiency and assessments.

[Annex D](#). Role profile template

The template used to structure and present the AI professional role profiles, based on the template defined in the European ICT professional role profiles (CWA 16458-2)[\[4\]](#).

[Annex E](#). Educational profile template

Template used to describe the AI Educational Profiles with, based on the educational profile template from the Guidelines for developing ICT Professional Curricula (CEN/TS 17699:2022) [\[5\]](#).

[Annex F](#). Creating AI professional role profiles using European ICT professional role profiles

Short description how the AI Role Profiles were created, based on CWA 16458-1 [\[3\]](#)[\[4\]](#).

[Annex G](#). Criteria for adding roles

List of criteria used to decide which roles were added to the framework.

[Annex H](#). AI professional role profile titles and related titles

A table showing role profile title and titles that are closely related, such as synonyms and specialisations.

[Annex I](#). Table – AI professional role profiles and e-CF competences

A structured mapping between the AI professional role profiles and the competences of the European e-Competence Framework (e-CF) (CEN/EN 16234-1:2019)[\[1\]](#), including indicative proficiency levels.

[Annex J](#). e-CF competences and AI level descriptors

A table that links each e-CF competence to its AI descriptors at the relevant proficiency level(s).

[Annex K](#). AI skill areas descriptions

The concise descriptions for each AI skill area.

[Annex L](#). e-CF competences and AI skill areas

A table that links e-CF competences to AI skill areas.

[Annex M](#). AI role profiles and personal skills

A table that links role profiles to personal skills.

[O](#). AI role profiles and interpersonal skills

A table that links role profiles to interpersonal skills.

Annex N. Comparing lay users, professional users and AI professionals

A clarification of the distinction between lay users, professional users and AI professionals by comparing how these groups interact with, depend on and assume responsibility for AI systems.

Annex O. AI literacy and AI professionalism differences

A clarification of the distinction between AI literacy and AI professionalism by comparing scope, depth and goal.

Annex P. Application example: AI Health Specialist role profile

A description that provides an example of application in a specific sector.

Annex Q. Relation to other standards and frameworks

A description of the relations between this CWA and other relevant standards and frameworks. By laying out these different relationships, the CWA document can be understood in context of this larger ecosystem. It clarifies how this CWA can be used together with related standards and frameworks.

Annex R. AI skill areas in ESCO

A mapping of the ESCO [\[26\]](#) skill and knowledge examples to the AI skill areas applied in this CWA, using NLP methods, text embeddings, and similarity analysis [\[30\]](#)[\[31\]](#).

Annex S. AI role profiles and AI Act actor categories

A mapping of the AI role profiles of this CWA to the AI actor categories of the AI Act [\[9\]](#).

Bibliography

Annex B **(normative)**

Role profiles for AI professionals

This annex provides the full descriptions of the AI professional role profiles defined in this CEN Workshop Agreement. It presents a structured and consistent overview of all identified AI professional roles, with a standardized description covering their main title, alternative titles, mission, tasks, deliverables, required competences with AI descriptors and associated personal and interpersonal skills. Together, these role profiles form the backbone of the CWA and constitute the primary reference for understanding the scope and diversity of professional roles within the AI field.

The role profiles are designed to reflect current organisation and workplace practice across the AI lifecycle, from data processing and system development to operations, support, management and governance. They are formulated at a level of abstraction that enables their application across sectors and organisational contexts, while remaining sufficiently detailed to support workforce planning, education and training design, and professional development.

With the objective of supporting clarity, comparability and practical use, this annex is complemented by a set of dedicated overview contents, that can be used as tools for many purposes of CWA adoption in practice: a list of role titles and their related titles ([Annex H](#)), cross-references between AI role profiles and e-CF competences ([Annex I](#)), e-CF competences and AI skill areas ([Annex L](#)) and personal and interpersonal skills ([Annex M](#) and [0](#)). A mapping between roles and actor categories distinguished in the AI Act can be found in [Annex S](#). Together, these supplementary contents enable a multi-dimensional interpretation of the role profiles, and facilitate their alignment with other existing competence and skill frameworks, educational profiles, certification frameworks, and organisational needs.

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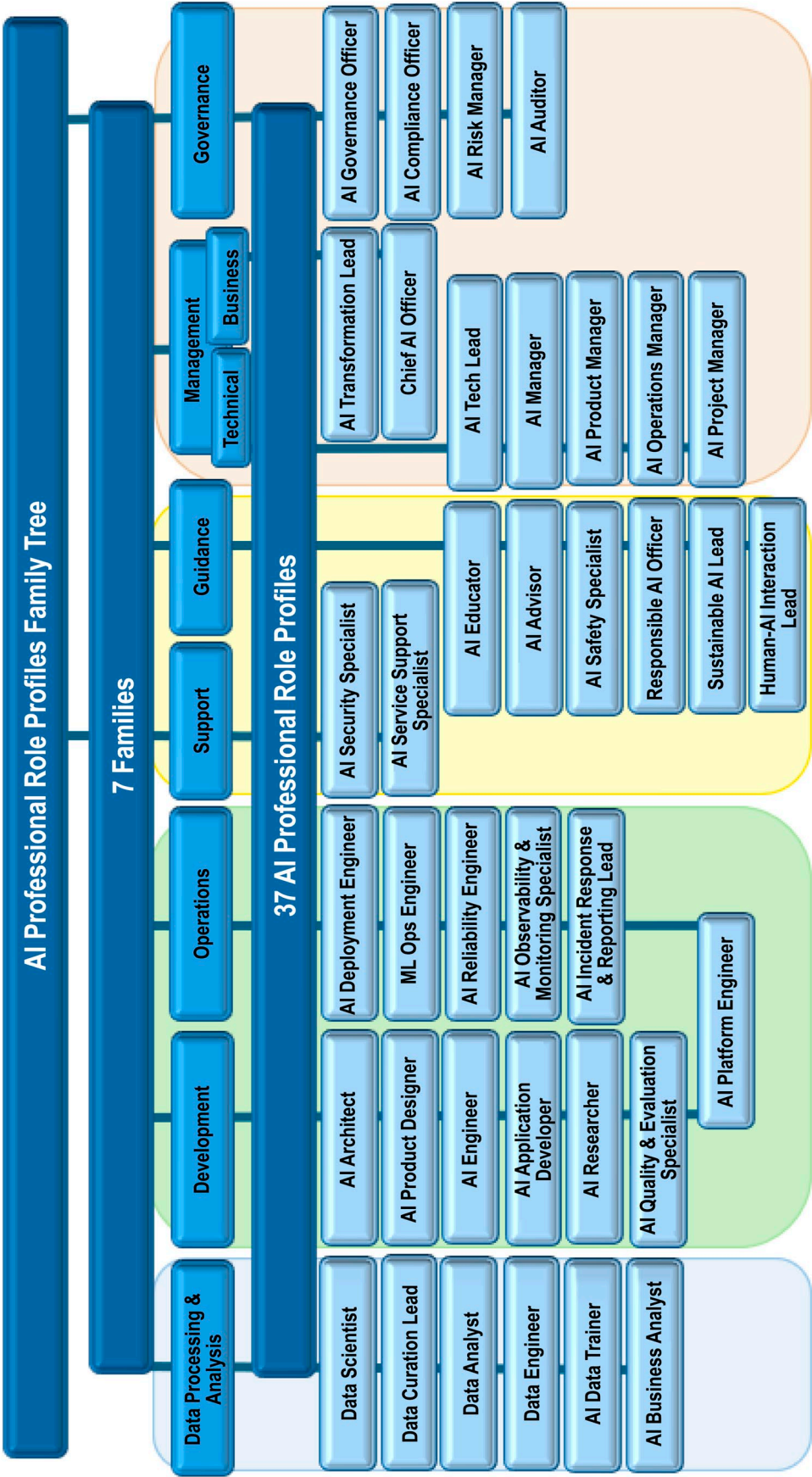


Figure B.1 — AI professional role profiles family tree

B.1 Data Processing and Analysis

	DATA PROCESSING & ANALYSIS			[1]
Profile title	DATA SCIENTIST			[1.1]
Related titles	Data Scientist AI, AI Data Scientist, Decision Scientist, Data Science Manager			
Summary statement	Leads the process of applying data analytics. Delivers insights from data by optimising the analytics process and presenting visual data representations.			
Mission	Finds, manages and merges multiple data sources and ensures consistency of datasets. Identifies the mathematical models, selects and optimises the algorithms to deliver business value through insights. Communicates patterns and recommends ways of applying data.			
Deliverables	Accountable	Responsible	Contributor	
	• Data Annotation and Judgement Process • Data Collection and Representation • Business Insights from Data	• Data Management Plan • Data Selection • Experiment design • Dissemination of Findings • Original High Quality Research	• AI/ML Component • Data Analytics • Data Management System • Data Model • Evaluation Outcome Reporting	
Main tasks	• Represent business challenges through mathematical models • Collect, understand, clean, analyse, integrate and investigate internal and external data to achieve the mission • Create and test hypothesis • Uncover data correlations/relationships in support of measurement and predication • Identify the right visualisation models depending on the business challenges and the data sets • Address data security through active preventative strategies • Select and optimise AI/ML algorithms and models • Select and apply appropriate statistical and AI/ML techniques			

	Comply with ethical guidelines and legal requirements			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.7.	Technology Trend Monitoring	e-4	Provides leadership in the monitoring, evaluation and exploitation of ICT and AI technological developments. Advises on AI innovation strategies and ensures alignment with organisational objectives.
	A.9.	Innovating	e-4	Leads innovation projects that exploit AI to create novel solutions or new business/research opportunities. Advises teams or stakeholders on the strategic use of AI to drive value, efficiency, or societal benefit.
	B.3.	Testing	e-4	Leads testing activities for complex ICT and AI systems. Integrates AI model evaluation with broader system testing. Ensures adherence to regulatory, ethical, and internal standards. Advises teams on mitigation of AI risks and improvement of system robustness.
	D.7.	Data Science and Analytics	e-4	Leads data science and analytics initiatives that enable AI solutions, optimising AI-supported processes and organisational decision-making.
	D.10.	Information and Knowledge Management	e-4	Designs and improves AI knowledge management processes and structures across multiple teams or business units. Advises on AI knowledge lifecycle, governance, and strategic use. Promotes collaborative knowledge sharing and innovation.
	D.11.	Needs Identification	e-4	Leads the identification and articulation of AI-related needs, ensuring alignment with business strategy, regulatory compliance, and ethical principles.
	E.1.	Forecast Development	e-4	Provides expert guidance on AI forecasting, influencing strategic decision-making. Evaluates multiple AI adoption scenarios and recommends actions across organisational functions.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			

Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Organise information • Solve problems • Think innovatively	<i>Self-management skills</i> • Attend to detail • Assume accountability • Cope with uncertainty • Exert willingness to learn	<i>Social and communication skills</i> • Communicate • Teach, train, instruct others • Work in teams • Delegate responsibilities • Exert ethical behaviour • Comply with regulations
KPI area	Value and effectiveness of data analytics and related business insights		

	DATA PROCESSING & ANALYSIS		[1]
Profile title	DATA CURATION LEAD		[1.2]
Related titles	Lead Data Curator, Data Stewardship Lead, Head of Data Curation, Principal Data Curator, Senior Data Steward, Data Governance Lead, Data Quality Lead, Data Operations Lead, Data Lifecycle Lead, Data Asset Management Lead, Data Integrity Lead, Trusted Data Lead, Data Trust Lead.		
Summary statement	Oversees the quality, structure, governance, and lifecycle of data assets to ensure they are reliable, reusable, and fit for analytical and AI use.		
Mission	Ensures data is accurate, well-documented, ethically managed, and consistently curated so it can be trusted and effectively used across analytics, AI, and business functions.		
Deliverables	Accountable	Responsible	Contributor
	• Curated and Trusted Data Assets • Data Curation & Metadata Framework	• Legal and Ethical Considerations on data	• AI Ethics KPI's • Data Governance Framework • Public Summary of Training Content (GPAI)
Main tasks	• Define and maintain data curation standards, including naming conventions, metadata, schemas, and documentation practices • Establish and monitor data quality rules, validation checks, and KPIs to ensure accuracy, completeness, and consistency • Monitor data quality issues and lead issue resolution with data owners and engineering teams • Oversee the creation and maintenance of business and technical metadata • Ensure datasets are catalogued, searchable, and clearly described for end users • Maintain data lineage and provenance for transparency, trust, and compliance • Partner with data owners and stewards to define ownership, accountability, and access controls • Contribute to or lead data governance frameworks, policies, and operating procedures • Ensure compliance with regulatory, privacy, and ethical data requirements (as applicable) • Manage data across its full lifecycle, from ingestion to retirement		

	- Define retention, versioning, and deprecation processes - Act as a bridge between engineering, analytics, product, research, and business teams to align data to needs - Provide guidance and training to enable correct, self-service data use - Promote a culture of data stewardship and accountability			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.4.	Product/Service Planning	e-3	Plans and manages product or service activities, including AI-enabled elements, ensuring alignment with business objectives, delivery constraints and regulatory requirements.
	D.2.	ICT Quality Strategy Development	e-4	Defines, evolves, and integrates AI quality objectives across projects and value streams. Guides teams to ensure trustworthy and resilient AI systems.
	D.7.	Data Science and Analytics	e-4	Leads data science and analytics initiatives that enable AI solutions, optimising AI-supported processes and organisational decision-making.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.5.	Process Improvement	e-3	Independently performs and monitors AI development and operational processes. Contributes to AI process evaluation, improvement suggestions, and risk awareness.
	E.6.	ICT Quality Management	e-4	Leads AI quality management activities across projects or services. Establishes AI quality governance, policies, and assurance practices aligned with business and AI strategy. Evaluates AI quality outcomes, drives corrective actions, and ensures adherence to ethical, regulatory, and organisational standards.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> - Think analytically - Think critically - Organise information - Identify problems - Solve problems - Think creatively		<i>Self-management skills</i> - Act independently - Focus on quality - Attend to detail - Make decisions - Assume responsibility	<i>Social and communication skills</i> - Communicate - Teach, train, instruct others - Work in teams - Build team spirit

		• Assume accountability • Forms judgements • Exert willingness to learn	• Exert ethical behaviour • Comply with regulations
KPI area	Datasets that meet agreed quality, metadata, and governance standards		

	DATA PROCESSING & ANALYSIS			[1]
Profile title	DATA ANALYST			[1.3]
Related titles	Data Analyst AI, AI Data Analyst, AI Analyst, Big Data Analyst, Data Quality Analyst.			
Summary statement	Analyses data in order to identify key insights for the organisation and ways the data can be used to solve problems.			
Mission	Imports, inspects, cleans, transforms, validates, models or interprets collections of data with regard to the business goals of the company. Ensures that the data sources and repositories provide consistent and reliable data. Prepares visualisations.			
Deliverables	Accountable	Responsible	Contributor	
	• Data Collection and Representation • Data Selection	• Data Analytics • Data Quality & Integrity	• Business Insights from data • Experiment Design • Quality of AI Dataset and Annotations	
Main tasks	• Define, build, and optimise data models to support business goals • Import, inspect, clean, transform, validate, and interpret datasets • Ensure data quality, consistency, and integrity across sources and repositories • Proactively protect data confidentiality and security throughout the data lifecycle • Curate, manage, and archive data to maintain accessibility and reliability • Advise on appropriate data analytic methods and tools based on business needs • Prepare clear visualisations to communicate insights effectively • Maintain compliance with legal standards and data governance policies			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>				
	A.10.	User Experience	e-3	Selects, adapts, and applies user experience design approaches for AI-enabled systems to meet user, business, and ethical requirements. Ensures that AI interactions are understandable, usable, and aligned with user expectations.
	B.5.	Documentation Production	e-2	Produces simple AI-related documents following established templates and guidelines.
	D.7.	Data Science and Analytics	e-3	Independently conducts data analysis and analytics tasks to support AI model development and AI-enhanced decision-making.

	D.10.	Information and Knowledge Management	e-3	Independently manages AI knowledge and information within defined processes. Analyses business processes to identify AI information needs. Applies tools and techniques to organise, access, and share AI knowledge effectively.
	D.11.	Needs Identification	e-3	Independently engages stakeholders to identify and validate needs, translating them into AI solution requirements.
Transversal aspects (from e-CF)	Be aware of and if applicable, behave proactively in: T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Organise information • Identify problems • Solve problems • Improvise		<i>Self-management skills</i> • Attend to detail • Focus on quality • Assume responsibility • Cope with uncertainty • Exert willingness to learn	<i>Social and communication skills</i> • Report • Work in teams • Comply with regulations • Exert ethical behaviour • Respect confidentiality
KPI area	Value, quality, effectiveness and timeliness of data analytics			

	DATA PROCESSING & ANALYSIS			[1]
Profile title	DATA ENGINEER			[1.4]
Related titles	Data Engineer AI, AI Data Engineer, Big Data Engineer, Big Data Specialist, ETL Developer, ETL Engineer, Data Pipeline Engineer, Data Integration Engineer, Cloud Data Engineer, Streaming Data Engineer, Real-Time Data Engineer.			
Summary statement	Develops the architecture needed to process, manage, and store large amounts of data.			
Mission	Designs the infrastructure and builds and maintains warehouses and data pipelines that collect, manage, and convert raw data into usable information for data scientists and analysts to leverage data for strategic advantage.			
Deliverables	Accountable		Responsible	Contributor
	Annotating and Labelling Datasets		- Built Pipeline - Data Infrastructure - Data Model - Data Pipeline Integration - Data Pipeline Reliability and Scalability	- Automated Workflows - Data Collection and Representation - Data Selection - Incident Response Plan - Data Management Plan
Main tasks	- Design, build, and optimise data models, pipelines, and infrastructure for AI/ML - Develop scalable data warehouses and processing systems - Define and apply data labelling methodologies for supervised learning - Ensure data quality, integrity, security, and lifecycle management - Curate, archive, and provision datasets for reliable AI/ML use - Advise on data engineering, preparation, and analytic best practices - Support AI/ML model development with high-quality, well-annotated data - Maintain compliance with data governance and legal standards - Complies with legal and ethical requirements and guidelines on data			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.5.	Architecture Design	e-3	Independently implements and adapts AI-enabled architectural solutions. Ensures alignment with enterprise architecture and policies. Identifies minor risks and recommends improvements.
	B.2.	Component Integration	e-3	Independently integrates AI components into systems, ensuring interoperability, performance and security. Selects appropriate integration approaches and contributes to AI system design.

	B.6.	Systems Engineering	e-3	Independently engineers AI infrastructure components and integrates AI systems into existing IT environments. Applies standard methods to ensure performance, security, and compliance, and contributes to AI system design.
	D.7.	Data Science and Analytics	e-2	Applies basic data collection, cleaning, and analysis techniques to support AI-driven projects under supervision.
	E.3.	Risk Management	e-2	Applies defined risk management practices to AI systems, supporting the identification, documentation, and monitoring of AI-related risks within established governance and regulatory frameworks.
	E.8.	Information Security Management	e-3	Ensures the security, resilience, and governance of AI systems across organisational domains. Defines AI security strategies, governance frameworks, and risk management approaches aligned with business and AI strategies. Advises stakeholders on AI-related security, compliance, and trustworthiness requirements.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Organise information • Solve problems • Improvise			<i>Self-management skills</i> • Focus on quality • Show commitment • Cope with uncertainty • Exert willingness to learn
				<i>Social and communication skills</i> • Communicate • Teach, train, instruct others • Work in teams • Exert ethical behaviour • Comply with regulations
KPI area	Effectiveness of data pipelines and infrastructure			

	DATA PROCESSING & ANALYSIS			[1]
Profile title	AI DATA TRAINER			[1.5]
Related titles	Training Data Specialist, AI Trainer, AI Model Trainer, Machine Learning Data Trainer, Conversational AI Trainer, Generative AI Trainer, Data Annotation Specialist, Data Annotator, Data Labelling Specialist, Training Data Annotator, Data Tagging Specialist.			
Summary statement	Ensures that training datasets are fit for purpose without bias.			
Mission	Prepares the training dataset for the AI program, annotates the data models, configures conversational conditions and responses, performs tests and evaluates AI performance regularly. Ensures adherence to ethical considerations and standards for AI, assessing the AI outputs for misinformation, biases and stereotypes.			
Deliverables	Accountable		Responsible	Contributor
	• Quality of AI Dataset and Annotations		• Annotating and Labelling Datasets • Data Verification and Validation • Evaluation of AI Performance	• AI Solution Requirements • Data Acquisition • Data Annotation Guidelines • New AI Solution Proposal
Main tasks	• Gather and curate data for AI training • Annotate the data models • Comply with legal and ethical requirements and guidelines • Assess AI outputs for misinformation, biases, etc.			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	B.3.	Testing	e-2	Supports testing of ICT and AI-based systems under supervision. Executes predefined test procedures and records results. Applies basic AI evaluation methods and assists in documenting model behaviour.
	B.5.	Documentation Production	e-2	Produces simple AI-related documents following established templates and guidelines.
	D.7.	Data Science and Analytics	e-2	Applies basic data collection, cleaning, and analysis techniques to support AI-driven projects under supervision.
	D.11	Needs Identification	e-3	Independently engages stakeholders to identify and validate needs, translating them into AI solution requirements.

Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability		
Personal and interpersonal skills	<i>Thinking skills</i> • Think quickly • Organise information • Solve problems • Improvise	<i>Self-management skills</i> • Attend to detail • Meet commitments • Show determination • Forms judgements • Cope with stress • Manage frustration • Exercise self-reflection	<i>Social and communication skills</i> • Communicate • Exert ethical behaviour • Comply with regulations • Respect confidentiality • Demonstrate trustworthiness
KPI area	Quality of datasets and the models they are used to develop		

	DATA PROCESSING & ANALYSIS		[1]
Profile title	AI BUSINESS ANALYST		[1.6]
Related titles	Business Analyst AI, AI Business Systems Analyst, AI Business Intelligence Analyst, AI Technical Business Analyst, AI Translator, Analytics Translator, Business-AI Translator, Data & Analytics Translator, Decision Engineer, AI Strategy Analyst, AI Solutions Analyst, AI Transformation Analyst, AI Functional Analyst, AI Systems Analyst, AI Value Analyst		
Summary statement	Ensures that AI initiatives are effectively aligned with the organisation's objectives by bridging the gap between business requirements and AI solutions.		
Mission	Integrates the technical aspects of AI with the strategic needs of a business. Works closely with data scientists, machine learning engineers, and business management to ensure AI projects are aligned with the business goals. Analyses the AI solutions needed to support business plans, focusing on data-driven decision-making, the integration of AI systems, and ensuring the AI model is aligned with business objectives. Advises on the lifecycle of the AI solutions.		
Deliverables	Accountable	Responsible	Contributor
	• Business Requirements for AI Exploitation	• AI/ML Business Case • Business Plan for AI Exploitation • Business Relationship • Opportunity Memo • Strategic Alignment	• Data Collection and Representation • AI Strategy & Implementation • Data Selection • Original High Quality Research • Critical Business Process Integration Proposal (Security)
Main tasks	• Contribute to the preparation of the organisation's business plan with a focus on AI/ML • Analyse business requirements and identify AI/ML-driven process improvements • Design and propose AI/ML-supported business processes aligned with strategic objectives • Support digital transformation initiatives by integrating AI/ML solutions to optimise operations • Identify and recommend AI/ML technologies and models that align with the ICT and AI/ML strategy • Develop business cases for AI/ML initiatives, including benefits, risks, and ROI analysis • Analyse and document data needs, AI/ML solution requirements, and integration constraints • Evaluate the organisational impact of AI/ML adoption in terms of change management and workforce readiness		

			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.1.	IS and Business Strategy Alignment	e-4	Aligns IS and AI strategy with business strategy, integrating AI capabilities into enterprise architecture while managing risk, sourcing, and governance.
	A.3.	Business Plan Development	e-3	Independently designs and justifies business plans for AI-enabled initiatives, evaluating alternative approaches, quantifying AI-specific costs and benefits, managing risks, and communicating value to stakeholders.
	A.7.	Technology Trend Monitoring	e-4	Provides leadership in the monitoring, evaluation and exploitation of ICT and AI technological developments. Advises on AI innovation strategies and ensures alignment with organisational objectives.
	D.7.	Data Science and Analytics	e-4	Leads data science and analytics initiatives that enable AI solutions, optimising AI-supported processes and organisational decision-making.
	D.10.	Information and Knowledge Management	e-4	Designs and improves AI knowledge management processes and structures across multiple teams or business units. Advises on AI knowledge lifecycle, governance, and strategic use. Promotes collaborative knowledge sharing and innovation.
	D.11.	Needs Identification	e-4	Leads the identification and articulation of AI-related needs, ensuring alignment with business strategy, regulatory compliance, and ethical principles.
	E.4.	Relationship Management	e-3	Independently maintains and nurtures relationships with stakeholders involved in AI projects. Coordinates routine AI-related tasks and facilitates communication across teams.
	E.5.	Process Improvement	e-4	Leads the design, implementation, and continuous improvement of AI processes. Ensures alignment with organisational objectives, ethical standards, and compliance.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			

Personal and interpersonal skills	Thinking skills • Think analytically • Think holistically • Plan activities • Identify problems • Solve problems • Think creatively • Think innovatively	Self-management skills • Meet commitments • Focus on quality • Assume responsibility • Exert result-orientedness • Cope with uncertainty • Exert willingness to learn	Social and communication skills • Persuade • Negotiate • Exert customer orientedness • Collaborate with others • Exert business orientation • Exert organisation sensitivity • Motivate others • Exert ethical behaviour
KPI area	Adequacy of the business requirements in response to the AI/ML strategy and business plan		

B.2 Development and Operations

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI ARCHITECT		[2.1]
Related titles	AI Solutions Architect, Enterprise AI Architect, AI Infrastructure Engineer, AI Systems Architect, AI Infrastructure Architect, Machine Learning Architect, Generative AI Architect, Agentic AI System Architect, AI Application Architect, AI Software Architect, AI Cloud Architect.		
Summary statement	Plans, designs and integrates the AI architecture.		
Mission	Designs, integrates and implements AI solutions ensuring procedures and models for development are current and comply with common standards. Monitors new AI technology developments and applies if appropriate. Provides technological design leadership and guides the development of AI solutions.		
Deliverables	Accountable	Responsible	Contributor
	• Data Architecture • Data Management System • Data Model • Data Infrastructure • ML Workflows • AI/ML Security Guidelines	• Choice of Technology • Selecting Models, Architecture and Techniques • Infrastructure Strategy • Integrated AI Solution System Architecture	• AI Strategy & Implementation • Business Requirements for AI Exploitation • AI Solution Requirements • Budget Plan

	Integration Transparency Information			- Development Process - Technical Documentation GPAI & High Risk AI
Main tasks	- Analyse technical and business requirements - Work closely with business stakeholders to align AI systems with goals - Specify and design the AI system architecture - Select hardware, software, and AI/ML technologies and tools - Lead development and integration of AI components - Lead and conduct system integration - Ensure incorporation of security and compliance by design - Consider legal, ethical and safety aspects in the integrated AI solutions - Ensure scalability, reliability, and integration with existing systems - Develop and maintain a record of usability and performance requirements - Oversee implementation and validate the integrated AI solution - Monitor, maintain, and evolve the AI system architecture			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.1.	IS and Business Strategy Alignment	e-4	Aligns IS and AI strategy with business strategy, integrating AI capabilities into enterprise architecture while managing risk, sourcing, and governance.
	A.5.	Architecture Design	e-4	Leads the design of complex AI-enabled enterprise architectures. Ensures AI solutions are scalable, secure, interoperable, and ethically aligned. Provides guidance to teams on AI integration.
	A.7.	Technology Trend Monitoring	e-4	Provides leadership in the monitoring, evaluation and exploitation of ICT and AI technological developments. Advises on AI innovation strategies and ensures alignment with organisational objectives.
	A.8.	Sustainability Management	e-3	Applies established methods to monitor and improve the sustainability performance of AI systems and projects.
	B.2.	Component Integration	e-4	Leads and coordinates AI component integration activities. Ensures consistency, quality and compliance of AI-enabled system architectures across projects or services.
	B.6.	Systems Engineering	e-4	Leads the design and optimisation of complex AI infrastructure. Anticipates AI system behaviour, implements advanced integration solutions, and ensures high

				performance, security, and ethical compliance. Provides guidance to others.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.8.	Information Security Management	e-3	Enables the effective security management of AI systems by implementing and adapting AI-specific security measures. Ensures that AI risks are identified, assessed, and mitigated within projects and operational environments, working with stakeholders to support secure and compliant AI use.
Transversal aspects (from e-CF)	Be aware of and if applicable, behave proactively in: T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	Thinking skills - Think analytically - Think holistically - Plan activities - Solve problems - Think innovatively	Self-management skills - Act independently - Make decisions - Cope with uncertainty - Exert willingness to learn	Social and communication skills - Promote - Exert customer orientedness - Collaborate with others - Work in teams - Exert organisation sensitivity - Lead others - Motivate others - Exert ethical behaviour - Comply with regulations	
KPI area	Effectiveness and efficiency of AI solution implementation			

	DEVELOPMENT & OPERATIONS			[2]
Profile title	AI PRODUCT DESIGNER			[2.2]
Related titles	AI Experience Designer, AI UX Designer, AI UX/Product Designer, Intelligent Product Designer, ML UX Designer, AI Interaction Designer, AI Systems Designer, Human-Centred AI Designer, Explainable AI Designer, XAI Designer, Responsible AI UX Designer, Conversational AI Designer, AI Service Designer, AI Design Lead, AI Design Specialist, Generative AI Designer, Human-AI Interaction Designer, Machine Learning UX Designer, Intelligent Systems Designer.			
Summary statement	Designs the way how people experience AI-enabled products. They design interfaces, workflows, and interactions that make complex AI systems understandable, useful, and trustworthy with a focus on human needs, business goals, and machine capabilities.			
Mission	Ensures AI products and services are intuitive, usable, and aligned with user and business needs.			
Deliverables	Accountable		Responsible	Contributor
	- Human–AI Interaction Design - Trust & Usability of AI Experiences - AI System User Instructions - Transparency Information for Users		AI Experience Design Specs	- Product Strategy & Feature Definition - AI Governance Policy
Main tasks	- Design how users input intent, receive output, and stay in control (prompts, actions, feedback, corrections, confidence signals) - Turn model capabilities and constraints into features that solve user problems - Influence how the system responds, adapts, explains itself - Make uncertainty, limitations, and system confidence visible; give users meaningful ways to intervene or override - Identify edge cases, hallucinations, bias risks, and breakdowns — and design graceful recovery paths - Collaborate with technical teams to align user needs, model behaviour, and system constraints - Test, iterate, and refine AI experiences - Embed ethical and responsible AI principles - Ensure fairness, accessibility, privacy, and safety are addressed proactively in the design			
			Level	Descriptor
e-Competences (from e-CF)	A.4.	Product/Service Planning	e-3	Plans and manages product or service activities, including AI-enabled elements, ensuring alignment with business

				objectives, delivery constraints and regulatory requirements.
	A.6.	Application Design	e-3	Designs AI applications and data structures independently for routine or well-defined tasks. Selects suitable AI methods and technologies to meet project requirements, balancing cost, performance, and quality.
	A.9.	Innovating	e-3	Independently develops and adapts AI-based solutions to address defined business, societal, or research needs. Combines AI with other technological advances to enhance products, services, or processes creatively.
	A.10.	User Experience	e-4	Leads the definition and governance of user experience design strategies for AI-enabled products and services. Ensures consistency, trustworthiness, and responsible use of AI across user journeys and platforms.
	B.5.	Documentation Production	e-3	Independently produces and maintains AI documentation that integrates technical and compliance requirements.
	D.11.	Needs Identification	e-3	Independently engages stakeholders to identify and validate needs, translating them into AI solution requirements.
	E.4.	Relationship Management	e-3	Independently maintains and nurtures relationships with stakeholders involved in AI projects. Coordinates routine AI-related tasks and facilitates communication across teams.
Transversal aspects (from e-CF)	Be aware of and if applicable, behave proactively in: T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	Thinking skills - Think analytically - Organise information - Identify problems - Solve problems - Think creatively	Self-management skills - Focus on quality - Attend to detail - Meet commitments - Assume responsibility - Exert willingness to learn - Adapt to change	Social and communication skills - Communicate - Persuade - Show empathy - Exert customer-orientedness - Teach, train, instruct others - Work in teams - Comply with regulations	
KPI area	Understandable, useful, and trustworthy designed AI products and services			

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI ENGINEER		[2.3]
Related titles	AI Systems Engineer, AI Orchestration Engineer, AI Optimisation Engineer, AI Algorithm Engineer, Intelligent Systems Engineer, ML Engineer, ML Expert, DL Engineer, DL Expert, Neural Network Engineer, Computer Vision Engineer, Computer Vision Expert, NLP Engineer, NLP Expert, LLM Engineer, Generative AI Engineer, Conversational AI Engineer, Prompt Engineer, Agentic AI Engineer, AI Agent Engineer, Quantum AI Engineer, Quantum ML Engineer.		
Summary statement	Builds and deploys AI models and systems.		
Mission	Ensures building and implementing AI systems that may encompass a wide range of techniques. Ensures scalability, dependability and efficiency of AI systems. Manages deployment pipelines for AI solutions.		
Deliverables	Accountable	Responsible	Contributor
		• AI Model • AI Solution Documentation • Documented Code • Incident Response Plan • Secure and Compliant Solution • Test plan	• AI Security Policy • Data Architecture • Development Process • Experiment Design • Integrated AI Solution • ML Workflows • System Architecture • Technical Documentation GPAI & High Risk AI • Integration Transparency Information
Main tasks	• Develop, engineer and integrate AI/ML components • Follow AI safety and ethical guidelines • Select hardware, software, and AI/ML technologies and tools • Implement development and integration of AI components • Aware of and address known security vulnerabilities, applying security by design • Shape and prepare documentation • Provide advanced, component technical support • Resolve issues prior to and following testing		
		Level	Descriptor

e-Competences (from e-CF)	A.6.	Application Design	e-3	Designs AI applications and data structures independently for routine or well-defined tasks. Selects suitable AI methods and technologies to meet project requirements, balancing cost, performance and quality.
	A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.
	B.1.	Application Development	e-3	Develops AI-enhanced applications according to specifications, integrating AI/ML models into software solutions. Applies established AI platforms and frameworks to achieve functional requirements.
	B.2.	Component Integration	e-3	Independently integrates AI components into systems, ensuring interoperability, performance and security. Selects appropriate integration approaches and contributes to AI system design.
	B.3.	Testing	e-3	Independently conducts systematic testing of ICT and AI systems. Evaluates AI models for correctness, robustness, fairness, and compliance with standards. Provides preliminary reports and recommendations for improvements.
	B.4.	Solution Deployment	e-3	Implements AI solutions reliably in production, integrating models with systems and workflows. Monitors performance and executes predefined updates or retraining as required.
	B.5.	Documentation Production	e-3	Independently produces and maintains AI documentation that integrates technical and compliance requirements.
	C.4.	Problem Management	e-3	Independently diagnoses and resolves routine ICT and AI incidents. Applies established procedures to prevent recurrence.
	D.7.	Data Science and Analytics	e-3	Independently conducts data analysis and analytics tasks to support AI model development and AI-enhanced decision-making.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> - Think analytically - Think critically - Plan activities - Solve problems - Think creatively		<i>Self-management skills</i> - Meet commitments - Assume responsibility - Cope with uncertainty	<i>Social and communication skills</i> - Communicate - Teach, train, instruct others - Work in teams

	• Think innovatively	• Cope with stress • Exert willingness to learn • Adapt to change	• Exert ethical behaviour • Comply with regulations • Demonstrate trustworthiness
KPI area	Fully functional AI models, systems and algorithms		

	DEVELOPMENT & OPERATIONS			[2]
Profile title	AI APPLICATION DEVELOPER			[2.4]
Related titles	AI Developer, AI Software Developer, AI Systems Developer, Intelligent Systems Developer, Business Intelligence Developer, AI Programmer, AI Practitioner, LLM Developer, AI Chatbot Developer, AI Agent Developer, Agentic AI Developer, Quantum AI Developer.			
Summary statement	Designs and develops AI applications to meet solution specifications.			
Mission	Ensures developing, coding, and testing AI applications and algorithms. Writes code for AI models and develops AI algorithms. Implements AI solutions into applications and finetunes the AI models based on performance.			
Deliverables	Accountable		Responsible	Contributor
	Documented Code		- Functioning AI System - AI/ML Component - Integrated AI Solution	- AI Solution Documentation - Legal, Ethical and Safety Compliance
Main tasks	- Integrate pre-trained ML/DL models into applications - Build AI-powered features into apps - Write code to interact with models - Test AI-powered features for accuracy and user experience - Deploy AI models - Follow AI safety and ethical guidelines			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.6.	Application Design	e-3	Designs AI applications and data structures independently for routine or well-defined tasks. Selects suitable AI methods and technologies to meet project requirements, balancing cost, performance, and quality.
	B.1.	Application Development	e-3	Develops AI-enhanced applications according to specifications, integrating AI/ML models into software solutions. Applies established AI platforms and frameworks to achieve functional requirements.
	B.2.	Component Integration	e-3	Independently integrates AI components into systems, ensuring interoperability, performance and security. Selects appropriate integration approaches and contributes to AI system design.
	B.3.	Testing	e-2	Supports testing of ICT and AI-based systems under supervision. Executes predefined test procedures and records results. Applies basic AI

				evaluation methods and assists in documenting model behaviour.
	B.5.	Documentation Production	e-3	Independently produces and maintains AI documentation that integrates technical and compliance requirements.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Plan activities • Solve problems • Think innovatively		<i>Self-management skills</i> • Meet commitments • Assume responsibility • Cope with uncertainty • Exert willingness to learn	<i>Social and communication skills</i> • Communicate • Teach, train, instruct others • Work in teams • Exert ethical behaviour • Comply with regulations
KPI area	Fully functional AI applications			

	DEVELOPMENT & OPERATIONS			[2]
Profile title	AI RESEARCHER			[2.5]
Related titles	AI Research Scientist, ML Researcher, AI/ML/DL/LLM Scientist, AI Research Engineer, Algorithmic Research Engineer, Applied Research Scientist, Generative AI Research Scientist, AI Safety Research Scientist, Responsible AI Researcher, AI Ethics Research Scientist, Trustworthy AI Researcher.			
Summary statement	Conducts research, both, in AI and ML, to explore and develop new algorithms, models, and theoretical foundations in order to advance the field of AI.			
Mission	Advances AI technology by creating novel methods, improving model capabilities, and contributing research that enables safe, ethical, and impactful AI systems for the benefit of society. Operates at the intersection of computer science, mathematics, and domain knowledge to push the boundaries of what machines can learn, reason, and do.			
Deliverables	Accountable		Responsible	Contributor
	- Experiment Design - Original High Quality research - Disseminating Findings - Research Impact and Publications		- Developed AI Models and Experiments - Ethical Standards in Research - Research Strategies for AI Policies	- Educational Initiatives - Community Engagement - Technical Documentation GPAI - Model Evaluation & Systemic Risk Documentation
Main tasks	- Design and test new algorithms or learning paradigms - Develop theoretical models to explain AI behaviour or performance - Conduct experiments to validate hypotheses on benchmarks or simulations - Publish research papers in AI conferences and journals - Collaborate with academic and industry peers on long-term research - Explore fundamental challenges such as generalization, interpretability, or alignment - Mentor students, interns, or junior researchers in scientific methods			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.7.	Technology Trend Monitoring	e-5	Provides strategic vision and authority for ICT and AI innovation. Initiates and governs transformational AI initiatives and shapes long-term AI adoption strategies.
	A.9.	Innovating	e-5	Defines the strategic direction for AI-driven innovation across the organisation or research domain. Envisions transformative AI

				applications that create new markets, services, or societal impact.
	D.7.	Data Science and Analytics	e-5	Defines and drives organisational strategy for AI-enabled data analytics, shaping AI adoption and governance.
	D.10.	Information and Knowledge Management	e-4	Designs and improves AI knowledge management processes and structures across multiple teams or business units. Advises on AI knowledge lifecycle, governance, and strategic use. Promotes collaborative knowledge sharing and innovation.
	D.11.	Needs Identification	e-4	Leads the identification and articulation of AI-related needs, ensuring alignment with business strategy, regulatory compliance, and ethical principles.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Plan activities • Solve problems • Think creatively • Think innovatively			<i>Self-management skills</i> • Act independently • Show initiative • Manage personal progression • Forms judgements • Manage frustration • Exert willingness to learn • Demonstrate curiosity
				<i>Social and communication skills</i> • Promote • Persuade • Report • Teach, train, instruct others • Build and maintain networks • Hold a vision • Exert ethical behaviour • Demonstrate trustworthiness
KPI area	Quality and impact of technical publications and developed technologies			

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI QUALITY & EVALUATION SPECIALIST		[2.6]
Related titles	AI Test Specialist, AI Tester, AI Testing Professional, AI Software Tester, Software AI/ML Tester, AI QA Tester, Tester AI Application Development, AI Test Engineer, AI Prompt Tester, AI Evaluator, Evaluator of AI Models, AI/ML Content Evaluator, AI Prompt Evaluator, AI Writing Evaluator, LLM Evaluator, AI Reviewer, AI Rater, AI Quality Rater, AI Data Rater, AI Quality Engineer, AI Quality Specialist, AI QA Specialist.		
Summary statement	Ensures AI systems meet defined standards for performance, robustness, fairness, reliability, safety, and ethical behaviour prior to release. Evaluates AI systems across a wide range of tasks, use cases, and performance metrics. Assesses model outputs for accuracy, relevance, safety, robustness, and overall quality and reviews prompts, responses, and model behaviour against established standards.		
Mission	Ensures high-quality, reliable, and responsible AI performance through end-to-end model evaluation. Designs and executes testing, validation, and evaluation processes that assess AI models and systems against technical, ethical, and business requirements.		
Deliverables	Accountable	Responsible	Contributor
	• Evaluation of Quality and Reliability • Human Rating Guideline Adherence • Evaluation Outcome Reporting • Test Plan • Accuracy, Robustness & Cybersecurity Evidence	• Test Plan • Test Procedure • Test Result • Annotation and Judgment Task • Feedback Documentation • Executing Evaluation Tasks • Legal, Ethical and Safety Compliance	• Validated AI Solution • AI Solution Documentation • Quality Assurance and Auditing • Quality Assurance Training • Conformity Assessment Report • Quality Management System Documentation • Common Specifications Compliance Evidence • Model Evaluation & Systemic Risk Documentation
Main tasks	• Design robust evaluation methodologies at micro (data, model) and macro (business KPI) levels		

	• Develop, implement, and maintain test plans and test cases for AI models, data pipelines, and system integrations • Validate AI model performance, robustness, fairness, explainability, and compliance with ethical standards • Test data quality, bias, drift, and representativeness to ensure training and inference reliability • Assess explainability, transparency, and human-centredness of AI outputs • Perform functional, non-functional, performance, security, and user-centred testing • Identify, document, and report defects, inconsistencies, and risks related to AI system behaviour • Provide actionable suggestions for improvements in data, model design, and system integration • Collaborate with developers, data scientists, and architects to enhance system quality • Monitor deployed AI systems for ongoing performance, fairness, and compliance			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.8.	Sustainability Management	e-3	Applies established methods to monitor and improve the sustainability performance of AI systems and projects.
	B.3.	Testing	e-4	Leads testing activities for complex ICT and AI systems. Integrates AI model evaluation with broader system testing. Ensures adherence to regulatory, ethical, and internal standards. Advises teams on mitigation of AI risks and improvement of system robustness.
	B.5.	Documentation Production	e-3	Independently produces and maintains AI documentation that integrates technical and compliance requirements.
	D.2.	ICT Quality Strategy Development	e-4	Defines, evolves, and integrates AI quality objectives across projects and value streams. Guides teams to ensure trustworthy and resilient AI systems.
	D.7.	Data Science and Analytics	e-2	Applies basic data collection, cleaning, and analysis techniques to support AI-driven projects under supervision.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.6.	ICT Quality Management	e-3	Ensures the quality of AI systems within a defined scope by applying and adapting quality governance practices. Defines and monitors AI quality indicators, evaluates AI outcomes, and identifies improvement actions. Contributes to

				risk-based decisions related to AI performance, reliability, and compliance.
	E.8.	Information Security Management	e-3	Enables the effective security management of AI systems by implementing and adapting AI-specific security measures. Ensures that AI risks are identified, assessed, and mitigated within projects and operational environments, working with stakeholders to support secure and compliant AI use.
Transversal aspects (from e-CF)	Be aware of and if applicable, behave proactively in: T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	Thinking skills - Think analytically - Think critically - Plan activities - Identify problems - Improvise		Self-management skills - Focus on quality - Forms judgements - Cope with stress - Manage frustration - Exert willingness to learn	Social and communication skills - Promote - Negotiate - Report - Teach, train, instruct others - Collaborate with others - Work in teams - Exert ethical behaviour - Comply with regulations - Demonstrate trustworthiness
KPI area	Quality of output of AI system/Consistency of the test plan according to the defined quality criteria			

	DEVELOPMENT & OPERATIONS			[2]
Profile title	AI DEPLOYMENT ENGINEER			[2.7]
Related titles	AI Implementation Engineer, AI Systems Engineer, AI Production Engineer, AI Integration Engineer, Model Deployment Engineer, ML Deployment Engineer, Applied AI Engineer.			
Summary statement	Packages, releases, and promotes AI models and AI-enabled services into production environments in a secure, scalable, and repeatable manner.			
Mission	Ensures AI solutions move reliably from development to production by managing deployment pipelines, environment configurations, and release processes while minimising operational risk and downtime.			
Deliverables	Accountable		Responsible	Contributor
	• Production-Ready AI/ML Models		• Model Deployment Pipelines	• Model Architecture • Performance & Monitoring Dashboards • Legal, Ethical and Safety Compliance
Main tasks	• Deploy and integrate ML/AI models into production systems, ensuring seamless handoff from data science teams to production systems • Build, maintain, and automate CI/CD pipelines for model testing, validation, rollout, versioning, and rollback • Monitor deployed models for performance, accuracy, reliability, and drift • Detect and resolve production issues, including data anomalies, failures, and incidents • Optimise system performance, including latency, throughput, scalability, and resource usage • Collaborate with cloud, DevOps, infrastructure, and engineering teams to ensure efficient deployment and operations • Manage security, privacy, and compliance for AI systems, including access controls, auditing, and safe data handling • Ensure AI safety, ethical use, and operational best practices are followed • Provide operational feedback to data science and ML teams to improve model design and readiness for production • Support continuous improvement of AI infrastructure and workflows, including cost and compute efficiency			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	B.2.	Component Integration	e-3	Independently integrates AI components into systems, ensuring interoperability, performance and security. Selects appropriate integration approaches and contributes to AI system design.

	B.3.	Testing	e-2	Supports testing of ICT and AI-based systems under supervision. Executes predefined test procedures and records results. Applies basic AI evaluation methods and assists in documenting model behaviour.
	B.4.	Solution Deployment	e-3	Implements AI solutions reliably in production, integrating models with systems and workflows. Monitors performance and executes predefined updates or retraining as required.
	B.5.	Documentation Production	e-2	Produces simple AI-related documents following established templates and guidelines.
	C.2.	Change Support	e-3	Plans and executes AI-related changes with limited supervision. Evaluates impact and coordinates changes to minimise service disruption and risk.
	C.3.	Service Delivery	e-3	Ensures reliable and secure delivery of AI-enabled services. Takes responsibility for operational performance, monitoring and incident management of AI components. Proactively addresses service risks to maintain agreed service levels.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Plan activities • Identify problems • Solve problems • Improvise			<i>Self-management skills</i> • Focus on quality • Assume responsibility • Cope with stress • Exert willingness to learn
				<i>Social and communication skills</i> • Communicate • Work in teams • Comply with regulations
KPI area	Safely, efficiently, and repeatedly deployed AI models			

	DEVELOPMENT & OPERATIONS		[2]
Profile title	MLOPS ENGINEER		[2.8]
Related titles	AIOps Engineer, AIOps Specialist, AIOps Professional, AI Operations Specialist, MLOps Engineer, MLOps Specialist, MLOps Professional, ML Operations Specialist, LLMOps Engineer, AI/ML Workflow Engineer.		
Summary statement	Develops, implements and maintains processes and tools that automate creating, training, deploying and updating ML models.		
Mission	Deploys and maintains the ML models in the production environment. Focuses on automating, simplifying, and streamlining ML models across the entire development lifecycle and improving workflows to develop, deploy, and manage them faster and easier. This includes standardising processes, increasing visibility and collaboration, and automating AI/MLOps tasks.		
Deliverables	Accountable	Responsible	Contributor
	• Model Deployment Processes • Scalability and Reliability • Record-Keeping / Logs	• AI/ML Security Guidelines • Automating Workflows • Development Process • Validated AI Solution	• AI Solution in Operation • Data Pipeline Integration • Security and Privacy • Testing and Evaluation
Main tasks	• Analyse requirements for ML model deployment, scaling, and lifecycle management • Standardize and document processes for model development, validation, deployment, and monitoring • Design and implement CI/CD pipelines for AI/ML models and data workflows • Automate the deployment, monitoring, retraining, and rollback of ML models in production • Manage infrastructure for ML workloads, including cloud services, containerization, and orchestration platforms • Implement tools for model versioning, data versioning, and experiment tracking • Ensure system security, compliance, and scalability across the ML lifecycle • Monitor model performance, data and model drift, and system health, triggering automated responses when necessary • Collaborate with data scientists, developers, and operations teams to improve AI/ML development and deployment workflows • Continuously optimise automation workflows to reduce friction, increase reliability, and speed up delivery • Follow AI safety and ethical guidelines on ML models		

			Level	Descriptor
e-Competences <i>(from e-CF)</i>				
	B.1.	Application Development	e-3	Develops AI-enhanced applications according to specifications, integrating AI/ML models into software solutions. Applies established AI platforms and frameworks to achieve functional requirements.
	B.2.	Component Integration	e-3	Independently integrates AI components into systems, ensuring interoperability, performance and security. Selects appropriate integration approaches and contributes to AI system design.
	B.4.	Solution Deployment	e-3	Implements AI solutions reliably in production, integrating models with systems and workflows. Monitors performance and executes predefined updates or retraining as required.
	B.6.	Systems Engineering	e-3	Independently engineers AI infrastructure components and integrates AI systems into existing IT environments. Applies standard methods to ensure performance, security, and compliance, and contributes to AI system design.
	C.2.	Change Support	e-3	Plans and executes AI-related changes with limited supervision. Evaluates impact and coordinates changes to minimise service disruption and risk.
	C.3.	Service Delivery	e-3	Ensures reliable and secure delivery of AI-enabled services. Takes responsibility for operational performance, monitoring and incident management of AI components. Proactively addresses service risks to maintain agreed service levels.
	C.5.	Systems Management	e-3	Manages and maintains IT and AI systems independently, ensuring reliable and secure operation. Resolves operational issues and contributes to continuous improvement of AI-enabled services.
	E.5.	Process Improvement	e-3	Independently performs and monitors AI development and operational processes. Contributes to AI process evaluation, improvement suggestions, and risk awareness.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think holistically • Think quickly		<i>Self-management skills</i> • Act independently • Assume accountability	<i>Social and communication skills</i> • Communicate

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	• Plan activities • Solve problems • Improvise	• Cope with uncertainty • Exert willingness to learn	• Teach, train, instruct others • Work in teams • Comply with regulations
KPI area	Reduced time to implement AI solutions, effective deployment of AI solutions		

	DEVELOPMENT & OPERATIONS			[2]
Profile title	AI RELIABILITY ENGINEER			[2.9]
Related titles	ML Reliability Engineer, AI Ops Reliability Engineer, AI Robustness Engineer, AI Systems Reliability Engineer, AI Assurance Engineer, Trustworthy AI Engineer, Autonomous Systems Reliability Engineer.			
Summary statement	Ensures AI systems and pipelines are robust, resilient, and fault-tolerant. Designs architectures and processes that prevent failures, recover from incidents, and maintain operational stability, so AI systems can be trusted to run reliably at scale.			
Mission	Delivers resilient and dependable AI systems by building fault-tolerant architectures, implementing safeguards, and optimising operational processes, ensuring AI performs reliably under all conditions.			
Deliverables	Accountable	Responsible	Contributor	
	• Robust, fault-tolerant AI pipelines • AI Reliability and Safety Reports • System uptime and Resilience Metrics	• Reliability Tests and Frameworks • AI System Failures Analysis • Incident Response Log • Incident Response Plan	• Model Design Recommendations • CI/CD pipeline • Risk & Compliance Documentation • Legal, Ethical and Safety Compliance • Cybersecurity Protection Evidence • Accuracy, Robustness & Cybersecurity Evidence • Serious Incidents & Corrective Reporting	
Main tasks	• Design and implement fault-tolerant AI architectures and pipelines • Conduct stress testing and load testing to identify system weaknesses • Develop and maintain automated recovery and failover mechanisms for AI services • Collaborate with MLOps, DevOps, and engineering teams to ensure production AI systems meet reliability SLAs • Analyse incidents and system failures, implement preventive measures, and optimise system stability • Ensure AI systems are scalable and can handle production workloads without degradation • Work closely with ML engineers, data scientists, and DevOps/ML Ops teams to integrate reliability practices into the full AI lifecycle			

	- Advise on design decisions that impact safety, robustness, and operational reliability - Ensure adherence to internal safety standards and external regulatory or ethical guidelines - Stay up-to-date with AI safety, robustness, and reliability research - Integrate new techniques, tools, or methodologies to improve AI system reliability over time			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.5.	Architecture Design	e-3	Independently implements and adapts AI-enabled architectural solutions. Ensures alignment with enterprise architecture and policies. Identifies minor risks and recommends improvements.
	B.3.	Testing	e-3	Independently conducts systematic testing of ICT and AI systems. Evaluates AI models for correctness, robustness, fairness, and compliance with standards. Provides preliminary reports and recommendations for improvements.
	C.5.	Systems Management	e-3	Manages and maintains IT and AI systems independently, ensuring reliable and secure operation. Resolves operational issues and contributes to continuous improvement of AI-enabled services.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.6.	ICT Quality Management	e-3	Ensures the quality of AI systems within a defined scope by applying and adapting quality governance practices. Defines and monitors AI quality indicators, evaluates AI outcomes, and identifies improvement actions. Contributes to risk-based decisions related to AI performance, reliability, and compliance.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> - Think analytically - Think critically - Identify problems - Think creatively - Improvise		<i>Self-management skills</i> - Focus on quality - Forms judgements - Cope with stress - Manage frustration - Exert willingness to learn	<i>Social and communication skills</i> - Communicate - Report - Teach, train, instruct others - Collaborate with others

			• Exert ethical behaviour • Comply with regulations • Demonstrate trustworthiness
KPI area	Reliable and resilient AI systems and pipelines		

	DEVELOPMENT & OPERATIONS			[2]
Profile title	AI OBSERVABILITY & MONITORING SPECIALIST			[2.10]
Related titles	AI Monitoring Engineer, AI Observability Engineer, AI Performance & Monitoring Engineer, AI/ML Monitoring Specialist, ML Systems Monitoring Engineer.			
Summary statement	Ensures AI models and pipelines are continuously tracked, measured, and analysed. Detects anomalies, monitors model performance, and provides actionable insights to maintain accuracy, fairness, and trustworthiness in AI systems. Builds the instrumentation needed to observe AI systems and models in production.			
Mission	Enables timely detection and diagnosis of issues by monitoring AI performance and drift, and by delivering actionable insights to support operational, technical, and business decision-making. Enables timely, informed responses that protect performance, compliance, and user trust.			
Deliverables	Accountable	Responsible	Contributor	
	- Operational Monitoring Dashboards - Model Performance and Drift Reports	- Alerting Rules - Anomaly Detection Configurations - Incident Investigation Report	- Model Retraining - Documentation of Post-Market Monitoring & Corrective Actions	
Main tasks	- Define, implement, and maintain observability frameworks for AI models and pipelines - Monitor key AI metrics: model performance, accuracy, data drift, feature drift, latency, and system health - Set up automated alerts and dashboards for anomalies and performance deviations - Investigate anomalies, diagnose root causes, and provide actionable insights to improve AI performance - Collaborate with data scientists and engineers to continuously improve model reliability and trustworthiness - Report on AI system performance and health to stakeholders, ensuring transparency and accountability - Follow AI safety and ethical guidelines			
		Level	Descriptor	
e-Competences <i>(from e-CF)</i>	B.3.	Testing	e-3	Independently conducts systematic testing of ICT and AI systems. Evaluates AI models for correctness, robustness, fairness, and compliance with standards. Provides preliminary reports and recommendations for improvements.

	C.3.	Service Delivery	e-3	Ensures reliable and secure delivery of AI-enabled services. Takes responsibility for operational performance, monitoring and incident management of AI components. Proactively addresses service risks to maintain agreed service levels.
	C.4.	Problem Management	e-3	Independently diagnoses and resolves routine ICT and AI incidents. Applies established procedures to prevent recurrence.
	C.5.	Systems Management	e-3	Manages and maintains IT and AI systems independently, ensuring reliable and secure operation. Resolves operational issues and contributes to continuous improvement of AI-enabled services.
	D.7.	Data Science and Analytics	e-3	Independently conducts data analysis and analytics tasks to support AI model development and AI-enhanced decision-making.
	D.10	Information and Knowledge Management	e-3	Independently manages AI knowledge and information within defined processes. Analyses business processes to identify AI information needs. Applies tools and techniques to organise, access, and share AI knowledge effectively.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Identify problems •			<i>Self-management skills</i> • Focus on quality • Forms judgements • Cope with stress • Manage frustration • Exert willingness to learn
				<i>Social and communication skills</i> • Communicate • Promote • Report • Collaborate with others • Exert ethical behaviour • Comply with regulations • Demonstrate trustworthiness
KPI area	AI systems that are observable, measurable, and trustworthy in operation			

	DEVELOPMENT & OPERATIONS			[2]
Profile title	AI INCIDENT RESPONSE & REPORTING LEAD			[2.11]
Related titles	AI Incident Response Manager, AI Incident Lead, AI Systems Incident Manager, AI Safety Incident Coordinator, AI Operations Response Lead, AI Monitoring & Response Lead, Head of AI Incident Response & Reporting, AI Oversight & Incident Manager, AI Incident & Assurance Lead.			
Summary statement	Oversees, coordinates and manages the identification, investigation, and resolution of AI system incidents while ensuring timely, accurate reporting to stakeholders and regulators. Collaborates across engineering, risk, and compliance teams to monitor AI behaviour, mitigate risks, and improve system safety and reliability.			
Mission	Ensures safe, reliable, and accountable AI operations by leading incident response, analysing root causes, and providing clear, actionable reporting to stakeholders and regulators.			
Deliverables	Accountable		Responsible	Contributor
	• AI Incident Response Protocols • AI Incident Report • Serious Incidents & Corrective Reporting		• AI Risk Dashboards & Metrics • Regulatory Compliance Submissions	• AI System Improvements • Organisational Risk & Governance Reports • Documentation of Post-Market Monitoring & Corrective Actions
Main tasks	• Detect, investigate, and resolve AI system incidents efficiently and safely • Produce timely, accurate, and actionable incident reports for leadership, stakeholders, and regulators • Conduct root cause analysis, assess impact, and implement corrective actions to prevent recurrence • Monitor AI systems for adherence to organisational policies, ethical standards, and regulatory requirements • Develop and refine incident response protocols, playbooks, and preventive measures • Work with engineering, risk, compliance, and governance teams to address AI risks and enhance system reliability • Maintain dashboards and documentation on AI incidents, identifying patterns and recommending strategic improvements			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	B.5.	Documentation Production	e-3	Independently produces and maintains AI documentation that integrates technical and compliance requirements.
	C.3.	Service Delivery	e-3	Ensures reliable and secure delivery of AI-enabled services. Takes responsibility for

				operational performance, monitoring and incident management of AI components. Proactively addresses service risks to maintain agreed service levels.
	C.4.	Problem Management	e-4	Leads problem management across ICT and AI systems. Proactively prevents incidents and optimises system and AI model performance.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.4.	Relationship Management	e-3	Independently maintains and nurtures relationships with stakeholders involved in AI projects. Coordinates routine AI-related tasks and facilitates communication across teams.
	E.8.	Information Security Management	e-4	Ensures the security, resilience, and governance of AI systems across organisational domains. Defines AI security strategies, governance frameworks, and risk management approaches aligned with business and AI strategies. Advises stakeholders on AI-related security, compliance, and trustworthiness requirements.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think quickly • Identify problems • Solve problems • Think creatively			<i>Self-management skills</i> • Focus on quality • Make decisions • Assume accountability • Cope with uncertainty
				<i>Social and communication skills</i> • Communicate • Negotiate • Report • Collaborate with others • Teach, train, instruct others • Motivate others • Exert ethical behaviour • Comply with regulations
KPI area	Resolution of AI system incidents and correct reporting			

	DEVELOPMENT & OPERATIONS			[2]
Profile title	AI PLATFORM ENGINEER			[2.12]
Related titles	AI Infrastructure Engineer, AI Systems Administrator, AI Admin, AI SysAdmin, ML Administrator, ML Admin.			
Summary statement	Manages and maintains the shared infrastructure, platforms, and services that support the development, deployment, and operation of AI systems at scale.			
Mission	Provides secure, scalable, and cost-efficient infrastructure and platforms by managing compute, storage, environments, and access controls that enable teams to build and run AI solutions effectively.			
Deliverables	Accountable		Responsible	Contributor
	- Provisioned AI Infrastructure & Platforms - Secure Access Measures		Operational Guidelines for AI Platform Usage	- End-to-End AI Deployment Pipelines - AI Model Performance & Scalability Reports - Record-Keeping / Logs
Main tasks	- Ensure compute resources are available and performant for AI workloads - Provide reproducible, scalable environments for model development and deployment - Implement Infrastructure-as-Code (IaC): Automate infrastructure setup and configuration reliably - Manage storage and data access - Set up monitoring and logging systems - Improve resource utilization and reduce operational expenses - Enforce secure access, encryption, and regulatory standards - Streamline the delivery of models through automated pipelines - Troubleshoot infrastructure and environment issues; resolve failures and performance bottlenecks efficiently - Collaborate on scalable AI solutions: Advise teams on distributed training, resource allocation, and performance improvements			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	B.2.	Component Integration	e-3	Independently integrates AI components into systems, ensuring interoperability, performance and security. Selects appropriate integration approaches and contributes to AI system design.
	B.3.	Testing	e-2	Supports testing of ICT and AI-based systems under supervision. Executes predefined test procedures and records results. Applies basic AI evaluation methods and assists in documenting model behaviour.

	B.6.	Systems Engineering	e-3	Independently engineers AI infrastructure components and integrates AI systems into existing IT environments. Applies standard methods to ensure performance, security, and compliance, and contributes to AI system design.
	C.3.	Service Delivery	e-3	Ensures reliable and secure delivery of AI-enabled services. Takes responsibility for operational performance, monitoring and incident management of AI components. Proactively addresses service risks to maintain agreed service levels.
	C.5.	Systems Management	e-3	Manages and maintains IT and AI systems independently, ensuring reliable and secure operation. Resolves operational issues and contributes to continuous improvement of AI-enabled services.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.8.	Information Security Management	e-2	Applies defined AI security policies, procedures, and controls to AI systems and components under guidance. Contributes to the secure operation of AI-enabled services by following established governance, risk management, and incident response processes related to AI.
Transversal aspects <i>(from e-CF)</i>	Be aware of and if applicable, behave proactively in: T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think quickly • Plan activities • Solve problems • Improvise			<i>Self-management skills</i> • Meet commitments • Assume responsibility • Cope with stress • Exert willingness to learn
				<i>Social and communication skills</i> • Communicate • Teach, train, instruct others • Collaborate with others • Work in teams • Exert customer orientedness • Comply with regulations
KPI area	Effectiveness of AI infrastructure in operation			

B.3 Support and Guidance

	SUPPORT & GUIDANCE			[3]
Profile title	AI SECURITY SPECIALIST			[3.1]
Related titles	AI Security Engineer, AI Security Professional, AI Security Operations Centred Expert, ML Security Specialist, ML Security Engineer.			
Summary statement	Ensures the implementation of the organisation’s AI security policy by the secure and appropriate protection of AI solutions and the data they depend on.			
Mission	Defines, proposes and implements necessary information security techniques and practices to address AI-based threats and attacks that specifically target AI technologies, compliant with legal requirements, information security standards and procedures. Contributes to AI security practices, awareness and compliance by providing advice, support, information and training.			
Deliverables	Accountable	Responsible	Contributor	
	• Secure AI/ML Lifecycle • AI Security Policy • Cybersecurity Protection Evidence	• Security Measures against AI/ML-Specific Attacks • Cybersecurity Protection Evidence • Incident Response Plan • AI Solution and Critical Business Process Integration Proposal (Security) • Information Security Risk Assessment	• AI/ML Security Guidelines • Risk Management Policy • Information Security Risk Treatment Plan • Information Security Policy • Accuracy, Robustness & Cybersecurity Evidence	
Main tasks	• Analyse AI systems and data flows to identify potential security vulnerabilities and threats • Define, propose, and implement information security techniques specific to AI/ML systems and models • Ensure compliance of AI/ML solutions with legal requirements, information security standards, ethical guidelines and internal policies • Develop and enforce security measures against AI/ML-specific attacks such as adversarial attacks, model inversion, data poisoning, and model theft • Secure training data, model artifacts, APIs, and inference environments • Conduct risk assessments and threat modelling for AI/ML solutions • Monitor AI/ML systems for security breaches, anomalies, and potential exploitation • Collaborate with development, data science, and operations teams to integrate security into the AI/ML lifecycle (security by design)			

	Contribute to the development and maintenance of AI/ML security guidelines, incident response plans, and audit documentation			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.5.	Architecture Design	e-3	Independently implements and adapts AI-enabled architectural solutions. Ensures alignment with enterprise architecture and policies. Identifies minor risks and recommends improvements.
	A.7.	Technology Trend Monitoring	e-4	Provides leadership in the monitoring, evaluation and exploitation of ICT and AI technological developments. Advises on AI innovation strategies and ensures alignment with organisational objectives.
	C.4.	Problem Management	e-3	Independently diagnoses and resolves routine ICT and AI incidents. Applies established procedures to prevent recurrence.
	D.1.	Information Security Strategy Development	e-4	Develops and integrates AI security strategy across projects or business units. Aligns AI security objectives with organisational goals, manages AI risks proactively, and ensures ethical AI deployment.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.8.	Information Security Management	e-4	Ensures the security, resilience, and governance of AI systems across organisational domains. Defines AI security strategies, governance frameworks, and risk management approaches aligned with business and AI strategies. Advises stakeholders on AI-related security, compliance, and trustworthiness requirements.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> - Think critically - Plan activities - Identify problems - Solve problems - Improvise		<i>Self-management skills</i> - Focus on quality - Assume accountability - Forms judgements - Cope with uncertainty - Exert willingness to learn	<i>Social and communication skills</i> - Persuade - Report - Teach, train, instruct others - Work in teams - Exert ethical behaviour

			• Comply with regulations
KPI area	Effectiveness of security measures in place		

	SUPPORT & GUIDANCE			[3]
Profile title	AI SERVICE SUPPORT SPECIALIST			[3.2]
Related titles	AI Support Specialist, AI Customer Support Specialist, AI Services Support Specialist, AI Operations Support Specialist, AI Platform Support Specialist, AI Application Support Specialist, AI Client Support Specialist, AI Customer Success Specialist, AI Service Delivery Specialist.			
Summary statement	Provides remote or onsite diagnosis and user support to internal or external clients with technical issues regarding AI-enabled services.			
Mission	Enables users to have an efficient and secure use of AI services and a positive user experience. Maintains a smooth operation of AI services by feeding insights back into continuous service improvement, while addressing issues and supporting users.			
Deliverables	Accountable		Responsible	Contributor
	- Resolved Support Tickets/Incident Records - User Support Case Resolution Outcomes		- Incident and Service Support Reports - Troubleshooting Guides	Continuous Service Improvement Backlog
Main tasks	- Diagnose and resolve AI service issues by troubleshooting user-reported incidents remotely or onsite - Provide day-to-day user support for AI-enabled tools, including access issues, usage questions, and basic configuration - Monitor AI service performance and availability, identifying anomalies or degradation impacting users - Escalate complex technical issues to AI engineers, data science, or platform teams with clear documentation and impact analysis - Guide users on secure and compliant use of AI services, following internal policies, data protection requirements and AI safety and ethical guidelines - Document incidents, resolutions, and known issues in ticketing and knowledge management systems - Collect user feedback and operational insights to identify recurring issues and improvement opportunities - Contribute to continuous service improvement by recommending process, tooling, or usability enhancements - Support onboarding and adoption of AI services, including basic user training and usage guidance			
			Level	Descriptor
e-Competences (from e-CF)	C.1.	User Support	e-2	Provides user support for standard AI-enabled systems and services under supervision. Addresses routine user requests related to AI functionalities and follows established procedures to resolve or escalate incidents.

	C.2.	Change Support	e-2	Applies defined change management procedures to ICT and AI solutions under guidance. Supports implementation of approved AI changes and monitors their operational impact.
	C.3.	Service Delivery	e-2	Provides service delivery support for AI-enabled services under guidance. Ensures AI services operate according to defined procedures, service levels and security requirements. Identifies and escalates AI-related incidents and performance deviations.
	C.4.	Problem Management	e-2	Supports resolution of ICT and AI incidents under guidance. Helps collect data on AI system errors and monitors alerts.
Transversal aspects (from e-CF)	Be aware of and if applicable, behave proactively in: T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think quickly • Identify problems • Solve problems		<i>Self-management skills</i> • Focus on quality • Assume responsibility • Exert result-orientedness • Manage frustration • Exert willingness to learn	<i>Social and communication skills</i> • Communicate • Report • Show empathy • Exert customer orientedness • Teach, train, instruct others • Exert social awareness • Demonstrate trustworthiness
KPI area	Solved Incident			

	SUPPORT & GUIDANCE			[3]
Profile title	AI EDUCATOR			[3.3]
Related titles	AI Lecturer, AI Teacher, AI Trainer, Trainer in AI, AI Curriculum Developer, AI Learning Development Manager, AI Training & Competence Specialist, AI Literacy & Training Specialist.			
Summary statement	Educates and trains professionals to reach optimal AI competence to support organisation performance.			
Mission	Provide the knowledge and skills required to ensure that people are able to effectively perform AI related tasks in the workplace.			
Deliverables	Accountable		Responsible	Contributor
	• Learning Outcomes • AI Skills Needs Analysis		• AI Learning Programme/ Training Course • AI Literacy Programme • Educational Initiatives	• AI Training Policy • Quality Assurance (Training) • Legal, Ethical and Safety Compliance
Main tasks	• Conduct AI training needs analyses • Design programmes to meet needs regarding AI • Translate AI concepts into appropriate learning • Embedding ethics/sustainability into learning programmes and curricula • Produce and/or update existing educational materials (content and method) • Adapt third party training material to support individual competence development in line with organisational needs • Deliver effective training in classroom, hybrid, on-line; formally or informally • Monitor, evaluate and report effectiveness of education/training • Evaluate and report performance of learners • Encourages continuous professional development • Include AI ethics aspects and guidelines in education/training • Foster critical and reflective thinking about AI impacts			
			Level	Descriptor
e-Competences (from e-CF)	A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.
	B.5.	Documentation Production	e-3	Independently produces and maintains AI documentation that integrates technical and compliance requirements.

	D.3.	Education and Training Provision	e-4	Defines and manages AI training programmes that enhance organisational AI capability.
	D.9.	Personnel Development	e-3	Independently identifies AI skill gaps, contributes to AI-focused learning initiatives, and applies AI competences in role-specific contexts.
	D.10.	Information and Knowledge Management	e-4	Designs and improves AI knowledge management processes and structures across multiple teams or business units. Advises on AI knowledge lifecycle, governance, and strategic use. Promotes collaborative knowledge sharing and innovation.
	D.11.	Needs Identification	e-3	Independently engages stakeholders to identify and validate needs, translating them into AI solution requirements.
	E.4.	Relationship Management	e-3	Independently maintains and nurtures relationships with stakeholders involved in AI projects. Coordinates routine AI-related tasks and facilitates communication across teams.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think holistically • Organise information • Think innovatively • Improvise			<i>Self-management skills</i> • Focus on quality • Meet commitments • Attend to detail • Assume responsibility • Show commitment • Forms judgements • Exert willingness to learn • Adapt to change
				<i>Social and communication skills</i> • Communicate • Show empathy • Exert customer orientedness • Coach, mentor, advise others • Teach, train, instruct others • Exert social awareness • Motivate others • Comply with regulations • Respect confidentiality
KPI area	Effectiveness of the AI training programme			

	SUPPORT & GUIDANCE			[3]
Profile title	AI ADVISOR			[3.4]
Related titles	AI Consultant, AI Specialist, AI Adoption Specialist, AI Adoption Advisor, AI Strategy Advisor, AI Business Advisor, AI Solutions Advisor, AI Solutions Consultant, AI Capability Advisor, AI Use Case Advisor, AI Portfolio Advisor, AI Value Advisor, AI Transformation Advisor, AI Innovation Advisor, AI Strategic Planning Advisor, AI Legal Advisor, AI Ethics Consultant.			
Summary statement	Provides advice and supports understanding of how AI adds value to an organisation.			
Mission	Maintains a technology watch to inform stakeholders of existing and emerging AI technologies and their potential to add value. Supports the identification of needs and AI solutions for achieving organisation and AI/IT strategic goals.			
Deliverables	Accountable		Responsible	Contributor
	• New AI Solution Proposal • Critical Business Process Integration Proposal • Opportunity Memo		• Knowledge or Information Base	• AI Project Plan • Business Requirements • Legal, Ethical and Safety Compliance
Main tasks	• Provide advice on how to optimise the use of existing tools and systems with AI based tools and systems • Raise awareness of AI-based innovations and potential value to a business • Make recommendations for the development and implementation of a business project or AI solution • Participate in scoping the business case for potential AI projects • Participate in the assessment and choice of AI solutions • Assess risks of change to business continuity and for information security and privacy • Identify ethical and safety risks and advise on mitigation measures			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.1.	IS and Business Strategy Alignment	e-4	Aligns IS and AI strategy with business strategy, integrating AI capabilities into enterprise architecture while managing risk, sourcing, and governance.
	A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.
	A.9	Innovating	e-4	Leads innovation projects that exploit AI to create novel solutions or new business/research opportunities. Advises teams or stakeholders on the strategic use of AI to drive value, efficiency, or societal benefit.

	D.11.	Needs Identification	e-4	Leads the identification and articulation of AI-related needs, ensuring alignment with business strategy, regulatory compliance, and ethical principles.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.4.	Relationship Management	e-4	Guides and coordinates stakeholders across multiple functions or teams in AI initiatives, fostering alignment and trust. Proactively manages expectations, addresses concerns, and resolves conflicts.
	E.5.	Process Improvement	e-4	Leads the design, implementation, and continuous improvement of AI processes. Ensures alignment with organisational objectives, ethical standards, and compliance.
	E.7.	Business Change Management	e-4	Leads AI-driven transformation programs, designing change strategies covering structural, cultural, and stakeholder factors. Evaluates outcomes using AI metrics, integrates governance, ethics, and compliance, and promotes AI literacy and organisational readiness.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Think holistically • Identify problems • Solve problems • Think creatively • Think innovatively		<i>Self-management skills</i> • Act independently • Focus on quality • Meet commitments • Show initiative • Forms judgements • Cope with uncertainty • Manage frustration • Exert willingness to learn • Adapt to change • Exercise self-reflection	<i>Social and communication skills</i> • Communicate • Persuade • Report • Exert customer orientedness • Coach, mentor, advise others • Collaborate with others • Build and maintain networks • Exert business orientation • Exert organisation sensitivity • Exert political sensitivity • Exert ethical behaviour

			• Comply with regulations • Respect confidentiality • Demonstrate trustworthiness
KPI area	Relevance of proposals regarding AI solutions to business needs		

	SUPPORT & GUIDANCE			[3]
Profile title	AI SAFETY SPECIALIST			[3.5]
Related titles	AI Safety Expert, Safety Expert for AI Systems, AI Safety Engineer, AI Trust and Safety Engineer, ML Safety Engineer, AI Platform Safety Engineer, User Safety & Integrity Engineer, AI/ML Abuse Prevention Engineer, AI Content Safety Engineer.			
Summary statement	Ensures that AI systems are developed, deployed, and maintained with a focus on user safety, trust, and ethical standards.			
Mission	Designs and implements systems, safety measures and tools to detect and prevent abuse, promote user safety, and reduce risks across AI platforms and throughout the development process. Conducts risk assessments to identify potential harms associated with AI systems. Assists in responding to incidents.			
Deliverables	Accountable	Responsible	Contributor	
	• Safety of Stakeholders • Model Evaluation & Systemic Risk Documentation	• Safety Plans • Incident Response • Model Evaluation & Systemic Risk Documentation	• Legal and Safety Standards • Technological Interventions • Human Oversight Measures • Fundamental Rights Impact Assessment (FRIA) • Responsible AI Impact Assessment • Legal, Ethical and Safety Compliance	
Main tasks	• Analyse AI/ML systems and development processes to identify potential safety risks and harms • Design and implement safety measures, tools, and protocols to prevent misuse and reduce risks • Develop and integrate abuse detection, content moderation, explainable AI and anomaly monitoring systems • Conduct safety-focused risk assessments during AI/ML system design, development, and deployment • Ensure compliance with ethical guidelines, user trust standards, and legal safety requirements • Collaborate with development, research, legal, and policy teams to embed safety across the AI/ML lifecycle • Assist in incident response by analysing, mitigating, and documenting safety-related events			

	- Continuously monitor AI/ML system behaviour to detect emerging risks and update safety mechanisms accordingly - Create AI safety standards/ guidelines in line with ethical guidelines			
			Level	Descriptor
e-Competences (from e-CF)				
	A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.
	A.8.	Sustainability Management	e-3	Applies established methods to monitor and improve the sustainability performance of AI systems and projects.
	B.3.	Testing	e-3	Independently conducts systematic testing of ICT and AI systems. Evaluates AI models for correctness, robustness, fairness, and compliance with standards. Provides preliminary reports and recommendations for improvements.
	D.3.	Education and Training Provision	e-3	Implements AI training programmes and integrates AI learning into development plans.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.8.	Information Security Management	e-3	Enables the effective security management of AI systems by implementing and adapting AI-specific security measures. Ensures that AI risks are identified, assessed, and mitigated within projects and operational environments, working with stakeholders to support secure and compliant AI use.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> - Think critically - Plan activities - Identify problems - Think creatively - Improvise		<i>Self-management skills</i> - Focus on quality - Assume accountability - Show determination - Forms judgements - Manage frustration	<i>Social and communication skills</i> - Communicate - Persuade - Negotiate - Report - Coach, mentor, advise others

		• Exert willingness to learn	• Teach, train, instruct others • Work in teams • Exert ethical behaviour • Comply with regulations
KPI area	Effective safety measures in place		

	SUPPORT & GUIDANCE			[3]
Profile title	RESPONSIBLE AI OFFICER			[3.6]
Related titles	AI Ethics Officer, AI Ethicist, Responsible AI Specialist/Lead/Director, Manager/ Director Responsible AI, AI Ethics Specialist/Manager/Director/Lead.			
Summary statement	Ensures AI systems are designed, developed, deployed, and used in an ethical manner, building human-centricity into design and ensuring protection of fundamental human rights across the entire lifecycle.			
Mission	Establishes, maintains, communicates and promotes AI ethics policies, guidelines, and protocols for AI development, deployment and use within the organisation, in line with corporate governance guardrails. Conducts ethical reviews, evaluates and monitors AI applications and their consequences on different stakeholder groups and on fundamental human rights. Ensures accountability for AI-related decisions and actions from an ethical lens.			
Deliverables	Accountable	Responsible	Contributor	
	- Human Oversight Instructions - Metric Development - Fundamental Rights Impact Assessment (FRIA) - Responsible AI Impact Assessment	- AI Ethics KPI's - AI Ethics Policy - Fundamental Rights Impact Assessment (FRIA) - Responsible AI Impact Assessment - Legal and Ethical Considerations	- Risk Management Policy - AI Literacy Programme - Human Oversight Instructions, Measures & Documentation - Transparency Information for Users - Ethics Board	
Main tasks	- Keep up-to-date with relevant regulations, standards and guidelines related to ethical/ responsible AI and ensures the organisation's practices align with them - Develop and enforce internal policies, guiding principles, practices, and KPI's to ensure the ethical development, deployment, and use of AI, in alignment with the organisation's code of ethics - Assess and review AI-related guidelines and standards, and offer recommendations for improvement - Detect and examine conflicting priorities and values across the AI lifecycle, carefully weighing trade-offs between different options - Identify and evaluate potential ethical and societal risks associated with AI systems, technologies, applications, and practices - Evaluates the AI systems' fulfilment of and conformity with ethical and societal requirements - Ensure AI systems comply with data privacy regulations and oversees measures to protect sensitive information - Promote awareness among employees regarding ethical considerations.			

	• Implement processes to detect and mitigate biases in AI models, ensuring fairness and non-discrimination • Promote processes to detect and mitigate negative impacts in AI Ethics principles and fundamental rights and connect it with all stages of AI system lifecycle • Design and conduct training programmes on AI ethics and societal issues for staff • Provide leadership for ensuring 'human-centricity' by design • Promote implementation of corporate mechanisms to handle AI ethics issues • Lead discussions and help resolve ethical conflicts arising in AI development, deployment, and use • Share AI ethics insights, recommendations, and relevant information with both internal and external stakeholders • Oversee and contribute to the activities of the AI Ethical decision-making bodies and tools (AI Ethics Board/Ethics Committee, AI Ethics Review Board, AI ethics panel, AI ethics channel) • Promote integration of AI ethics aspects in general corporate ethics and social responsibility scope			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.
	A.8.	Sustainability Management	e-3	Applies established methods to monitor and improve the sustainability performance of AI systems and projects.
	B.5.	Documentation Production	e-3	Independently produces and maintains AI documentation that integrates technical and compliance requirements.
	D.2.	ICT Quality Strategy Development	e-4	Defines, evolves, and integrates AI quality objectives across projects and value streams. Guides teams to ensure trustworthy and resilient AI systems.
	D.3.	Education and Training Provision	e-3	Implements AI training programmes and integrates AI learning into development plans.
	E.5.	Process Improvement	e-4	Leads the design, implementation, and continuous improvement of AI processes. Ensures alignment with organisational objectives, ethical standards, and compliance.
Transversal aspects	<i>Be aware of and if applicable, behave proactively in:</i>			

<i>(from e-CF)</i>	T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability		
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Identify problems	<i>Self-management skills</i> • Act independently • Focus on quality • Show initiative • Show commitment • Show determination • Forms judgements • Manage frustration • Exert willingness to learn • Demonstrate curiosity • Adapt to change • Exercise self-reflection	<i>Social and communication skills</i> • Communicate • Promote • Persuade • Negotiate • Report • Coach, mentor, advise others • Teach, train, instruct others • Collaborate with others • Exert political sensitivity • Exert social awareness • Motivate others • Hold a vision • Exert ethical behaviour • Comply with regulations • Demonstrate trustworthiness
KPI area	Alignment to (internal and external) standards, policies and guidelines related to ethical/responsible AI quality goals		

	SUPPORT & GUIDANCE			[3]
Profile title	SUSTAINABLE AI LEAD			[3.7]
Related titles	Head of Sustainable AI, AI Sustainability Director, Director of Sustainable AI, AI Sustainability Lead, Sustainability & AI Integration Lead, Climate-Conscious AI Lead, Green AI Lead, Green AI Program Lead, AI for Sustainability Lead, ESG & AI Strategy Lead, Sustainable AI Technology Strategy Lead, AI Impact & Sustainability Lead.			
Summary statement	Promotes environmentally and socially sustainable AI practices across the organisation.			
Mission	Minimises the environmental footprint and long-term societal impact of AI by guiding responsible resource use, lifecycle management, and sustainability-aligned decision-making.			
Deliverables	Accountable	Responsible	Contributor	
	• Sustainable AI Principles, Standards and Guidelines • AI Sustainability Assessment Framework • Sustainable AI KPIs	• AI Environmental Impact Assessments • AI Lifecycle Sustainability Plans • Internal Guidance and Playbooks for Sustainable AI Development	• ESG, Sustainability, or Responsible Technology Reports • AI Governance Documentation • Training Materials and Awareness Programmes on Responsible and Sustainable AI	
Main tasks	• Define and maintain guidelines, standards, and best practices for environmentally and socially sustainable AI across the organisation • Assess, monitor, and reduce the environmental footprint of AI systems, including energy consumption, compute efficiency, and carbon impact • Embed sustainability considerations throughout the AI lifecycle, from design and development to deployment, maintenance, and decommissioning • Advise product, data, and engineering teams on sustainable AI design choices, architectures, datasets, and infrastructure • Integrate sustainability criteria into AI governance frameworks, approval processes, and strategic decision-making • Collaborate with ESG, IT, procurement, and sustainability teams to align AI initiatives with broader organisational sustainability goals • Identify and mitigate potential long-term societal, ethical, and environmental impacts of AI systems • Define key sustainability metrics and contribute to internal and external reporting on Sustainable AI performance • Build organisational awareness and capability through training, guidance, and advocacy for sustainable AI practices • Monitor evolving regulations, standards, and best practices related to sustainable, responsible, and green AI			

			Level	Descriptor
e-Competences (from e-CF)	A.1.	IS and Business Strategy Alignment	e-4	Aligns IS and AI strategy with business strategy, integrating AI capabilities into enterprise architecture while managing risk, sourcing, and governance.
	A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.
	A.8.	Sustainability Management	e-4	Leads initiatives to assess, advise, and implement sustainable AI practices across projects and organisational units.
	D.4.	Purchasing	e-3	Applies standard procurement processes to acquire AI products and services that meet organisational requirements.
	D.10.	Information and Knowledge Management	e-4	Designs and improves AI knowledge management processes and structures across multiple teams or business units. Advises on AI knowledge lifecycle, governance, and strategic use. Promotes collaborative knowledge sharing and innovation.
	E.4.	Relationship Management	e-3	Independently maintains and nurtures relationships with stakeholders involved in AI projects. Coordinates routine AI-related tasks and facilitates communication across teams.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> - Think holistically - Identify problems - Think creatively - Think innovatively		<i>Self-management skills</i> - Act independently - Focus on quality - Show initiative - Make decisions - Assume accountability - Show determination - Manage frustration - Exert willingness to learn - Adapt to change	<i>Social and communication skills</i> - Communicate - Promote - Persuade - Negotiate - Coach, mentor, advise others - Teach, train, instruct others - Collaborate with others - Exert organisation sensitivity

			• Exert political sensitivity • Hold a vision • Exert ethical behaviour • Comply with regulations
KPI area	Sustainable AI systems and operations		

	SUPPORT & GUIDANCE		[3]
Profile title	HUMAN-AI INTERACTION LEAD		[3.8]
Related titles	Head of Human–AI Interaction, Director of Human–AI Experience, Human–AI Strategy Lead, Human-Centred AI Lead, Head of AI Interaction, Director of Human-Centred AI.		
Summary statement	Optimises how humans interact with AI systems to ensure usability, trust, and effective collaboration. Assesses the interactions between AI systems and the human beings tasked with human oversight of the output.		
Mission	Ensures that all human interactors are trained and competent in their roles. Designs and evaluates human-AI interactions that enhance human judgment, support user needs, and ensure AI systems remain understandable, controllable, and beneficial.		
Deliverables	Accountable	Responsible	Contributor
	- Human Oversight Framework and Operations - Human Oversight Instructions, Measures & Documentation	Intervention Decision and Execution	- Legal, Ethical and Safety Compliance Documentation - Legal, Ethical and Safety Standards - Personnel Training and Qualifications Record - Fundamental Rights Impact Assessment (FRIA) - Responsible AI Impact Assessment - AI System User Instructions
Main tasks	- Represent interests of human oversight personnel to top management and/or oversight bodies - Ensure all human oversight personnel have received relevant training appropriate to their role and level of expertise - Document all-natural persons who are a Human-in-the-Loop, Human-on-the-Loop, Human-in-Command, or any humans available for post hoc review of outputs, including each person's role, responsibility, and confirmation of qualifications - Monitor the AI system real-time - Document and log interventions or usage of human-machine interface tools, including the rationale for the decision and the control, treatment, or mitigation applied - Document metrics, measurements, and thresholds for the effectiveness of each human interaction with the AI system - Follow AI safety and ethical guidelines		
		Level	Descriptor

e-Competences <i>(from e-CF)</i>	A.6.	Application Design	e-3	Designs AI applications and data structures independently for routine or well-defined tasks. Selects suitable AI methods and technologies to meet project requirements, balancing cost, performance, and quality.
	A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.
	A.10.	User Experience	e-4	Leads the definition and governance of user experience design strategies for AI-enabled products and services. Ensures consistency, trustworthiness, and responsible use of AI across user journeys and platforms.
	B.3.	Testing	e-3	Independently conducts systematic testing of ICT and AI systems. Evaluates AI models for correctness, robustness, fairness, and compliance with standards. Provides preliminary reports and recommendations for improvements.
	D.3.	Education and Training Provision	e-3	Implements AI training programmes and integrates AI learning into development plans.
	D.11.	Needs Identification	e-4	Leads the identification and articulation of AI-related needs, ensuring alignment with business strategy, regulatory compliance, and ethical principles.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.5.	Process Improvement	e-3	Independently performs and monitors AI development and operational processes. Contributes to AI process evaluation, improvement suggestions, and risk awareness.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> - Think critically - Organise information - Identify problems			<i>Self-management skills</i> - Act independently - Focus on quality - Show initiative - Show determination - Forms judgments
				<i>Social and communication skills</i> - Communicate - Promote - Persuade - Collaborate with others

		• Assume responsibility • Cope with uncertainty • Cope with stress • Exert willingness to learn	• Motivate others • Teach, train, instruct others • Exert business orientation • Exert political sensitivity • Exert ethical behaviour • Comply with regulations
KPI area	Effectiveness of each human interaction with the AI System		

B.4 Management

	MANAGEMENT			[4]
Profile title	AI TRANSFORMATION LEAD			[4.1]
Related titles	AI Transformation Officer/ Director, AI Adoption Lead, AI Innovation Leader, AI Change Management Lead, AI Workforce Transformation Lead, AI Integration Lead, AI Acceleration Lead.			
Summary statement	Provides leadership for the implementation of the AI transformation of the organisation, driving successful adoption of AI.			
Mission	Drives cultural change and builds digital capability to deliver innovative AI-based business models, products, services, and processes.			
Deliverables	Accountable	Responsible	Contributor	
	• Community Engagement • AI/ML Business Case • Business Plan for AI Exploitation • Change Management Plan	• AI Transformation Strategy • AI Transformation Roadmap • AI Transformation KPIs	• Data governance framework • AI Literacy Programme • AI Solution Choice • Guidelines, Recommendations and Regulations regarding AI	
Main tasks	• Develop and deliver a clear AI transformation strategy, identifying opportunities where AI can provide value and competitive advantage • Work closely with key stakeholders, to demonstrate the benefits and ensure buy-in and alignment on AI initiatives, including consideration of ethical aspects • Oversee the implementation of AI projects from inception to completion, ensuring that projects meet their objectives • Establish robust data governance frameworks, together with data scientists and IT teams • Identify skills gaps and develops awareness and education to improve AI literacy and capability			

	- Assess and select the appropriate AI tools, platforms, and technologies that best fit the organisation's needs - Lead (cultural) change management efforts to ensure smooth integration of AI technologies into existing workflows and processes - Establish metrics and KPIs to monitor the performance and impact of AI initiatives			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.1.	IS and Business Strategy Alignment	e-5	Leads enterprise-wide IS and AI strategy; anticipates long-term business needs and drives innovation.
	A.3.	Business Plan Development	e-5	Shapes organisational strategy for AI investment through business planning, setting enterprise-level principles, prioritisation criteria, and governance models that align AI initiatives with long-term business objectives.
	A.5.	Architecture Design	e-4	Leads the design of complex AI-enabled enterprise architectures. Ensures AI solutions are scalable, secure, interoperable, and ethically aligned. Provides guidance to teams on AI integration.
	A.7.	Technology Trend Monitoring	e-4	Provides leadership in the monitoring, evaluation and exploitation of ICT and AI technological developments. Advises on AI innovation strategies and ensures alignment with organisational objectives.
	A.8.	Sustainability Management	e-4	Leads initiatives to assess, advise, and implement sustainable AI practices across projects and organisational units
	A.9.	Innovating	e-5	Defines the strategic direction for AI-driven innovation across the organisation or research domain. Envisions transformative AI applications that create new markets, services, or societal impact.
	E.7.	Business Change Management	e-5	Shapes enterprise-wide AI transformation strategy and embeds AI-driven change in long-term planning. Guides executive decisions, sets standards for ethical and sustainable AI adoption, and influences industry-wide practices.
	E.9.	IS Governance	e-5	Shapes and ensures enterprise-wide AI governance strategy, aligning AI capabilities with long-term business objectives, societal expectations, and regulatory evolution. Exercises authority over AI governance direction and influences external stakeholders and ecosystems.

Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability		
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Think holistically • Plan activities • Solve problems • Think creatively • Think innovatively • Improvise	<i>Self-management skills</i> • Act independently • Show initiative • Make decisions • Assume responsibility • Assume accountability • Show determination • Exert result-orientedness • Cope with uncertainty • Manage frustration • Adapt to change	<i>Social and communication skills</i> • Persuade • Negotiate • Coach, mentor, advise others • Build and maintain networks • Exert business orientation • Exert organisation sensitivity • Exert political sensitivity • Lead others • Delegate responsibilities • Hold a vision • Exert ethical behaviour • Comply with regulations
KPI area	Successful AI strategy implementation		

	MANAGEMENT		[4]
Profile title	CHIEF AI OFFICER (CAIO)		[4.2]
Related titles	AI Strategist, AI Strategy Manager, Chief AI Strategy Officer, Chief Intelligence Officer, AI Lead, AI Director, Director of AI, Director of Intelligent Systems, Head of AI.		
Summary statement	Defines and implements an AI strategy, (ethics) policy, and governance across the organisation.		
Mission	Ensures the alignment of the AI strategy with the organisation strategy. Provides leadership for the strategy, development and implementation of the organisation's AI applications, to create a sustainable competitive edge.		
Deliverables	Accountable	Responsible	Contributor
	• AI Strategy and Implementation • Product Strategy & Feature Definition • AI Transformation Roadmap • AI Security Policy • AI Ethics Policy • AI Release Plan • AI Tool Portfolio • Strategic Alignment • System Architecture	• AI Governance Policy • Ethics Board	• AI Compliance Policy • AI/ML Business Case • Business Plan for AI Exploitation Legal, Ethical and Safety Compliance
Main tasks	• Enable the organisation's AI strategy, providing strategic leadership for innovation based around AI solutions • Define and maintain an ethical and responsible AI governance framework • Collaborate with the CIO to align AI and digital transformation agendas • Supervise the development, deployment, and lifecycle of AI models and applications • Establish governance and risk assessment processes for third-party AI solutions, vendors, and foundation models used across the organisation • Oversee the prioritisation and governance of the organisation's AI portfolio to ensure alignment with strategic objectives, value creation, and risk appetite • Ensure transparency, fairness, robustness, and accountability in AI outputs • Lead workforce readiness and job transformation initiatives to support the responsible integration of AI into business processes and ways of working • Establish organisation-wide AI literacy development programs • Define KPI's for AI success and monitor business impact • Lead organisational readiness and governance alignment for AI regulatory compliance (e.g., EU AI Act) • Promote explainability and stakeholder trust in AI-enabled systems		

	• Champion and promote the AI safety and ethical guidelines • Promote implementation of mechanisms to handle AI ethics issues in AI systems lifecycle • Contribute to the activities of the AI Ethical decision-making bodies and tools (AI Ethics Board/Ethics Committee, AI Ethics Review Board, AI ethics panel, AI ethics channel)			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.1.	IS and Business Strategy Alignment	e-5	Leads enterprise-wide IS and AI strategy; anticipates long-term business needs and drives innovation.
	A.3.	Business Plan Development	e-5	Shapes organisational strategy for AI investment through business planning, setting enterprise-level principles, prioritisation criteria, and governance models that align AI initiatives with long-term business objectives.
	A.7.	Technology Trend Monitoring	e-5	Provides strategic vision and authority for ICT and AI innovation. Initiates and governs transformational AI initiatives and shapes long-term AI adoption strategies.
	A.8.	Sustainability Management	e-4	Leads initiatives to assess, advise, and implement sustainable AI practices across projects and organisational units.
	A.9.	Innovating	e-5	Defines the strategic direction for AI-driven innovation across the organisation or research domain. Envisions transformative AI applications that create new markets, services, or societal impact.
	E.2.	Project and Portfolio Management	e-5	Drives strategic AI project and portfolio management across the organisation, shaping innovation, governance, and AI capability development.
	E.3.	Risk Management	e-4	Ensures the effectiveness and consistency of AI risk management across the organisation by defining AI risk controls, governance mechanisms, and assurance processes aligned with enterprise risk frameworks.
	E.4.	Relationship Management	e-4	Guides and coordinates stakeholders across multiple functions or teams in AI initiatives, fostering alignment and trust. Proactively manages expectations, addresses concerns, and resolves conflicts.
	E.9.	IS Governance	e-5	Shapes and ensures enterprise-wide AI governance strategy, aligning AI capabilities with long-term business objectives, societal expectations, and regulatory evolution. Exercises authority over AI governance

				direction and influences external stakeholders and ecosystems.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Think holistically • Identify problems • Solve problems • Think innovatively	<i>Self-management skills</i> • Focus on quality • Show initiative • Make decisions • Assume responsibility • Assume accountability • Manage personal progression • Cope with uncertainty • Adapt to change	<i>Social and communication skills</i> • Communicate • Promote • Coach, mentor, advise others • Build and maintain networks • Exert business orientation • Exert organisation sensitivity • Exert political sensitivity • Lead others • Delegate responsibilities • Exert ethical behaviour • Comply with regulations	
KPI area	Overall added value, efficiency and effectiveness of the AI systems and applications			

	MANAGEMENT			[4]
Profile title	AI TECH LEAD			[4.3]
Related titles	AI Technical Lead, Lead AI Engineer, AI Lead, AI Engineering Lead, ML Tech Lead, ML Engineering Lead, Principal AI Engineer, Staff AI Engineer, Head of AI Engineering, Director of AI Engineering, AI Platform Lead, AI Infrastructure Lead.			
Summary statement	Provides technical leadership for AI solutions, guiding architecture, model development, code quality and engineering best practices.			
Mission	Ensures AI systems are technically sound, scalable, and maintainable by setting standards, mentoring teams, and translating requirements into robust AI architectures.			
Deliverables	Accountable	Responsible	Contributor	
	• AI Model • Technical Roadmap for AI Initiatives • AI/ML Component • Built Pipeline • Developed AI Models and Experiments • Technical Documentation GPAI & High Risk AI	• Model Training and Evaluation Pipelines • Code Quality and Engineering Standards for AI Projects	• Business Requirement Specifications • Data Strategy and Data Governance Policies • Legal, Ethical and Safety Compliance • Quality Assurance and Auditing	
Main tasks	• Define and guide the technical architecture of AI solutions and systems • Set coding standards, best practices, and ensure adherence to them across the team • Mentor engineers and data scientists on model development, engineering, and deployment • Review and approve AI models, pipelines, and system designs for quality and scalability • Troubleshoot complex technical issues and provide solutions for critical problems • Evaluate and recommend AI tools, frameworks, and technologies to optimise workflows • Collaborate with Product Managers to translate requirements into technically feasible solutions • Conduct technical risk assessments and implement mitigation strategies • Ensure AI systems are robust, maintainable, and aligned with organisational standards • Promote innovation by researching and prototyping emerging AI methods or technologies • Promote implementation of mechanisms to handle AI ethics issues in AI systems lifecycle			

	Contribute to the activities of the AI Ethical decision-making bodies and tools (AI Ethics Board/Ethics Committee, AI Ethics Review Board, AI ethics panel, AI ethics channel)			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.5.	Architecture Design	e-4	Leads the design of complex AI-enabled enterprise architectures. Ensures AI solutions are scalable, secure, interoperable, and ethically aligned. Provides guidance to teams on AI integration.
	A.6.	Application Design	e-4	Leads the design of complex AI applications and system architectures. Integrates AI models into larger systems, ensuring scalability, interoperability, and ethical compliance. Advises stakeholders on AI design trade-offs and performance optimisation.
	A.7.	Technology Trend Monitoring	e-4	Provides leadership in the monitoring, evaluation and exploitation of ICT and AI technological developments. Advises on AI innovation strategies and ensures alignment with organisational objectives.
	B.6.	Systems Engineering	e-4	Leads the design and optimisation of complex AI infrastructure. Anticipates AI system behaviour, implements advanced integration solutions, and ensures high performance, security, and ethical compliance. Provides guidance to others.
	D.7.	Data Science and Analytics	e-4	Leads data science and analytics initiatives that enable AI solutions, optimising AI-supported processes and organisational decision-making.
	E.2.	Project and Portfolio Management	e-4	Leads complex AI projects or portfolios, integrating multiple AI initiatives to deliver strategic business value.
	E.4.	Relationship Management	e-3	Independently maintains and nurtures relationships with stakeholders involved in AI projects. Coordinates routine AI-related tasks and facilitates communication across teams.
	E.5.	Process Improvement	e-3	Independently performs and monitors AI development and operational processes. Contributes to AI process evaluation, improvement suggestions, and risk awareness.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			

Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Think holistically • Identify problems • Solve problems • Plan activities • Think innovatively	<i>Self-management skills</i> • Act independently • Show initiative • Make decisions • Assume responsibility • Assume accountability • Show commitment • Cope with uncertainty • Exert willingness to learn	<i>Social and communication skills</i> • Communicate • Resolve conflict • Collaborate with others • Build and maintain networks • Exert business orientation • Lead others • Build team spirit • Exert ethical behaviour • Comply with regulations
KPI area	Business user requirement satisfaction		

	MANAGEMENT		[4]
Profile title	AI MANAGER		[4.4]
Related titles	Manager of AI, AI Program Manager, AI Portfolio Manager, AI Team Manager, AI General Manager.		
Summary statement	Oversees the AI team's people, resources, and overall performance, ensuring that the team is organised, skilled, and aligned with organisational objectives.		
Mission	Builds, leads, and grows a high-performing AI team that delivers impactful solutions, balancing talent development, team productivity, and alignment with business goals.		
Deliverables	Accountable	Responsible	Contributor
	- AI Team Capacity and Staffing Plans - AI Team Performance and Development Plans - AI Resource Allocation Reports - Quality Management System Documentation	- AI Talent Development Programs - Reports on Team Achievements and Challenges	- AI Roadmap Recommendations - AI Compliance - Legal, Ethical and Safety Compliance
Main tasks	- Hire, onboard, mentor, and coach AI engineers and data scientists to build a high-performing team - Assign team members to projects effectively, balancing workload and skills - Set goals, conduct performance reviews, and provide feedback to drive individual and team growth - Ensure AI team objectives align with broader organisational and business goals - Develop career paths, training programmes, and succession plans for AI team members - Foster a collaborative, innovative, and accountable work environment - Liaise with product, operations, and business leaders to ensure the AI team meets organisational needs - Manage team-related budgets, tools, and external resources or contractors - Identify people-related or capacity risks and proactively resolve them - Provide leadership with regular updates on team capacity, achievements, and challenges - Contribute to the activities of the AI Ethical decision-making bodies and tools (AI Ethics Board/Ethics Committee, AI Ethics Review Board, AI ethics panel, AI ethics channel)		
		Level	Descriptor

e-Competences <i>(from e-CF)</i>	D.9.	Personnel Development	e-4	Integrates AI competence development into team/organisation processes, guides others in AI adoption, and evaluates learning impact.
	D.11.	Needs Identification	e-4	Leads the identification and articulation of AI-related needs, ensuring alignment with business strategy, regulatory compliance, and ethical principles.
	E.2.	Project and Portfolio Management	e-4	Leads complex AI projects or portfolios, integrating multiple AI initiatives to deliver strategic business value.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.4.	Relationship Management	e-4	Guides and coordinates stakeholders across multiple functions or teams in AI initiatives, fostering alignment and trust. Proactively manages expectations, addresses concerns, and resolves conflicts.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think holistically • Plan activities • Solve problems • Think creatively • Improvise	<i>Self-management skills</i> • Make decisions • Assume responsibility • Show commitment • Adapt to change	<i>Social and communication skills</i> • Communicate • Resolve conflict • Collaborate with others • Build and maintain networks • Exert business orientation • Exert organisation sensitivity • Manage others • Build team spirit • Exert ethical behaviour • Comply with regulations	
KPI area	Business user requirement satisfaction			

	MANAGEMENT		[4]
Profile title	AI PRODUCT MANAGER		[4.5]
Related titles	AI Product Owner, AI Product Lead, Head of AI Product, ML Product Manager, ML Product Owner, Intelligent Systems Product Manager, Intelligent Products Lead, AI Solutions Manager, AI Business Product Manager.		
Summary statement	Oversees the development, implementation, and optimisation of AI products and solutions within an organisation. Focuses on vision, requirements, roadmap, and stakeholder alignment.		
Mission	Defines AI product vision and strategy based on market, customer needs and business goals. Defines product requirements, works closely with stakeholders, data scientists, and engineers, guiding the product development teams, prioritising features and potential releases. Validates that the developed AI solution meets requirements.		
Deliverables	Accountable	Responsible	Contributor
	• AI Product Roadmap • AI Solution Requirements • AI Product Performance Metrics and Reporting • Evaluation of AI Performance • Alerting Rules • Anomaly Detection Configurations	• Product Strategy & Feature Definition • Detailed AI product Requirements • User stories for AI Initiatives • AI Release Plan • Business Requirements for AI Exploitation	• Technical Design Documentation • Resource Allocation/ Team Priorities • Legal, Ethical and Safety Compliance
Main tasks	• Define and communicate the AI product vision, strategy, and roadmap. • Gather, prioritise, and manage AI product requirements from business stakeholders. • Translate business needs into AI use cases and features. • Collaborate with AI Tech Leads and engineers to ensure technical feasibility of solutions. • Monitor AI product performance, impact, and adoption metrics. • Coordinate cross-functional teams (engineering, operations, business) to deliver features. • Conduct market research and competitive analysis to guide AI product decisions. • Ensure AI product compliance with ethical, legal, and regulatory standards. • Facilitate stakeholder reviews, demos, and feedback sessions. • Adjust product priorities based on data, business goals, and user feedback. • Contribute to the activities of the AI Ethical decision-making bodies and tools (AI Ethics Board/Ethics Committee, AI Ethics Review Board, AI ethics panel, AI ethics channel)		

			Level	Descriptor
e-Competences <i>(from e-CF)</i>				
	A.3.	Business Plan Development	e-3	Independently designs and justifies business plans for AI-enabled initiatives, evaluating alternative approaches, quantifying AI-specific costs and benefits, managing risks, and communicating value to stakeholders.
	A.4.	Product/Service Planning	e-4	Leads and optimises product or service planning for AI-enabled solutions. Ensures effectiveness, compliance and sustainability across the lifecycle, balancing value, risk and resource constraints.
	A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.
	A.9.	Innovating	e-4	Leads innovation projects that exploit AI to create novel solutions or new business/research opportunities. Advises teams or stakeholders on the strategic use of AI to drive value, efficiency, or societal benefit.
	A.10	User Experience	e-3	Selects, adapts, and applies user experience design approaches for AI-enabled systems to meet user, business, and ethical requirements. Ensures that AI interactions are understandable, usable, and aligned with user expectations.
	D.4.	Purchasing	e-3	Applies standard procurement processes to acquire AI products and services that meet organisational requirements.
	D.11	Needs Identification	e-4	Leads the identification and articulation of AI-related needs, ensuring alignment with business strategy, regulatory compliance, and ethical principles.
	E.2.	Project and Portfolio Management	e-4	Leads complex AI projects or portfolios, integrating multiple AI initiatives to deliver strategic business value.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> - Think analytically - Think critically		<i>Self-management skills</i> - Focus on quality - Show initiative	<i>Social and communication skills</i> Communicate

	• Think holistically • Plan activities • Solve problems • Think innovatively	• Make decisions • Assume responsibility • Exert result-orientedness • Cope with stress • Adapt to change	• Collaborate with others • Work in teams • Exert business orientation • Exert organisation sensitivity • Manage others • Build team spirit • Exert ethical behaviour • Comply with regulations
KPI area			

	MANAGEMENT			[4]
Profile title	AI OPERATIONS MANAGER			[4.6]
Related titles	AI Ops Manager, Manager AI Operations, AI Operations Lead/ Director, AI Systems Operations Manager, ML Ops Manager, AI Infrastructure Operations Manager, Model Operations Manager, AI Data Operations Manager.			
Summary statement	Manages AI operations, including the people and overall resources involved. Ensures deploying, running, and maintaining AI systems reliably in production.			
Mission	Implements and maintains (a designated part of an) AI operation ensuring that activities are conducted in accordance with organisational rules, processes and standards. Plans, changes and implements them in accordance with the organisational AI strategy and budget. Manages risks and ensures the effectiveness of the AI operation and infrastructure.			
Deliverables	Accountable	Responsible	Contributor	
	• Production-Ready AI Systems and Pipelines • Operational Performance Dashboards • Documentation of Post-Market Monitoring & Corrective Actions	• CI/CD Pipelines for AI Models • Monitoring and Alerting Reports • Operational Process Documentation • Documentation of Post-Market Monitoring & Corrective Actions	• Technical Design • Legal, Ethical and Safety Compliance • Sustainable AI Policy • Serious Incidents & Corrective Reporting	
Main tasks	• Develop operational strategies for management and improvement of AI systems • Oversee installation, maintenance and continuous improvement of AI systems • Work closely with IT, data and development teams to ensure seamless integration and functionality of AI technologies • Manage and optimise AI application and system updates • Ensure that all AI operations meet ethical guidelines and compliance requirements • Provide leadership and mentor teams on operational best practices and procedures for AI • Analyse and propose AI solutions for continuous productivity improvement • Manage the implementation and monitoring of AI quality assurance, security and privacy • Contribute to the activities of the AI Ethical decision-making bodies and tools (AI Ethics Board/Ethics Committee, AI Ethics Review Board, AI ethics panel, AI ethics channel)			
		Level	Descriptor	

e-Competences <i>(from e-CF)</i>	C.2.	Change Support	e-3	Plans and executes AI-related changes. Evaluates impact and coordinates changes to minimise service disruption and risk.
	C.3.	Service Delivery	e-3	Ensures reliable and secure delivery of AI-enabled services. Takes responsibility for operational performance, monitoring and incident management of AI components. Proactively addresses service risks to maintain agreed service levels.
	C.4.	Problem Management	e-3	Independently diagnoses and resolves routine ICT and AI incidents. Applies established procedures to prevent recurrence.
	C.5.	Systems Management	e-3	Manages and maintains IT and AI systems independently, ensuring reliable and secure operation. Resolves operational issues and contributes to continuous improvement of AI-enabled services.
	D.9.	Personnel Development	e-3	Independently identifies AI skill gaps, contributes to AI-focused learning initiatives, and applies AI competences in role-specific contexts.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.5.	Process Improvement	e-3	Independently performs and monitors AI development and operational processes. Contributes to AI process evaluation, improvement suggestions, and risk awareness.
	E.6.	ICT Quality Management	e-3	Ensures the quality of AI systems within a defined scope by applying and adapting quality governance practices. Defines and monitors AI quality indicators, evaluates AI outcomes, and identifies improvement actions. Contributes to risk-based decisions related to AI performance, reliability, and compliance.
	E.8.	Information Security Management	e-3	Enables the effective security management of AI systems by implementing and adapting AI-specific security measures. Ensures that AI risks are identified, assessed, and mitigated within projects and operational environments, working with stakeholders to support secure and compliant AI use.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			

Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Think holistically • Plan activities • Solve problems • Think innovatively	<i>Self-management skills</i> • Focus on quality • Make decisions • Assume responsibility • Exert result-orientedness • Cope with stress • Adapt to change	<i>Social and communication skills</i> • Communicate • Collaborate with others • Work in teams • Exert business orientation • Exert organisation sensitivity • Manage others • Build team spirit • Exert ethical behaviour • Comply with regulations
KPI area	Optimisation of overall resources		

	MANAGEMENT		[4]
Profile title	AI PROJECT MANAGER		[4.7]
Related titles	Project Manager AI, AI Project Lead, ML Project Manager, MLOps Project Manager, Applied AI Project Manager, AI Implementation Manager, AI Delivery Manager.		
Summary statement	Plans, coordinates implementation and manages AI projects to achieve optimal performance and results, coordinating tasks, timelines and stakeholders across teams.		
Mission	Successfully delivers AI initiatives on time and within scope. Defines, implements and manages AI projects from conception to final delivery. Responsible for achieving optimal results, conforming to relevant regulations, ethical guidelines, and industry standards for quality, safety and sustainability and complying with defined scope, performance, costs, and schedule. Ensures clear communication between business, technical, and operational stakeholders.		
Deliverables	Accountable	Responsible	Contributor
	• AI Project Design & Plan • Validated AI Solution	• AI Solution Documentation • AI Project Risk Management Plan	• Integrated AI Solution • Change Management Plan • Legal, Ethical and Safety Compliance
Main tasks	• Define project scope, objectives, deliverables, and success criteria for AI initiatives • Organise, coordinate and manage the AI project team • Maintain stakeholder engagement and communication • Monitor project progress and ensure milestones are met on time and within scope • Identify project risks, issues, and dependencies, and implement mitigation plans • Coordinate, record and ensure quality compliance • Communicate project status, progress, and challenges to stakeholders and leadership • Manage changes to project scope, schedule, and resources in a controlled manner • Ensure effective documentation of project requirements, decisions, and outcomes • Circulate and distribute information from the project owner • Ensure the AI project supports the organisation's wider goals • Comply with budgets and delivery times • Adapt the AI project according to changing circumstances		

	Contribute to the activities of the AI Ethical decision-making bodies and tools (AI Ethics Board/Ethics Committee, AI Ethics Review Board, AI ethics panel, AI ethics channel)			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.4.	Product/Service Planning	e-4	Leads and optimises product or service planning for AI-enabled solutions. Ensures effectiveness, compliance and sustainability across the lifecycle, balancing value, risk and resource constraints.
	B.5.	Documentation Production	e-3	Independently produces and maintains AI documentation that integrates technical and compliance requirements.
	D.11.	Needs Identification	e-3	Independently engages stakeholders to identify and validate needs, translating them into AI solution requirements.
	E.2.	Project and Portfolio Management	e-4	Provides expert guidance on AI forecasting, influencing strategic decision-making. Evaluates multiple AI adoption scenarios and recommends actions across organisational functions.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.4.	Relationship Management	e-3	Independently maintains and nurtures relationships with stakeholders involved in AI projects. Coordinates routine AI-related tasks and facilitates communication across teams.
	E.7.	Business Change Management	e-3	Manages small-scale AI transformation initiatives and defines business requirements for AI adoption. Monitors AI adoption metrics, identifies deviations, and conducts risk assessments addressing bias, model drift, and cybersecurity. Communicates AI benefits and limitations to stakeholders.
Transversal aspects <i>(from e-CF)</i>	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			

Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Think quickly • Plan activities • Identify problems • Solve problems • Think creatively • Improvise	<i>Self-management skills</i> • Manage time • Meet commitments • Assume responsibility • Show commitment • Exert result-orientedness • Cope with uncertainty • Cope with stress • Adapt to change	<i>Social and communication skills</i> • Communicate • Report • Exert customer orientedness • Collaborate with others • Work in teams • Exert business orientation • Exert social awareness • Manage others • Control progress • Motivate others • Build team spirit • Exert ethical behaviour • Comply with regulations
KPI area	AI project goals achievement		

B.5 Governance

	GOVERNANCE		[5]
Profile title	AI GOVERNANCE OFFICER		[5.1]
Related titles	Head of AI Governance, Director of AI Governance, AI Governance Lead, Responsible AI Governance Lead, AI Governance Specialist, AI Policy Lead, Enterprise AI Governance Manager, AI Officer, AI Policy Specialist, AI Policy Lead.		
Summary statement	Leads the development, implementation, and oversight of an organisation's AI governance framework and AI policy.		
Mission	Establishes and maintains AI governance structures that promote responsible AI use, guide organisational decision-making, and ensure transparency, accountability, and alignment with overall business goals. Ensures AI systems work as expected and are used properly, under proper monitoring, control and oversight. The aim is to minimise unexpected behaviour that results in harm to users, affected persons, business and society at large.		
Deliverables	Accountable	Responsible	Contributor
	• Organisation-wide AI Governance Framework	• Governance Committees or Boards	• AI Compliance Policy • Risk Mitigation Plans

	(Policies, Standards, Procedures) - AI Compliance Framework - AI Ethics and Accountability Guidelines - Strategic AI Governance Reports - Public Summary of Training Content (GPAI)		- Approval of Workflows for AI Projects - Governance Maturity Assessments - Legal, Ethical and Safety Compliance Documentation - AI Compliance Framework - Public Summary of Training Content (GPAI)		- AI Strategy & Implementation - Strategic Alignment - Organisational Risk & Governance Reports - Audit Readiness Checklist - AI System Risk Classification Register - AI Act Compliance Assessment Report	
Main tasks	- Develop and maintain the organisation-wide AI governance framework - Define AI policies, ethical guidelines, and accountability standards - Align AI initiatives with organisational strategy and objectives - Set approval processes for new AI projects and deployments - Establish cross-functional governance committees or boards - Monitor governance maturity and recommend improvements - Advise leadership on emerging AI governance trends and best practices - Coordinate with regulators, industry bodies, and standardisation initiatives - Promote awareness and training on AI governance across the organisation					
			Level	Descriptor		
e-Competences <i>(from e-CF)</i>	A.1.	IS and Business Strategy Alignment	e-4	Aligns IS and AI strategy with business strategy, integrating AI capabilities into enterprise architecture while managing risk, sourcing, and governance.		
	A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.		
	D.1.	Information Security Strategy Development	e-4	Develops and integrates AI security strategy across projects or business units. Aligns AI security objectives with organisational goals, manages AI risks proactively, and ensures ethical AI deployment.		
	D.2.	ICT Quality Strategy Development	e-4	Defines, evolves, and integrates AI quality objectives across projects and value streams. Guides teams to ensure trustworthy and resilient AI systems.		
	D.10.	Information and Knowledge Management	e-4	Designs and improves AI knowledge management processes and structures across multiple teams or business units. Advises on AI knowledge lifecycle, governance, and strategic		

				use. Promotes collaborative knowledge sharing and innovation.
	E.3.	Risk Management	e-4	Ensures the effectiveness and consistency of AI risk management across the organisation by defining AI risk controls, governance mechanisms, and assurance processes aligned with enterprise risk frameworks.
	E.4.	Relationship Management	e-4	Guides and coordinates stakeholders across multiple functions or teams in AI initiatives, fostering alignment and trust. Proactively manages expectations, addresses concerns, and resolves conflicts.
	E.9.	IS Governance	e-5	Shapes and ensures enterprise-wide AI governance strategy, aligning AI capabilities with long-term business objectives, societal expectations, and regulatory evolution. Exercises authority over AI governance direction and influences external stakeholders and ecosystems.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Think holistically • Organise information • Identify problems			<i>Self-management skills</i> • Act independently • Focus on quality • Show initiative • Assume accountability • Assume responsibility • Manage personal progression • Forms judgements • Exert willingness to learn
				<i>Social and communication skills</i> • Communicate • Promote • Persuade • Negotiate • Coach, mentor, advise others • Collaborate with others • Build and maintain networks • Exert political sensitivity • Lead others • Motivate others • Hold a vision • Exert ethical behaviour • Comply with regulations
KPI area	...			

	GOVERNANCE			[5]
Profile title	AI COMPLIANCE OFFICER			[5.2]
Related titles	Compliance Officer AI, AI Regulatory Compliance Officer, AI Compliance Manager, AI Compliance Director, Responsible AI Compliance Lead, AI Legal & Compliance Officer, AI Policy Compliance Manager, AI Regulatory Affairs Manager, AI Trust and Privacy Compliance Officer, AI Vendor/Third-Party/Supplier Compliance Manager, AI Regulatory Representative, AI Authorised Representative, EU Representative.			
Summary statement	Assures compliance of the development, deployment, and use of AI systems with relevant laws, regulations, standards, internal policies and ethical practices.			
Mission	Ensures AI systems are compliant with all applicable laws and regulations, protecting the organisation from potential legal and financial risks. Commits the organisation to the adherence to relevant laws, regulations, and industry standards governing AI use, so that AI systems are ethical, legal and secure.			
Deliverables	Accountable	Responsible	Contributor	
	• AI Compliance Policy • AI Compliance Assessment Report • Regulatory Adherence Documentation for AI SystemsInternal AI Compliance Checklists and Records • AI Literacy Programme • Common Specifications Compliance Evidence	• AI Compliance Policy • AI Compliance Assessment Report • AI Compliance Risk Mitigation Plan • AI Compliance KPI's • AI Compliance Policy • Compliance Assessments of AI Projects • Common Specifications Compliance Evidence	• AI Company Policy • Quality Assurance • Risk Management Policy • AI Governance Framework Documentation • Third-Party / Supplier AI Compliance Evidence • GPAI Model Cooperation with Authorities • Conformity Assessment Reports • Audit Readiness Checklist • AI Compliance Framework • AI System Risk Classification Register	
Main tasks	• Keep up-to-date with relevant laws and regulations related to AI and ensures the organisation's practices comply with them • Develop and enforce internal policies and KPI's governing the ethical and legal use of AI technologies, including data privacy and bias risks • Identify and mitigate compliance risks associated with AI systems and practices			

	• Ensure the organisation has a clear and documented position on its level of risk classification, including risk tiers and the associated implications of this • Conduct training programmes on AI compliance and ethical considerations for employees • Perform regular audits of AI systems and prepares compliance reports for senior management and regulatory bodies • Act as a point of contact for communications with certification bodies and supervisory authorities • Establish and manage protocols for reporting serious incidents and responding to compliance incidents or breaches. • Maintain technical documentation and records • Validate contracts with importers or distributors.			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.
	B.5.	Documentation Production	e-3	Independently produces and maintains AI documentation that integrates technical and compliance requirements.
	D.1.	Information Security Strategy Development	e-4	Develops and integrates AI security strategy across projects or business units. Aligns AI security objectives with organisational goals, manages AI risks proactively, and ensures ethical AI deployment.
	D.8.	Contract Management	e-3	Independently manages AI contract activities, ensuring clarity on data ownership, model training and performance standards, liability, and regulatory compliance while monitoring supplier delivery and escalating risks as needed.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
	E.5.	Process Improvement	e-3	Independently performs and monitors AI development and operational processes. Contributes to AI process evaluation, improvement suggestions, and risk awareness.
	E.6.	ICT Quality Management	e-3	Ensures the quality of AI systems within a defined scope by applying and adapting quality governance practices. Defines and monitors AI quality indicators, evaluates AI outcomes, and identifies improvement actions. Contributes to risk-based decisions related to AI performance, reliability, and compliance.

	E.8.	Information Security Management	e-4	Ensures the security, resilience, and governance of AI systems across organisational domains. Defines AI security strategies, governance frameworks, and risk management approaches aligned with business and AI strategies. Advises stakeholders on AI-related security, compliance, and trustworthiness requirements.
	E.9.	IS Governance	e-4	Leads the definition, implementation, and evolution of AI governance frameworks, ensuring consistent control of AI systems across the organisation. Integrates AI governance into enterprise risk management, compliance, and strategic decision-making.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Identify problems		<i>Self-management skills</i> • Act independently • Focus on quality • Attend to detail • Show initiative • Assume responsibility • Show commitment • Show determination • Forms judgements	<i>Social and communication skills</i> • Communicate • Promote • Persuade • Negotiate • Report • Coach, mentor, advise others • Teach, train, instruct others • Collaborate with others • Build and maintain networks • Control progress • Motivate others • Exert ethical behaviour • Comply with regulations
KPI area	Achievement of compliance to (internal and external) AI regulations, standards and policies			

	GOVERNANCE			[5]
Profile title	AI RISK MANAGER			[5.3]
Related titles	AI Risk Officer, AI Risk & Controls Manager, AI Model Risk Manager, AI Operational Risk Lead, Risk Management Specialist in AI, Responsible AI Risk Manager.			
Summary statement	Leads and manages the organisation's AI risk governance activities.			
Mission	Ensures the organisation's exposure to AI related risks is effectively identified, measured, managed and mitigated and all activities conducted are in compliance with governing regulations, security standards, and internal policies and procedures to minimise risk.			
Deliverables	Accountable	Responsible	Contributor	
	• AI Risk Assessment Reports • Risk Mitigation Plans for AI Projects • AI Risk Dashboards or Risk Heatmaps • AI Risk Metrics • AI System Risk Classification Register	• Risk Evaluations of AI Systems • AI System Risk Classification Register • AI Risk Management Strategies and Controls • Risk Management Policy	• Governance Reports • AI Governance Policy • AI Security Strategy • Legal, Ethical and Safety Compliance Documentation • Organisational Risk & Governance Reports • AI Compliance Framework • AI Compliance Assessment Report	
Main tasks	• Identify potential risks related to AI systems, including technical, operational, financial, business, legal, and ethical risks • Conduct detailed risk assessments to evaluate the likelihood and impact of identified risks and determine appropriate mitigation strategies • Develop and implement risk mitigation plans to address identified risks • Continuously monitor AI systems for emerging risks and ensures ongoing compliance with risk management policies • Establish and manage protocols for responding to risk-related incidents, and coordinate response efforts and corrective actions • Maintain a risk register for all AI projects • Communicate risk management strategies and findings to stakeholders, ensuring transparency and increasing awareness of risk-related issues • Follow AI safety and ethical guidelines in the identification, assessment and treatment of risks • Advise on risk prioritisation for new AI projects • Classify AI systems according to risk tiers and maintain documented justification for the classification • Evaluate third-party AI tools and vendors for risk exposure			

	• Maintain comprehensive records of risk assessments, mitigation plans, incidents, and outcomes • Promote a risk-aware culture across AI development teams			
			Level	Descriptor
e-Competences <i>(from e-CF)</i>	A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.
	B.5.	Documentation Production	e-3	Independently produces and maintains AI documentation that integrates technical and compliance requirements.
	D.1.	Information Security Strategy Development	e-4	Develops and integrates AI security strategy across projects or business units. Aligns AI security objectives with organisational goals, manages AI risks proactively, and ensures ethical AI deployment.
	D.10.	Information and Knowledge Management	e-3	Independently manages AI knowledge and information within defined processes. Analyses business processes to identify AI information needs. Applies tools and techniques to organise, access, and share AI knowledge effectively.
	E.3.	Risk Management	e-4	Ensures the effectiveness and consistency of AI risk management across the organisation by defining AI risk controls, governance mechanisms, and assurance processes aligned with enterprise risk frameworks.
	E.5.	Process Improvement	e-3	Independently performs and monitors AI development and operational processes. Contributes to AI process evaluation, improvement suggestions, and risk awareness.
	E.6.	ICT Quality Management	e-3	Ensures the quality of AI systems within a defined scope by applying and adapting quality governance practices. Defines and monitors AI quality indicators, evaluates AI outcomes, and identifies improvement actions. Contributes to risk-based decisions related to AI performance, reliability, and compliance.
	E.8.	Information Security Management	e-3	Enables the effective security management of AI systems by implementing and adapting AI-specific security measures. Ensures that AI risks are identified, assessed, and mitigated within projects and operational environments, working with stakeholders to support secure and compliant AI use.

Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability		
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Think holistically • Identify problems • Solve problems	<i>Self-management skills</i> • Act independently • Focus on quality • Attend to detail • Assume responsibility • Exert result-orientedness • Forms judgements	<i>Social and communication skills</i> • Communicate • Promote • Persuade • Negotiate • Report • Teach, train, instruct others • Collaborate with others • Exert business orientation • Manage others • Control progress • Exert ethical behaviour • Comply with regulations • Demonstrate trustworthiness
KPI area	Assessment and mitigation of AI related risks		

	GOVERNANCE		[5]
Profile title	AI AUDITOR		[5.4]
Related titles	AI and ML Auditor, AI Audit Manager, AI Assurance Lead, AI Systems Auditor, Responsible AI Auditor, Technology & AI Audit Lead, Model Audit Specialist, Internal AI Auditor, Algorithm Auditor, AI Audit Specialist, Algorithm Audit Specialist, AI Compliance Auditor, Regulatory Assurance Specialist.		
Summary statement	Performs AI audits to ensure AI systems operate within established statutory, regulatory, ethical, technical and policy frameworks, standards and requirements.		
Mission	Conducts independent reviews to assess the effectiveness of processes and controls and the overall compliance with the organisation's legal and regulatory frameworks and policies. Evaluates, tests and verifies AI-related products, functions, algorithms, models, data streams and policies ensuring compliance with guidelines, standards and regulations.		
Deliverables	Accountable	Responsible	Contributor
	• AI audit reports • Audit Findings • AI Act Compliance Assessment Report • Audit Plan and Scope for AI Systems • Audit Readiness Checklist • Conformity Assessment Report	• Audits of AI Models and Processes • AI Documentation Review • AI System Tests for Fairness, Bias, and Accuracy • Audit Readiness Checklist • Conformity Assessment Report	• Legal, Ethical and Safety Compliance Documentation • Governance Framework • Risk Evaluation Insights •
Main tasks	• Conduct independent audits of AI systems for compliance and ethical standards • Assess AI governance policies and frameworks for effectiveness • Verify the implementation of AI risk management controls • Evaluate AI model performance, fairness, and transparency • Identify the scope of the AI, algorithmic, or autonomous system, product or service to be audited • Assess level of maturity, sufficiency or appropriateness of the evidence • Engage relevant stakeholders (and technical resources as applicable) to execute on the audit including but not limited to holding meetings, inspecting evidence, and conducting interviews • Document findings and provide recommendations to management • Provide audit findings including any insufficiencies or non-conformities • Provide a certificate decision including certificate issuance or blocking of initial issuance • Conduct follow-up audits to ensure corrective actions are implemented • Test AI systems for biases, accuracy, and robustness • Review AI project documentation and decision logs		

	- Report audit results to stakeholders, including governance committees or regulators - Maintain and document continuous personal development in relevant fields - Stay updated on audit standards and emerging risks in AI systems - Follow AI safety and ethical guidelines			
			Level	Descriptor
e-Competences (from e-CF)	A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.
	B.2.	Testing	e-2	Supports testing of ICT and AI-based systems. Executes predefined test procedures and records results. Applies basic AI evaluation methods and assists in documenting model behaviour.
	B.5.	Documentation Production	e-3	Independently produces and maintains AI documentation that integrates technical and compliance requirements.
	D.8.	Contract Management	e-3	Independently manages AI contract activities, ensuring clarity on data ownership, model training and performance standards, liability, and regulatory compliance while monitoring supplier delivery and escalating risks as needed.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> - Think analytically - Think critically - Think holistically - Identify problems - Plan activities		<i>Self-management skills</i> - Act independently - Focus on quality - Attend to detail - Assume responsibility - Exert result-orientedness - Forms judgements	<i>Social and communication skills</i> - Communicate - Resolve conflict - Report - Exert customer orientedness - Teach, train, instruct others

		• Demonstrate curiosity	• Build and maintain networks • Exert business orientation • Exert organisation sensitivity • Motivate others • Exert ethical behaviour • Comply with regulations • Respect confidentiality • Demonstrate trustworthiness
KPI area	Achievement of company quality goals regarding the AI system		

Annex C **(normative)**

Educational profiles for AI professionals

This annex presents the educational profiles that correspond to the AI professional role profiles defined in this CEN Workshop Agreement. It articulates how the competences, skills and responsibilities associated with professional practice in AI can be translated into education- and training-oriented structures.

The educational profiles are expressed in terms of learning outcomes and levels of learning as identified by the EQF [\[20\]](#). This EQF level assignment is based upon the systematic relation between EQF learning levels and e-CF proficiency levels, bridging competence performance/ workplace proficiency levels with levels of progression in learning. There are eight EQF learning levels, of which EQF levels 3 to 8 correspond to e-CF proficiency levels e-1 to e-5 as follows: e-1=EQF3; e-2=EQF4+5; e-3=EQF6; e-4=EQF7; e-5=EQF8. This relation is further described in [Annex Q](#), “Relationship with other standards and frameworks”, section 1 “e-CF” contains a table with e-CF proficiency level descriptors and section 7 “EQF” of that same Annex, contains a table mapping e-CF proficiency levels to EQF levels.

This perspective is deliberate. It allows professional requirements to be interpreted within diverse education and training contexts, while preserving a clear and traceable connection to labour market needs. Rather than prescribing curricula, the profiles provide a structured reference that can inform training and curriculum design, programme development and assessment across a wide range of contexts.

This CWA recognises that there is no single pathway into the AI profession. The educational profiles have a modular structure, that can be flexibly combined and adjusted to different contextual needs. There is a direct link between competences and programme learning outcomes (PLOs), which means that a PLO from an educational profile can be easily transferred and (re)used in other contexts where learners are training specific competences or parts of professional roles. In this way, PLOs do not only serve a single programme or profile, but can also support broader learning pathways by providing a consistent reference for assessing and developing competence-based skills across different situations. This flexibility is essential in a field that continues to evolve at pace, with a growing importance of lifelong learning, upskilling and reskilling. This annex also supports transparency, comparability and mutual understanding between learners, education providers and employers. It contributes to a shared European reference for AI education and training, while remaining adaptable to future developments in the AI skills landscape.

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C.1 Data Processing and Analysis

	DATA PROCESSING & ANALYSIS		[1]
Profile title	DATA SCIENTIST		[EP 1.1]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile data scientist. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Finds, manages and merges multiple data sources and ensures consistency of datasets. Identifies the mathematical models, selects and optimises the algorithms to deliver business value through insights. Communicates patterns and recommends ways of applying data.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.7.	Technology Trend Monitoring	e-4
	A.9.	Innovating	e-4
	B.3.	Testing	e-4
	D.7.	Data Science and Analytics	e-4
	D.10.	Information and Knowledge Management	e-4
	D.11.	Needs Identification	e-4
	E.1.	Forecast Development	e-4
Complexity	The profile has an EQF7 level.		

1. PLO Technology Trend Monitoring [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Design transferable AI-enabled solutions in complex contexts by critically analysing and evaluating emerging technology trends and organisational opportunities.	
Unit Learning Outcomes	
1.1	Critically analyse emerging AI technologies and trends in domains such as finance, healthcare, or smart systems using market reports, research publications, and pilot studies.
1.2	Evaluate AI adoption opportunities using technical, organisational, ethical, and regulatory criteria by considering the implications of recent trends and innovations.
1.3	Synthesize information from multiple sources to identify AI innovation opportunities using literature, industry analyses, and cross-domain technology insights.

1.4	Design AI-enabled solutions or concepts that are transferable across contexts informed by observed technological trends and emerging best practices.
1.5	Validate and justify design decisions using appropriate evaluation methods and metrics by testing solutions in simulations, prototypes, or benchmarking exercises.
1.6	Communicate and defend AI-related proposals to specialist and non-specialist audiences through presentations, reports, or workshops highlighting trends and rationale.

2. PLO Innovating [EQF7]

The learner has demonstrated ability to...

Deliver impactful AI-enabled innovations in professional contexts by leading collaborative development, aligning technical and organisational factors, and evaluating real-world effectiveness.

Unit Learning Outcomes

2.1	Coordinate team efforts to design AI-enabled solutions addressing complex professional or societal problems, by aligning roles, expertise, and development activities.
2.2	Integrate multiple technical and organisational factors in developing AI-based solutions, such as system architecture, workflows, and governance constraints.
2.3	Apply AI technologies to implement solutions with practical impact, in real-world organisational or professional environments.
2.4	Evaluate the effectiveness and applicability of AI innovations in real-world professional contexts, using operational, stakeholder, or performance criteria.
2.5	Manage trade-offs between innovation, feasibility, and organisational constraints in AI projects, such as time, resources, and risk.
2.6	Facilitate stakeholder engagement around AI-enabled innovations, by communicating value, limitations, and implementation implications.

3. PLO Testing [EQF7]

The learner has demonstrated ability to...

Lead the testing of AI and ICT systems to ensure robustness, fairness, and accountability by designing strategic frameworks, innovating validation methods, and critically evaluating AI model behaviour in multidisciplinary environments.

Unit Learning Outcomes

3.1	Lead the design and implementation of AI and ICT testing frameworks in multidisciplinary project environments.
3.2	Critically evaluate complex AI models for robustness, fairness, interpretability, explainability, and compliance using advanced evaluation tools and domain-specific criteria.
3.3	Innovate AI testing methodologies to improve model evaluation, validation, and auditing practices by integrating research findings or new algorithmic approaches.
3.4	Ensure ethical, legal, and organisational accountability in AI testing processes through governance frameworks and compliance audits.

3.5	Coordinate testing activities across teams and integrate AI evaluation with overall system assessment in collaborative or cross-functional projects.

4. PLO Data Science and Analytics [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Apply and manage AI-enabled and data-driven analytics solutions to address complex problems, integrate insights from data science as inputs to AI models, coordinate team activities, evaluate data quality and ethical implications, and generate actionable insights that enhance AI-supported and data-informed decision-making in professional, organisational, or research contexts.	
Unit Learning Outcomes	
4.1	Design AI-augmented analytics workflows and solutions for complex, multi-factor problems in organisational or research contexts.
4.2	Apply advanced analytics, predictive models, and machine learning methods using large-scale or multi-source data to support AI-enabled decision-making.
4.3	Evaluate data integrity, model performance, and ethical implications in AI and analytics initiatives within professional or organisational projects.
4.4	Generate actionable insights and recommendations to improve decision-making and outcomes in business, organisational, or research settings.
4.5	Coordinate team activities to implement AI and data-driven analytics projects efficiently.
4.6	Develop frameworks for performance metrics, risk assessment, and operational evaluation in AI-enabled analytics workflows.
4.7	Document reproducible AI and data science analysis pipelines including scripts, notebooks, and workflow documentation.

5. PLO Information and Knowledge Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organisational units by aligning AI knowledge management with organisational objectives, governance requirements, and innovation needs.	
Unit Learning Outcomes	
5.1	Design and evaluate AI knowledge management structures for complex or cross-unit AI initiatives involving multiple stakeholders.
5.2	Advise on the AI knowledge lifecycle, including creation, validation, governance, maintenance, and reuse of AI models, data, and related artifacts.
5.3	Develop and improve governance approaches for AI knowledge and information by integrating organisational, regulatory, ethical, and strategic considerations.
5.4	Facilitate collaborative knowledge sharing and learning across interdisciplinary teams engaged in AI development, deployment, or oversight.
5.5	Align AI knowledge management practices with organisational objectives to support innovation, effectiveness, and sustainable use of AI technologies.

6. PLO Needs Identification [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Leads the end-to-end needs identification process with stakeholders, ensuring AI-driven solution recommendations are strategically aligned with organisational goals, regulatory requirements, and value creation objectives, and ensures the effective implementation, adoption, and iterative enhancement of implemented solutions.	
Unit Learning Outcomes	
6.1	Lead cross-functional teams in stakeholder engagement by coordinating workshops, co-creation sessions, or advisory meetings to define and validate complex organisational needs.
6.2	Critically assess and ensure that AI-driven solution proposals align with organisational strategy, regulatory requirements, and long-term value creation objectives, using strategic planning frameworks or business model analysis.
6.3	Evaluate and co-create a comprehensive range of AI solution options, including make-or-buy, SaaS, cloud, low-code/no-code, and other emerging technologies, by applying feasibility studies, prototyping, or comparative analysis.
6.4	Ensure the effective implementation, adoption, and iterative enhancement of AI solutions, using human-centred design principles, project management tools, or feedback loops.

7. PLO Forecast Development [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Enhance organisational decision-making and operational responsiveness by evaluating AI adoption patterns, integrating predictive insights, and translating trends into forward-looking strategic forecasts across business functions.	
Unit Learning Outcomes	
7.1	Explain AI adoption patterns across organisational functions and their operational implications in areas such as marketing, operations, and product development.
7.2	Understand competitive and market dynamics affecting AI adoption using sector-specific studies and benchmarking analyses.
7.3	Evaluate AI trend data and interpret their impact on products, services, and internal processes using predictive analytics and cross-functional performance metrics.
7.4	Develop forward-looking forecasts and apply predictive insights to improve operational efficiency and decision-making by integrating data-driven scenario planning into organisational strategies.
7.5	Design AI-driven process improvements by identifying areas of efficiency gains or innovation opportunities.
7.6	Assess the feasibility and business value of AI adoption initiatives through cost-benefit analysis and performance evaluation.
7.7	Present actionable AI-informed strategies and forecasts to decision-makers using clear, evidence-based communication.

Assessments DATA SCIENTIST [EP 1.1]	
1	PLO Technology Trend Monitoring [EQF7]
1.1	Critical AI technology trend analysis report in which the learner analyses emerging AI technologies and trends in at least two application domains, using market reports, research publications and pilot studies. Assessed for source quality, analytical depth, comparison across domains, and relevance for data science practice.
1.2	AI adoption opportunity evaluation matrix applying technical, organisational, ethical and regulatory criteria to selected AI adoption opportunities. Assessed for completeness of criteria, quality of trade-off analysis, and justification of adoption priorities.
1.3	Cross-source AI innovation opportunity brief synthesising evidence from academic literature, industry analyses and cross-domain technology insights to identify and prioritise AI innovation opportunities. Assessed for synthesis quality, originality, evidence base and strategic relevance.
1.4	Transferable AI-enabled solution design document including a design rationale explaining how the concept can be applied across different organisational or sectoral contexts. Assessed for transferability, feasibility, use of emerging best practices and alignment with identified trends.
1.5	Validation and justification report based on a prototype, simulation or benchmarking exercise, including evaluation methods, metrics, results and limitations. Assessed for appropriateness of validation design, metric selection, interpretation of results and quality of design justification.
1.6	Stakeholder-facing proposal presentation and defence, supported by a concise written proposal or slide deck, explaining the AI trend, rationale, proposed solution and expected value to both specialist and non-specialist audiences. Assessed for clarity, evidence-based argumentation, audience adaptation and ability to respond to critical questions.
2	PLO Innovating [EQF7]
2.1	AI innovation opportunity identification report, where the learner, working in a group, identifies and articulates innovation opportunities using AI technologies within a defined domain or organisational context, and shows the team collaboration efforts. Assessed for originality, relevance, and alignment with technological and business trends.
2.2	Concept design document, including problem definition, proposed AI-enabled solution, and conceptual architecture, showing the integration of technical and organizational factors. Assessed for feasibility, coherence, and justification of design choices.
2.3	Prototype or Proof-of-Concept (PoC) demonstrating the feasibility of the proposed AI innovation, accompanied by technical documentation. Assessed on functionality, appropriateness of approach, and ability to demonstrate key innovation aspects.
2.4	Comparative innovation analysis report, evaluating alternative AI solution approaches (e.g., models, architectures, or methodologies) with explicit trade-offs (e.g., performance, scalability, ethics). Assessed for analytical depth and quality of evaluation criteria.
2.5	Innovation impact & risk assessment report, analysing potential organisational, societal, ethical, and regulatory implications of the proposed AI solution. Assessed for completeness, critical reflection, and alignment with responsible AI principles.
2.6	Innovation proposal pitch and defence, including a structured presentation to stakeholders (technical and non-technical), followed by Q&A. Assessed for persuasiveness, clarity,

	evidence-based argumentation, and ability to respond to critique and justify innovation decisions.
3	PLO Testing [EQF7]
3.1	Evaluation of an AI testing framework design and implementation plan, including definition of testing strategy, test levels (unit, integration, system), validation criteria, roles and responsibilities in a multidisciplinary team, and integration into the AI lifecycle; assessed for completeness, coherence, feasibility, and justification of design decisions.
3.2	Evaluation of a comprehensive AI model evaluation report, in which the learner applies advanced evaluation tools to assess a complex AI model across robustness, fairness, interpretability, explainability, and regulatory compliance. The report must include metric selection, benchmarking results, trade-off analysis, and domain-specific justification of evaluation criteria; assessed for methodological rigour, completeness, critical analysis, and validity of conclusions.
3.3	Evaluation of an AI testing methodology innovation report and prototype, in which the learner designs or adapts a testing methodology by integrating recent research findings or novel algorithmic approaches. The submission must include (1) a literature-informed rationale, (2) description of the proposed methodological innovation, (3) implementation or simulation of the approach, and (4) comparative evaluation demonstrating improvement over baseline testing practices; assessed for originality, methodological rigour, validity of improvement claims, and relevance to model evaluation, validation, and auditing.
3.4	Assessment of an AI ethics and bias evaluation report, including identification of potential biases and fairness issues; evaluated for completeness, methodological soundness, and alignment with ethical and regulatory standards.
3.5	Assessment of data visualisations and test result dashboards, evaluated for clarity, correctness, appropriateness of visual techniques, and effectiveness in communicating testing outcomes to stakeholders.
4	PLO Data Science and Analytics [EQF7]
4.1	Review of AI workflow documentation, including data acquisition, preprocessing, modelling, and evaluation stages; assessed for completeness, coherence of workflow design, traceability of decisions, and alignment with analytical objectives.
4.2	Evaluation of analytical model outputs, including performance metrics, validation results, and interpretation; assessed for correctness, appropriateness of evaluation metrics, and justification of model performance in relation to the problem context.
4.3	Assessment of a data integrity and ethics report, including data quality analysis, bias identification, and compliance considerations; evaluated for methodological soundness, completeness, and alignment with ethical and regulatory standards.
4.4	Evaluation of an insights and recommendations report, translating analytical results into actionable business or organisational recommendations; assessed for analytical depth, relevance, clarity, and strength of evidence-based argumentation.
4.5	Review of team coordination and collaboration documentation, including role allocation, workflow integration, and communication artefacts; assessed for effectiveness of coordination, clarity of responsibilities, and contribution to successful analytical outcomes.
4.6	Assessment of a performance and risk evaluation framework, including definition of performance indicators, monitoring mechanisms, and risk mitigation strategies; evaluated for completeness, appropriateness, and integration into the analytical lifecycle.

4.7	Evaluation of reproducible AI pipelines, including code, data versioning, and documentation; assessed for reproducibility, robustness, scalability, and adherence to best practices in data science workflows.
5	PLO Information and Knowledge Management [EQF7]
5.1	Evaluation of an AI knowledge management architecture and knowledge structure design, including data/knowledge models, metadata structures, and integration with AI workflows; assessed for coherence, scalability, traceability, and alignment with organisational and analytical requirements.
5.2	Assessment of an AI knowledge lifecycle framework and lifecycle guidelines, including processes for knowledge creation, validation, storage, reuse, and retirement; evaluated for completeness, feasibility, and alignment with AI system lifecycle and organisational needs.
5.3	Review of an AI knowledge governance framework and knowledge risk & compliance assessment, including policies, roles, controls, and risk mitigation strategies; assessed for robustness, regulatory alignment, and effectiveness in ensuring trustworthy and compliant knowledge management.
5.4	Evaluation of an AI knowledge sharing strategy and collaboration model, including mechanisms for knowledge dissemination, stakeholder engagement, and cross-functional collaboration; assessed for effectiveness, inclusiveness, and alignment with organisational culture and workflows.
5.5	Assessment of an AI knowledge management strategy and strategic alignment report, including alignment with business objectives, AI strategy, and value creation goals; evaluated for strategic coherence, justification of design choices, and integration with organisational governance and decision-making processes.
6	PLO Needs Identification [EQF7]
6.1	Strategic stakeholder engagement plan – assessed via a documented engagement plan and workshop/co-creation outputs for AI needs identification; evaluated for stakeholder analysis, appropriateness of engagement methods, quality of elicited requirements, and traceability from stakeholder input to identified AI opportunities.
6.2	AI Solution Alignment Report – assessed via a written report analysing AI solutions against strategic, regulatory, ethical, and value alignment criteria; evaluated for analytical depth, justification of alignment decisions, and consideration of trade-offs and constraints.
6.3	AI Solution Evaluation Portfolio – assessed via a portfolio submission including feasibility studies, comparative analysis, and AI prototyping results; evaluated for methodological rigour, validity of comparisons, integration of evidence, and justification of selected solution approaches.
6.4	AI Implementation & Enhancement Plan – assessed via a documented implementation roadmap with iterative improvement strategy for AI solutions; evaluated for feasibility, coherence of implementation phases, integration with organisational processes, and robustness of continuous improvement mechanisms.
7	PLO Forecast Development [EQF7]
7.1	Analytical report or case study submission assessing explanation of AI adoption patterns and operational implications; evaluated for analytical depth, use of evidence, clarity of reasoning, and linkage between observed patterns and organisational impact.

7.2	Market intelligence brief evaluated for depth of insight, quality of data sources, and relevance to business function analysis; assessed for synthesis of market and technological trends and justification of identified implications.
7.3	Predictive data analysis report assessed for accuracy of interpretation, appropriate selection and use of predictive models and metrics, and robustness of results, including validation and handling of uncertainty.
7.4	Forward-looking forecast document graded for integration of predictive insights, scenario analysis, and development of actionable recommendations; evaluated for coherence, plausibility, and strategic relevance.
7.5	Process improvement proposal evaluated for feasibility, level of innovation, and potential impact; assessed for alignment with forecast outcomes, justification of proposed changes, and consideration of organisational constraints.
7.6	Feasibility and business impact assessment report, including cost-benefit analysis and risk considerations for forecast-driven initiatives; evaluated for completeness, validity of assumptions, and strength of evidence-based conclusions.

	DATA PROCESSING & ANALYSIS		[1]
Profile title	DATA CURATION LEAD		[EP 1.2]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile data curation lead. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Ensures data is accurate, well-documented, ethically managed, and consistently curated so it can be trusted and effectively used across analytics, AI, and business functions.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.4.	Product/Service Planning	e-3
	D.2.	ICT Quality Strategy Development	e-4
	D.7.	Data Science and Analytics	e-4
	E.3.	Risk Management	e-3
	E.5.	Process Improvement	e-3
	E.6.	ICT Quality Management	e-4
Complexity	The profile has an EQF7 level.		

1. PLO Product/Service Planning [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Plan and deliver AI-enabled products or services by analysing components, applying structured planning methods, managing resources, and ensuring compliance with relevant standards and legislation in guided, partially predictable contexts.	
Unit Learning Outcomes	
1.1	Identify and explain the components, current status, and target objectives of products and services, including AI-enabled elements, using product roadmaps and system specifications.
1.2	Analyse and assess cost effectiveness, risks, opportunities, strengths, and weaknesses related to AI components in structured project or service planning scenarios.
1.3	Apply established methods and tools such as Gantt charts, workflow software, and AI project templates to develop structured product or service plans, including AI-specific timelines, milestones, and resource allocation.
1.4	Ensure appropriate AI documentation, delivery specifications, and compliance by adhering to industry standards, regulatory frameworks, and internal quality guidelines.

1.5	Communicate product or service plans and AI-related decisions effectively to team members and stakeholders using reports, presentations, or visual dashboards.

2. PLO ICT Quality Strategy Development [EQF7]

The learner has demonstrated ability to...

Define, evaluate, coordinate, and optimise AI quality strategies by integrating ethical, resilience, and performance considerations across AI systems, using relevant frameworks and monitoring to address complex problems and enhance organisational outcomes.

Unit Learning Outcomes

2.1	Define AI quality strategies by applying principles of ethics, performance, and resilience, using frameworks such as ISO/IEC 42001, EU AI Ethics Guidelines, and Explainable AI best practices.
2.2	Evaluate AI system interactions, interdependencies, and quality objectives against organisational goals, using AI performance metrics, KPIs, and benchmarking tools.
2.3	Coordinate cross-functional activities to implement AI quality strategies and ensure alignment with organisational objectives.
2.4	Optimise AI quality strategies by integrating strategic monitoring, feedback loops, and continuous improvement practices.
2.5	Solve strategic AI quality challenges across multiple systems by applying evidence-based decision-making.
2.6	Report and communicate strategic AI quality outcomes, lessons learned, and recommendations for organisational decision-making.

3. PLO Data Science and Analytics [EQF7]

The learner has demonstrated ability to...

Apply and manage AI-enabled and data-driven analytics solutions to address complex problems, integrate insights from data science as inputs to AI models, coordinate team activities, evaluate data quality and ethical implications, and generate actionable insights that enhance AI-supported and data-informed decision-making in professional, organisational, or research contexts.

Unit Learning Outcomes

3.1	Design AI-augmented analytics workflows and solutions for complex, multi-factor problems in organisational or research contexts.
3.2	Apply advanced analytics, predictive models, and machine learning methods using large-scale or multi-source data to support AI-enabled decision-making.
3.3	Evaluate data integrity, model performance, and ethical implications in AI and analytics initiatives within professional or organisational projects.
3.4	Generate actionable insights and recommendations to improve decision-making and outcomes in business, organisational, or research settings.
3.5	Coordinate team activities to implement AI and data-driven analytics projects efficiently.
3.6	Develop frameworks for performance metrics, risk assessment, and operational evaluation in AI-enabled analytics workflows.

3.7	Document reproducible AI and data science analysis pipelines including scripts, notebooks, and workflow documentation.

4. PLO Risk Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities.	
Unit Learning Outcomes	
4.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
4.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
4.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
4.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
4.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
4.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.
5. PLO Process Improvement [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Enhance AI process performance by designing and implementing data-driven improvements that integrate multiple AI concepts, address operational risks, uphold ethical standards, and support effective team collaboration.	
Unit Learning Outcomes	
5.1	Design modifications to AI workflows to improve performance and efficiency using practical AI development projects.
5.2	Apply multiple AI process concepts and metrics to identify, analyse, and solve process problems in real-world AI applications.
5.3	Assess operational risks and ethical considerations in AI development and deployment by evaluating AI systems in operational environments.
5.4	Collaborate effectively within a team to implement process improvements in AI project settings.
5.5	Evaluate the outcomes of AI process changes against performance, ethical, and compliance criteria using defined metrics and benchmarks.
5.6	Document AI process modifications and lessons learned for knowledge sharing within the team.

6. PLO ICT Quality Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Design, evaluate, and manage AI quality management frameworks by integrating governance mechanisms, quality metrics, ethical principles, and risk-based controls to ensure and improve the quality, trustworthiness, and compliance of AI systems across complex organisational contexts.	
Unit Learning Outcomes	
6.1	Design AI quality management frameworks by integrating governance mechanisms, metrics, and ethical principles.
6.2	Adapt AI quality approaches to complex organisational contexts involving multiple AI systems and stakeholders.
6.3	Evaluate the effectiveness of AI quality controls using performance, risk, and compliance evidence.
6.4	Assess AI-related risks and uncertainties in relation to trustworthiness, fairness, and system robustness.
6.5	Manage the implementation of AI quality assurance activities within organisational or cross-functional projects.
6.6	Interpret AI quality outcomes to inform strategic decisions on AI deployment, scaling, or modification.
6.7	Critically reflect on limitations of AI quality practices in light of evolving technological, ethical, or regulatory conditions.

Assessments DATA CURATION LEAD [EP 1.2]	
1	PLO Product/Service Planning [EQF6]
1.1	Evaluation of a product/service specification and roadmap analysis report, supported by oral questioning and peer review; assessed for correct identification of product/service components, current status, target objectives, AI-enabled elements, and alignment with system specifications.
1.2	Assessment of a risk, opportunity and cost-effectiveness matrix, combined with case study analysis and written justification; evaluated for completeness, logical assessment of strengths and weaknesses, feasibility of AI components, and quality of evidence-based reasoning.
1.3	Review of a structured AI product/service plan, including Gantt chart, workflow model, milestones, resource allocation and AI-specific dependencies; assessed using a rubric for planning coherence, feasibility, completeness and alignment with project or service objectives.
1.4	Audit of an AI documentation, delivery specification and compliance package, using checklist verification and documented evidence evaluation; assessed for adherence to relevant standards, regulatory frameworks, internal quality guidelines and traceability of compliance decisions.
1.5	Assessment of stakeholder communication deliverables, including presentation, visual dashboard or planning report, with feedback from simulated stakeholders; evaluated for clarity, accuracy, audience appropriateness, and ability to explain AI-related planning decisions and implications.

2	PLO ICT Quality Strategy Development [EQF7]
2.1	Assessment of an AI training module design document and AI use-case mapping, evaluated for relevance to ICT quality strategy, clarity of learning design, alignment with data quality objectives, and suitability of selected AI use cases.
2.2	Evaluation of AI training materials and a recorded or observed AI training session, assessed for accuracy, pedagogical quality, practical applicability, and ability to communicate ICT quality principles in AI-enabled data curation contexts.
2.3	Review of an AI learning feedback summary and revised AI training content, assessed for quality of feedback analysis, responsiveness to learner needs, evidence of improvement, and alignment with ICT quality and data governance requirements.
2.4	Assessment of AI ethics and governance training materials and applied AI case examples, evaluated for completeness, regulatory and ethical accuracy, relevance to data quality strategy, and ability to support responsible AI/data curation practice.
2.5	Evaluation of documented AI learner support evidence and facilitation notes, assessed for clarity of guidance, appropriateness of support interventions, responsiveness to learner difficulties, and consistency with intended learning outcomes.
2.6	Review of an AI instructional design rationale and alignment with learning objectives, assessed for coherence between learning outcomes, activities, assessment approach, ICT quality strategy, and the required professional competence level.
3	PLO Data Science and Analytics [EQF7]
3.1	Review of AI workflow documentation, including data ingestion, curation, transformation, and integration processes; assessed for completeness, traceability of data handling decisions, alignment with data governance standards, and coherence across the data lifecycle.
3.2	Evaluation of analytical model outputs, including performance metrics and validation results; assessed for correctness, appropriateness of evaluation criteria, and consideration of data quality constraints impacting analytical outcomes.
3.3	Assessment of a data integrity and ethics report, including data quality analysis, bias identification, and compliance considerations; evaluated for methodological soundness, completeness, and alignment with governance and regulatory frameworks.
3.4	Evaluation of an insights and recommendations report, translating analytical results into actionable improvements for data curation and management processes; assessed for relevance, clarity, and strength of evidence-based reasoning.
3.5	Review of team coordination documentation, including collaboration artefacts, role allocation, and workflow integration; assessed for effectiveness of coordination, clarity of responsibilities, and contribution to consistent data curation practices.
3.6	Assessment of a performance and risk framework, including data quality indicators, monitoring mechanisms, and risk mitigation strategies; evaluated for completeness, appropriateness, and integration into the data lifecycle and governance processes.
3.7	Evaluation of reproducible AI pipelines, including data versioning, metadata documentation, and workflow automation; assessed for reproducibility, robustness, scalability, and adherence to data curation and governance best practices.
4	PLO Risk Management [EQF6]
4.1	Written AI risk assessment report evaluated against completeness and methodological correctness; assessed for systematic identification of risks related to data quality, integrity,

	lineage, and governance, and for appropriate application of risk assessment methods and justification of findings.
4.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives; evaluated for prioritisation of risks, clarity of assumptions, and linkage to data curation processes and operational context.
4.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries; evaluated for effectiveness of proposed mitigation measures, integration with data governance frameworks, and ability to address risks across the data lifecycle.
4.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement; assessed for ability to explain risk scenarios, justify mitigation decisions, and adapt communication to technical and non-technical stakeholders.
4.5	Review of AI system performance logs, annotated with identified emerging risks and analysis; evaluated for accuracy of risk detection, depth of analysis, and ability to relate observed behaviour to underlying data quality and governance issues.
4.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards; assessed for completeness, traceability of changes, and effectiveness in improving ongoing risk management practices.
5	PLO Process Improvement [EQF6]
5.1	Graded workflow diagrams and updated AI/data pipelines; rubric-based evaluation of performance improvements, assessed for clarity of workflow design, effectiveness of implemented improvements, and alignment with data curation, quality, and governance requirements.
5.2	Analysis report submission with metrics calculations, including data quality indicators and performance measures; assessed via peer review or instructor feedback for accuracy of calculations, appropriateness of metrics, and validity of conclusions.
5.3	Risk and ethical assessment report evaluated against a checklist and supported by case study review; assessed for identification of process-related risks, ethical considerations, and alignment with data governance and compliance standards.
5.4	Team project documentation assessed via contribution logs and peer evaluation; evaluated for clarity of roles, effectiveness of collaboration, and contribution to consistent and improved data curation processes.
5.5	Comparative performance report graded against defined metrics and benchmarks; oral defence or presentation optional; assessed for analytical depth, validity of comparisons, and justification of proposed process improvements.
5.6	Lessons-learned or reflective report reviewed for completeness, clarity, and insightfulness; assessed for critical reflection on process performance, identification of improvement opportunities, and linkage to future optimisation of data curation workflows.
6	PLO ICT Quality Management [EQF7]
6.1	Design assignment producing an integrated AI quality management framework, including data quality dimensions, governance structures, and lifecycle integration; assessed for completeness, coherence, scalability, and alignment with organisational and data curation requirements.
6.2	Case study analysis justifying adaptation of AI quality approaches to complex organisational contexts; evaluated for contextual understanding, appropriateness of selected approaches, and strength of justification in relation to data quality and governance challenges.

6.3	Evaluation report assessing effectiveness of AI quality and risk controls; assessed for methodological rigour, use of appropriate metrics, and ability to demonstrate the impact of controls on data quality and system performance.
6.4	Risk assessment document analysing trustworthiness and uncertainty in AI systems; evaluated for identification of data-related risks, handling of uncertainty, and alignment with governance, compliance, and quality assurance standards.
6.5	Project-based assessment with an AI quality assurance implementation plan, including processes, controls, and monitoring mechanisms; assessed for feasibility, integration with organisational workflows, and effectiveness in ensuring continuous data and system quality.
6.6	Strategic decision brief based on interpreted AI quality evidence; evaluated for clarity, relevance of evidence, justification of decisions, and alignment with organisational objectives and quality strategy.
6.7	Critical reflective essay on limitations of AI quality management practices; assessed for depth of reflection, identification of limitations and trade-offs, and ability to propose informed improvements for data curation and quality management processes.

	DATA PROCESSING & ANALYSIS		[1]
Profile title	DATA ANALYST		[EP 1.3]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile data analyst. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Imports, inspects, cleans, transforms, validates, models or interprets collections of data with regard to the business goals of the company. Ensures that the data sources and repositories provide consistent and reliable data. Prepares visualisations.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.10.	User Experience	e-3
	B.5.	Documentation Production	e-2
	D.7.	Data Science and Analytics	e-3
	D.10.	Information and Knowledge Management	e-3
	D.11.	Needs Identification	e-3
Complexity	The profile has an EQF6 level.		

1. PLO User Experience [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Analyse, design, and evaluate effective and ethically responsible AI-enabled user experiences by applying UX methods, designing interfaces that communicate AI behaviour, and considering usability, trust, and ethical implications.	
Unit Learning Outcomes	
1.1	Analyse user needs, goals, and behaviour in AI-supported applications, such as recommendation or automation systems.
1.2	Apply and adapt UX and HCI methods using AI design tools and frameworks to design user interactions for AI-enabled products and services.
1.3	Design interface elements such as visual indicators or textual cues that communicate AI behaviour, limitations, or confidence levels to users, and evaluate usability, explainability, and trust using methods like user testing or heuristics.
1.4	Assess ethical implications of AI-driven user experiences by considering issues such as bias, fairness, and transparency.

2. PLO Documentation Production [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Identify and explain AI documentation requirements, and produce basic AI-related technical and compliance documents using predefined templates and under guidance, ensuring information is accurate, up to date, and aligned with organisational and regulatory standards in routine AI development contexts.	
Unit Learning Outcomes	
2.1	Identify key AI documentation types, requirements, and templates used in routine AI projects, such as model datasheets, user manuals, or compliance checklists.
2.2	Explain the purpose of technical, compliance, and transparency documentation for AI systems, by referring to examples like algorithmic decision logs or fairness assessment reports.
2.3	Produce basic AI technical and compliance documents under guidance, following predefined templates, using standard documentation formats and structured forms.
2.4	Use document-management tools to store, retrieve, and update AI documentation, in systems that support organised and version-controlled storage.
2.5	Verify that information in AI documents is accurate, complete, and aligned with organisational standards, by cross-checking against project requirements and regulatory guidelines.

3. PLO Data Science and Analytics [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Analyse and integrate data from multiple sources using statistical and predictive analytics methods to produce actionable insights, evaluate data quality and bias, and communicate findings to support AI-driven decision-making in situations with partially defined problems and varying data availability.	
Unit Learning Outcomes	
3.1	Analyse data from multiple sources such as databases, APIs, or log files to identify patterns and trends relevant for AI-enhanced decision-making.
3.2	Integrate structured and unstructured datasets using data integration tools or programming languages to improve AI model performance.
3.3	Apply predictive analytics and basic machine learning methods in Python, R, or equivalent tools to support AI-assisted decision-making.
3.4	Evaluate datasets for quality, bias, and compliance in accordance with ethical, privacy, or regulatory standards.
3.5	Communicate findings effectively through reports, dashboards, or presentations to support organisational AI-driven processes.
3.6	Produce data storytelling artifacts such as visual narratives or annotated dashboards to convey insights for AI-enabled decisions.

4. PLO Information and Knowledge Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Manage AI-related knowledge and information by independently identifying AI-related knowledge needs and systematically organising, maintaining, and sharing AI knowledge assets within defined operational contexts.	
Unit Learning Outcomes	
4.1	Identify AI-related knowledge and information assets, such as datasets, models, documentation, and policies, relevant to defined organisational processes.
4.2	Analyse operational processes to determine AI-related information and knowledge requirements in support of AI-enabled tasks or decision-making.
4.3	Apply appropriate methods and tools to organise, document, and maintain AI knowledge and information using structured repositories and standardized documentation practices.
4.4	Ensure the accessibility, quality, and consistency of AI knowledge and information by applying established validation, versioning, and basic governance procedures.
4.5	Share and reuse AI knowledge effectively within teams or projects to support operational efficiency and informed use of AI systems.

5. PLO Needs Identification [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Independently engage with stakeholders to identify and validate needs, translating them into feasible AI and technology solution options, while considering business objectives and organisational priorities.	
Unit Learning Outcomes	
5.1	Actively engages with internal and external stakeholders to elicit and validate their needs, using structured interviews, workshops, or observational techniques.
5.2	Analyse and articulate stakeholder needs, differentiating between functional, technical, and business requirements, by applying basic requirement-gathering frameworks or tools.
5.3	Translate validated stakeholder needs into feasible AI or technology solution options, considering constraints such as cost, technical feasibility, and organisational priorities.
5.4	Apply basic data analysis using datasets, dashboards, or simple statistical tools to support the identification of needs and evaluate potential solution options.
5.5	Recognize and consider ethical implications and relevant regulatory constraints in AI application scenarios or technology deployment when proposing solutions.

Assessments DATA ANALYST [EP 1.3]	
1	PLO User Experience [EQF6]
1.1	AI user research report, submission and review, with practical observation of research artefacts; assessed for clarity of user needs analysis, relevance of evidence, and alignment with the data/AI use context.

1.2	AI UX prototype evaluation, practical design assignment, rubric-based assessment; evaluated for usability, appropriateness of design choices, and alignment with user requirements and analytical objectives.
1.3	AI interface mock-ups and heuristic evaluation report, peer and instructor review; assessed for clarity, consistency, usability issues identified, and quality of improvement recommendations.
1.4	AI ethics assessment report, written case analysis, and ethical decision reflection; assessed for identification of ethical risks, quality of reasoning, and relevance to responsible AI-supported data analysis.
2	PLO Documentation Production [EQF5]
2.1	Review of a submitted AI documentation inventory or reference table; quiz or oral questioning on AI documentation types and template purposes; assessed for correctness of identification, completeness, and understanding of documentation roles in routine AI projects.
2.2	Written explanation or short report linking AI documentation types to their purposes; scenario-based questions on transparency or compliance documentation; assessed for clarity, correctness, and relevance of explanations to the given context.
2.3	Evaluation of a completed AI datasheet, compliance checklist, or user guide, assessed for accuracy, completeness, adherence to predefined templates, and correct use of standard documentation formats.
2.4	Inspection of a document repository demonstrating correct storage, retrieval, and version control of AI documentation; submission of a log showing updates; assessed for proper use of document management tools and consistency of versioning practices.
2.5	Review of annotated AI documents or a verification checklist demonstrating identification and correction of errors; assessed for accuracy of verification, completeness of checks, and alignment with organisational documentation standards.
3	PLO Data Science and Analytics [EQF6]
3.1	Evaluation of integrated datasets, assessed for correctness of data integration, consistency across sources, handling of missing or conflicting data, and alignment with analytical objectives.
3.2	Assessment of analytics report, evaluated for clarity of analysis, appropriate use of methods, correctness of results, and logical interpretation of findings in relation to the problem context.
3.3	Review of predictive model outputs, assessed for correctness of results, appropriate use of evaluation metrics, and quality of interpretation, including recognition of model limitations.
3.4	Audit of dataset evaluation report, evaluated for completeness of data quality assessment, identification of issues (e.g., bias, inconsistency), and justification of conclusions.
3.5	Assessment of findings presentation, evaluated for clarity, structure, and effectiveness in communicating analytical results to technical and non-technical stakeholders.
3.6	Evaluation of data storytelling artifacts, assessed for coherence between data, visuals, and narrative, clarity of message, and ability to support data-driven decision-making.
4	PLO Information and Knowledge Management [EQF6]

4.1	Assessment of an AI knowledge asset inventory and AI asset classification document, assessed for correct identification and classification of datasets, models, documentation, and policies relevant to defined organizational processes.
4.2	Evaluation of a written AI information needs analysis and AI process–knowledge mapping, assessed for analysis of operational processes and determination of AI-related information and knowledge requirements supporting AI-enabled tasks or decision-making.
4.3	Review of a structured AI knowledge repository with AI documentation templates and version control evidence, assessed for appropriate organization, documentation, and maintenance of AI knowledge and information using standardized documentation practices.
4.4	Assessment of an AI knowledge quality checklist and documented AI knowledge governance procedures, assessed for accessibility, quality, consistency, validation, versioning, and basic governance of AI knowledge and information.
4.5	Evaluation of an AI knowledge sharing package with documented AI knowledge reuse evidence, assessed for effective sharing and reuse of AI knowledge within teams or projects to support operational efficiency and informed use of AI systems.
5	PLO Needs Identification [EQF6]
5.1	Stakeholder needs report – assessed via a written report of AI stakeholder needs and validation summary; evaluated for completeness of stakeholder identification, clarity of elicited needs, and quality of validation using appropriate techniques (e.g., interviews, workshops).
5.2	Requirement analysis matrix – assessed via a submitted matrix mapping functional, technical, and business requirements to AI solutions; evaluated for correctness of classification, completeness, and logical alignment between requirements and proposed solutions.
5.3	AI solution options brief – assessed via presentation or report proposing feasible AI solution options; evaluated for relevance, feasibility, and justification of proposed options in relation to stakeholder needs and organisational constraints.
5.4	AI data analysis summary – assessed via submitted dashboard, data visualisation, or short report analysing data to inform AI solutions; evaluated for accuracy of analysis, appropriate use of tools, and relevance of insights to identified needs.
5.5	AI ethical & regulatory assessment – assessed via a written document outlining ethical and regulatory considerations in AI solution proposals; evaluated for identification of key issues, alignment with applicable standards, and appropriateness of considerations for the proposed solutions.

	DATA PROCESSING & ANALYSIS		[1]
Profile title	DATA ENGINEER		[EP 1.4]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile data engineer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Designs the infrastructure and builds and maintains warehouses and data pipelines that collect, manage, and convert raw data into usable information for data scientists and analysts to leverage data for strategic advantage.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.5.	Architecture Design	e-3
	B.2.	Component Integration	e-3
	B.6.	Systems Engineering	e-3
	D.7.	Data Science and Analytics	e-2
	E.3.	Risk Management	e-2
	E.8.	Information Security Management	e-3
Complexity	The profile has an EQF6 level.		

1. PLO Architecture Design [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Deliver functional AI-enabled solutions in enterprise settings by analysing requirements, designing and integrating AI components, and applying standard architectural practices to ensure scalability, security, and interoperability under guided supervision.	
Unit Learning Outcomes	
1.1	Identify and describe core AI architecture components, such as hardware accelerators, cloud AI services, and data pipelines, in enterprise AI systems.
1.2	Apply standard AI design patterns and implement AI modules using Python frameworks, pre-trained models, or microservices architectures in guided projects.
1.3	Evaluate AI risks, ethical considerations, and adherence to policies by applying standardized checklists and reflection exercises in lab or project scenarios.
1.4	Integrate AI components into simple enterprise systems using APIs, cloud services, or modular pipelines in partially unpredictable business contexts.

2. PLO Component Integration [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Deliver functioning AI-enabled solutions by selecting, implementing and integrating AI models, data pipelines and services within existing systems, evaluating interoperability, performance and security, and articulating well-reasoned integration choices in applied project contexts.	
Unit Learning Outcomes	
2.1	Analyse and compare AI integration requirements within different application or system contexts, such as web-based, embedded or data-driven applications.
2.2	Design and implement AI component integration using appropriate architectures, APIs, microservices and deployment tools, by applying established integration patterns and frameworks.
2.3	Integrate and configure AI models, data pipelines and services to ensure interoperability with existing systems, in heterogeneous software environments.
2.4	Test, validate and evaluate AI-enabled solutions with respect to performance, security and reliability, using defined metrics and test procedures.
2.5	Explain and justify integration decisions, trade-offs and outcomes in project-based or team settings, by referring to technical constraints and design choices.

3. PLO Systems Engineering [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Design, integrate, and validate AI infrastructure systems independently using appropriate tools and frameworks to solve complex AI problems while ensuring performance, security, and ethical AI practices.	
Unit Learning Outcomes	
3.1	Design AI infrastructure solutions, including cloud-based pipelines and model deployment environments, for specific operational scenarios such as predictive analytics or recommendation systems.
3.2	Integrate AI components and services with existing IT systems using APIs, microservices, or containerization tools to ensure functional reliability.
3.3	Validate AI system performance and security through structured testing procedures such as unit tests, load testing, or penetration testing.
3.4	Apply ethical AI practices, such as bias detection in datasets, privacy safeguards, and explainable AI techniques, when implementing AI systems.
3.5	Evaluate solutions and propose improvements to AI infrastructure systems within team-based projects using performance metrics and user feedback.
3.6	Document AI infrastructure design and implementation processes clearly, using diagrams, code comments, or reports, to support maintainability and knowledge transfer.

4. PLO Data Science and Analytics [EQF5]	
<i>The learner has demonstrated ability to...</i>	

Identify and collect structured and unstructured data from common sources, and apply basic data cleaning and descriptive analytics techniques to generate insights that support AI-assisted decision-making within defined, predictable tasks and workflows.

Unit Learning Outcomes

4.1	Identify common structured and unstructured datasets such as CSV files, JSON, text, or sensor data relevant to AI-assisted applications.
4.2	Apply basic data cleaning and preprocessing techniques using standard tools or scripts to prepare data for AI-enabled analysis.
4.3	Demonstrate the use of simple descriptive analytics in spreadsheets or basic statistical software to produce insights for AI-supported decision-making.
4.4	Recognize ethical and privacy considerations when handling personal, sensitive, or AI-relevant data.
4.5	Create basic visualizations such as charts or dashboards to communicate AI-relevant insights.

5. PLO Risk Management [EQF5]

The learner has demonstrated ability to...

Support safe and responsible AI system operations by identifying, describing, and documenting technical, operational, ethical, and privacy risks in accordance with organisational policies and standard monitoring tools.

Unit Learning Outcomes

5.1	Identify common AI system risks, including bias, model drift, and data privacy issues, by referring to organisational policies and guidelines in operational AI systems.
5.2	Describe AI system behaviours and operational characteristics using standard monitoring tools and templates in deployed AI applications.
5.3	Record AI risk incidents and observations in standardized registers within organisational AI workflows.
5.4	Recognize ethical and compliance-related considerations in the use of AI systems in predictable operational contexts such as customer support or data processing tasks.
5.5	Apply basic AI risk documentation techniques to support supervisors or team members in operational decision-making.

6. PLO Information Security Management [EQF6]rel

The learner has demonstrated ability to...

Ensure the security and reliability of AI systems by assessing vulnerabilities, applying secure development practices, and implementing mitigation strategies using appropriate tools and collaborative methods.

Unit Learning Outcomes

6.1	Analyse AI system components and workflows to identify potential security vulnerabilities in development or operational pipelines.

6.2	Evaluate AI risks related to data, models, deployment, and operation using established risk assessment frameworks and tools.
6.3	Apply secure AI development and operational practices (DevSecMLOps) to mitigate identified risks in practical project scenarios.
6.4	Implement AI monitoring and anomaly detection using software tools or supervised techniques.
6.5	Collaborate effectively in teams to plan and execute AI security measures in applied projects or simulated operational scenarios.

Assessments DATA ENGINEER [EP 1.4]	
1	PLO Architecture Design [EQF6]
1.1	Evaluation of architecture diagrams and component inventory, assessed for correct identification, description, and contextual placement of hardware accelerators, cloud AI services, and data pipelines in an enterprise AI system.
1.2	Grading of AI module code and review of module documentation, assessed for appropriate use of standard AI design patterns, Python frameworks, pre-trained models, or microservices architectures in a guided project.
1.3	Assessment of risk checklist and ethics report, using a standardized rubric to verify identification of AI risks, ethical considerations, and adherence to relevant policies in a lab or project scenario.
1.4	Evaluation of integrated prototype and deployment report, assessed for correct use of APIs, cloud services, or modular pipelines, and for evidence of interoperability in a simple enterprise system.
2	PLO Component Integration [EQF6]
2.1	AI integration requirements analysis report and comparative system context matrix, assessed for completeness, accuracy, and justified comparison of requirements across web-based, embedded, or data-driven application contexts.
2.2	Implemented AI integration solution, including code and configuration, and AI integration architecture diagram, assessed for appropriate use of architectures, APIs, microservices, deployment tools, and established integration patterns or frameworks.
2.3	Configured AI models and data pipelines with AI API/interface specification, assessed for interoperability with existing systems and consistency across heterogeneous software environments.
2.4	AI system test results and AI evaluation summary, assessed against defined performance, security, and reliability metrics and documented test procedures.
2.5	Written AI integration justification report and oral project defence or presentation, assessed for evidence-based explanation of integration decisions, trade-offs, technical constraints, design choices, and outcomes.
3	PLO Systems Engineering [EQF6]
3.1	Evaluation of AI design diagrams and design report submission, assessed for fit between cloud-based pipelines, model deployment environments, and the specified operational scenario.

3.2	Review of integrated AI module and integration report, assessed for correct use of APIs, microservices, or containerization tools and evidence of functional reliability within existing IT systems.
3.3	Assessment of AI test report and performance dashboard, reviewed for structured unit, load, or penetration testing evidence covering AI system performance and security.
3.4	Review of AI bias report, privacy documentation, and explainability report, assessed for demonstrated application of bias detection, privacy safeguards, and explainable AI techniques during implementation.
3.5	Evaluation of AI evaluation report and recommendations report, assessed for use of performance metrics and user feedback to justify proposed improvements to AI infrastructure systems.
3.6	Review of AI project documentation, assessed for clarity, completeness, and usefulness of diagrams, code comments, or reports for maintainability and knowledge transfer.
4	PLO Data Science and Analytics [EQF5]
4.1	Review of dataset inventory, assessed for correct identification and classification of common structured and unstructured datasets relevant to AI-assisted applications.
4.2	Inspection of cleaned dataset, assessed for accurate application of basic cleaning and preprocessing techniques using standard tools or scripts.
4.3	Evaluation of descriptive analytics report, assessed for correct use of simple descriptive analytics and relevance of insights for AI-supported decision-making.
4.4	Ethics checklist audit, assessed for recognition of ethical and privacy considerations when handling personal, sensitive, or AI-relevant data.
4.5	Assessment of data visualizations, assessed for accuracy, appropriateness, and clarity of basic charts or dashboards communicating AI-relevant insights.
5	PLO Risk Management [EQF5]
5.1	Written report or checklist evaluating identification of common AI risks in a sample operational system, including bias, model drift, and data privacy issues; observation of correct reference to and application of organisational policies and guidelines.
5.2	Review of standardized system behaviour logs or monitoring templates, assessed for completeness, accuracy, and correct description of AI system behaviours and operational characteristics in deployed AI applications.
5.3	Inspection of risk incident registers documenting AI incidents, anomalies, and observations, graded for clarity, correctness, completeness, and fit with standardized organisational AI workflows.
5.4	Short case-study assignment or quiz assessing recognition of ethical and compliance-related considerations in predictable operational AI contexts such as customer support or data processing tasks.
5.5	Submission of operational risk documentation, reviewed for structure, clarity, traceability, and usefulness for supervisors or team members in operational decision-making.
6	PLO Information Security Management [EQF6]
6.1	Evaluation of Vulnerability Analysis Report detailing AI components and workflow weaknesses, assessed for identification of potential security vulnerabilities in development or operational pipelines.

6.2	Review of Risk Assessment Matrix, including severity and mitigation measures, using rubric-based assessment of AI risks related to data, models, deployment, and operation.
6.3	Assessment of Secure Development Implementation Plan, including evidence of applied DevSecMLOps practices to mitigate identified risks in practical project scenarios.
6.4	Observation and review of Monitoring Dashboard or Log outputs during lab exercises, assessed for implementation of AI monitoring and anomaly detection using software tools or supervised techniques.
6.5	Assessment of Team Project Security Plan documentation, with peer and instructor evaluation of collaboration, security planning, and execution of AI security measures in applied or simulated operational scenarios.

	DATA PROCESSING & ANALYSIS		[1]
Profile title	AI DATA TRAINER		[EP 1.5]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI data trainer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Prepares the training dataset for the AI program, annotates the data models, configures conversational conditions and responses, performs tests and evaluates AI performance regularly. Ensures adherence to ethical considerations and standards for AI, assessing the AI outputs for misinformation, biases and stereotypes.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	B.3.	Testing	e-2
	B.5.	Documentation Production	e-2
	D.7.	Data Science and Analytics	e-2
	D.11	Needs Identification	e-3
Complexity	The profile has an EQF6 level.		

1. PLO Testing [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Perform structured testing of AI and ICT systems to detect basic errors or biases and ensure ethical compliance by executing guided procedures and clearly documenting results.	
Unit Learning Outcomes	
1.1	Apply predefined test procedures to AI and ICT systems using guided examples and structured exercises.
1.2	Identify basic errors, anomalies, or inconsistencies in AI model outputs in controlled datasets or simulated scenarios.
1.3	Recognize simple biases in AI outputs and flag them for further review by comparing outputs against reference standards or simple fairness checks.
1.4	Document testing activities, results, and observations following established templates and reporting formats.
1.5	Recall relevant ethical and regulatory standards applicable to AI testing in academic or guided professional contexts.

2. PLO Documentation Production [EQF5]
<i>The learner has demonstrated ability to...</i>

Identify and explain AI documentation requirements, and produce basic AI-related technical and compliance documents using predefined templates and under guidance, ensuring information is accurate, up to date, and aligned with organisational and regulatory standards in routine AI development contexts.

Unit Learning Outcomes

2.1	Identify key AI documentation types, requirements, and templates used in routine AI projects, such as model datasheets, user manuals, or compliance checklists.
2.2	Explain the purpose of technical, compliance, and transparency documentation for AI systems, by referring to examples like algorithmic decision logs or fairness assessment reports.
2.3	Produce basic AI technical and compliance documents under guidance, following predefined templates, using standard documentation formats and structured forms.
2.4	Use document-management tools to store, retrieve, and update AI documentation, in systems that support organised and version-controlled storage.
2.5	Verify that information in AI documents is accurate, complete, and aligned with organisational standards, by cross-checking against project requirements and regulatory guidelines.

3. PLO Data Science and Analytics [EQF5]

The learner has demonstrated ability to...

Identify and collect structured and unstructured data from common sources, and apply basic data cleaning and descriptive analytics techniques to generate insights that support AI-assisted decision-making within defined, predictable tasks and workflows.

Unit Learning Outcomes

3.1	Identify common structured and unstructured datasets such as CSV files, JSON, text, or sensor data relevant to AI-assisted applications.
3.2	Apply basic data cleaning and preprocessing techniques using standard tools or scripts to prepare data for AI-enabled analysis.
3.3	Demonstrate the use of simple descriptive analytics in spreadsheets or basic statistical software to produce insights for AI-supported decision-making.
3.4	Recognize ethical and privacy considerations when handling personal, sensitive, or AI-relevant data.
3.5	Create basic visualizations such as charts or dashboards to communicate AI-relevant insights.

4. PLO Needs Identification [EQF6]

The learner has demonstrated ability to...

Independently engage with stakeholders to identify and validate needs, translating them into feasible AI and technology solution options, while considering business objectives and organisational priorities.

Unit Learning Outcomes

4.1	Actively engages with internal and external stakeholders to elicit and validate their needs, using structured interviews, workshops, or observational techniques.
4.2	Analyse and articulate stakeholder needs, differentiating between functional, technical, and business requirements, by applying basic requirement-gathering frameworks or tools.
4.3	Translate validated stakeholder needs into feasible AI or technology solution options, considering constraints such as cost, technical feasibility, and organisational priorities.
4.4	Apply basic data analysis using datasets, dashboards, or simple statistical tools to support the identification of needs and evaluate potential solution options.
4.5	Recognize and consider ethical implications and relevant regulatory constraints in AI application scenarios or technology deployment when proposing solutions.

Assessments AI DATA TRAINER [EP 1.5]	
1	PLO Testing [EQF5]
1.1	Review of AI test execution report, assessed for correct execution of predefined test procedures on AI and ICT systems using guided examples and structured exercises.
1.2	Evaluation of AI error/anomaly log, assessed for accurate identification and description of basic errors, anomalies, or inconsistencies in AI model outputs from controlled datasets or simulated scenarios.
1.3	Assessment of AI bias report, assessed for recognition and flagging of simple biases in AI outputs through comparison with reference standards or simple fairness checks.
1.4	Inspection of AI test documentation, assessed for complete and accurate recording of testing activities, results, and observations using established templates and reporting formats.
1.5	Review of AI compliance checklist, assessed for correct identification of relevant ethical and regulatory standards applicable to AI testing in academic or guided professional contexts.
2	PLO Documentation Production [EQF5]
2.1	Review of submitted AI documentation inventory or reference table, combined with quiz or oral questioning, assessed for correct identification of AI documentation types, requirements, templates, and template purposes in routine AI projects.
2.2	Written explanation or short report linking AI documentation types to purposes, with scenario-based questions, assessed for accurate explanation of technical, compliance, and transparency documentation using examples such as algorithmic decision logs or fairness assessment reports.
2.3	Evaluation of completed AI datasheet, compliance checklist, or user guide, assessed for accuracy, completeness, adherence to predefined templates, and correct use of standard documentation formats or structured forms under guidance.
2.4	Inspection of document repository and update log, assessed for correct storage, retrieval, updating, and version-controlled organisation of AI documentation.
2.5	Review of annotated AI documents or verification checklist, assessed for evidence of cross-checking against project requirements and regulatory guidelines, correction of errors, and alignment with organizational standards.

3	PLO Data Science and Analytics [EQF5]
3.1	Review of dataset inventory, assessed for correct identification and classification of common structured and unstructured datasets relevant to AI-assisted applications.
3.2	Inspection of cleaned dataset, assessed for appropriate application of basic data cleaning and preprocessing techniques using standard tools or scripts.
3.3	Evaluation of descriptive analytics report, assessed for correct use of simple descriptive analytics in spreadsheets or basic statistical software and relevance of insights for AI-supported decision-making.
3.4	Ethics checklist audit, assessed for correct recognition of ethical and privacy considerations when handling personal, sensitive, or AI-relevant data.
3.5	Assessment of data visualizations, assessed for accuracy, appropriateness, and clarity of basic charts or dashboards communicating AI-relevant insights.
4	PLO Needs Identification [EQF6]
4.1	Stakeholder Needs Report – assessed via written report of AI stakeholder needs and validation summary, including evidence from structured interviews, workshops, or observational techniques with internal and external stakeholders.
4.2	Requirement Analysis Matrix – assessed via submitted matrix mapping functional, technical, and business requirements to AI solutions, with traceable differentiation of stakeholder needs using basic requirement-gathering frameworks or tools.
4.3	AI Solution Options Brief – assessed via presentation or report proposing feasible AI solution options, including justification against validated stakeholder needs, cost, technical feasibility, and organizational priorities.
4.4	AI Data Analysis Summary – assessed via submitted dashboard, data visualization, or short report analysing data to support identification of needs and evaluation of potential AI solution options.
4.5	AI Ethical & Regulatory Assessment – assessed via written document outlining ethical implications and relevant regulatory constraints in AI application scenarios or technology deployment when proposing solution options.

	DATA PROCESSING & ANALYSIS		[1]
Profile title	AI BUSINESS ANALYST		[EP 1.6]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI business analyst. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Integrates the technical aspects of AI with the strategic needs of a business. Works closely with data scientists, machine learning engineers, and business management to ensure AI projects are aligned with the business goals. Analyses the AI solutions needed to support business plans, focusing on data-driven decision-making, the integration of AI systems, and ensuring the AI model is aligned with business objectives. Advises on the lifecycle of the AI solutions.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.1.	IS and Business Strategy Alignment	e-4
	A.3.	Business Plan Development	e-3
	A.7.	Technology Trend Monitoring	e-4
	D.7.	Data Science and Analytics	e-4
	D.10.	Information and Knowledge Management	e-4
	D.11.	Needs Identification	e-4
	E.4.	Relationship Management	e-3
	E.5.	Process Improvement	e-4
Complexity	The profile has an EQF7 level.		

1. PLO IS and Business Strategy Alignment [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Analyse complex organisational environments to align information systems and AI capabilities with business strategy, evaluating governance, ethical, regulatory, and risk requirements, and designing integrated IS models and enterprise architectures that enhance organisational performance in dynamic, multidisciplinary contexts.	
Unit Learning Outcomes	
1.1	Analyse organisational strategies and operating models to identify business needs, priorities, risks, and opportunities for IS and AI enablement, using enterprise case studies or organisational datasets.
1.2	Evaluate the alignment between business strategy and existing IS, data, and AI capabilities, identifying gaps and improvement opportunities by mapping technology portfolios to strategic objectives.

1.3	Assess IS and AI governance frameworks, including ethical, legal, regulatory, and risk considerations, in support of strategic alignment, in compliance with industry standards and organisational policies.
1.4	Design and evaluate integrated IS models and enterprise architectures that support business objectives and strategic decision-making, using modelling tools such as ArchiMate or UML.
1.5	Apply AI and data-driven solutions to improve business processes, performance, and competitive positioning, by implementing predictive analytics, process automation, or recommendation systems.
1.6	Critically evaluate the organisational impact of IS–business alignment initiatives, using appropriate performance and value-creation metrics, such as ROI, KPIs, or balanced scorecards.

2. PLO Business Plan Development [EQF6]

The learner has demonstrated ability to...

Produce and communicate a feasible and economically justified plan for a data- or AI-driven initiative by analysing alternatives, estimating costs and benefits, and collaborating effectively within a team.

Unit Learning Outcomes

2.1	Apply established business planning and cost–benefit methods appropriately to a data- or AI-driven initiative in a commercial or organisational context.
2.2	Analyse alternative approaches and identify basic advantages and limitations using structured evaluation frameworks such as SWOT or scenario analysis.
2.3	Estimate costs, benefits, and expected value by applying standard data sources or publicly available AI datasets.
2.4	Explain feasibility and alignment with stated business objectives in written or oral presentations for stakeholders or team members.
2.5	Communicate the plan effectively using reports, slides, or discussions and demonstrate constructive participation in team work in group projects or collaborative exercises.

3. PLO Technology Trend Monitoring [EQF7]

The learner has demonstrated ability to...

Design transferable AI-enabled solutions in complex contexts by critically analysing and evaluating emerging technology trends and organisational opportunities.

Unit Learning Outcomes

3.1	Critically analyse emerging AI technologies and trends in domains such as finance, healthcare, or smart systems using market reports, research publications, and pilot studies.
3.2	Evaluate AI adoption opportunities using technical, organisational, ethical, and regulatory criteria by considering the implications of recent trends and innovations.
3.3	Synthesize information from multiple sources to identify AI innovation opportunities using literature, industry analyses, and cross-domain technology insights.

3.4	Design AI-enabled solutions or concepts that are transferable across contexts informed by observed technological trends and emerging best practices.
3.5	Validate and justify design decisions using appropriate evaluation methods and metrics by testing solutions in simulations, prototypes, or benchmarking exercises.
3.6	Communicate and defend AI-related proposals to specialist and non-specialist audiences through presentations, reports, or workshops highlighting trends and rationale.

4. PLO Data Science and Analytics [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Apply and manage AI-enabled and data-driven analytics solutions to address complex problems, integrate insights from data science as inputs to AI models, coordinate team activities, evaluate data quality and ethical implications, and generate actionable insights that enhance AI-supported and data-informed decision-making in professional, organisational, or research contexts.	
Unit Learning Outcomes	
4.1	Design AI-augmented analytics workflows and solutions for complex, multi-factor problems in organisational or research contexts.
4.2	Apply advanced analytics, predictive models, and machine learning methods using large-scale or multi-source data to support AI-enabled decision-making.
4.3	Evaluate data integrity, model performance, and ethical implications in AI and analytics initiatives within professional or organisational projects.
4.4	Generate actionable insights and recommendations to improve decision-making and outcomes in business, organisational, or research settings.
4.5	Coordinate team activities to implement AI and data-driven analytics projects efficiently.
4.6	Develop frameworks for performance metrics, risk assessment, and operational evaluation in AI-enabled analytics workflows.
4.7	Document reproducible AI and data science analysis pipelines including scripts, notebooks, and workflow documentation.

5. PLO Information and Knowledge Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organisational units by aligning AI knowledge management with organisational objectives, governance requirements, and innovation needs.	
Unit Learning Outcomes	
5.1	Design and evaluate AI knowledge management structures for complex or cross-unit AI initiatives involving multiple stakeholders.
5.2	Advise on the AI knowledge lifecycle, including creation, validation, governance, maintenance, and reuse of AI models, data, and related artifacts.
5.3	Develop and improve governance approaches for AI knowledge and information by integrating organisational, regulatory, ethical, and strategic considerations.

5.4	Facilitate collaborative knowledge sharing and learning across interdisciplinary teams engaged in AI development, deployment, or oversight.
5.5	Align AI knowledge management practices with organisational objectives to support innovation, effectiveness, and sustainable use of AI technologies.

6. PLO Needs Identification [EQF7]

The learner has demonstrated ability to...

Leads the end-to-end needs identification process with stakeholders, ensuring AI-driven solution recommendations are strategically aligned with organisational goals, regulatory requirements, and value creation objectives, and ensures the effective implementation, adoption, and iterative enhancement of implemented solutions.

Unit Learning Outcomes

6.1	Lead cross-functional teams in stakeholder engagement by coordinating workshops, co-creation sessions, or advisory meetings to define and validate complex organisational needs.
6.2	Critically assess and ensure that AI-driven solution proposals align with organisational strategy, regulatory requirements, and long-term value creation objectives, using strategic planning frameworks or business model analysis.
6.3	Evaluate and co-create a comprehensive range of AI solution options, including make-or-buy, SaaS, cloud, low-code/no-code, and other emerging technologies, by applying feasibility studies, prototyping, or comparative analysis.
6.4	Ensure the effective implementation, adoption, and iterative enhancement of AI solutions, using human-centred design principles, project management tools, or feedback loops.

7. PLO Relationship Management [EQF6]

The learner has demonstrated ability to...

Achieve effective stakeholder alignment and support ethical AI adoption by analysing expectations, addressing privacy concerns, and coordinating collaborative solutions using communication techniques, project documentation, and digital platforms.

Unit Learning Outcomes

7.1	Analyse stakeholder expectations and concerns in AI projects, including ethical and privacy issues, using case studies, surveys, or system documentation.
7.2	Apply communication techniques to address AI adoption challenges, such as team discussions, presentations, or messaging platforms.
7.3	Collaborate effectively with peers in AI projects by participating in group tasks and using digital collaboration tools.
7.4	Coordinate stakeholder interactions using project documentation and digital platforms, in contexts such as shared repositories or feedback loops.
7.5	Evaluate the effectiveness of proposed solutions for AI-related stakeholder issues by reviewing outcomes, feedback, or implementation results.

7.6	Suggest improvements to stakeholder engagement strategies using lessons learned from project simulations or peer review exercises.

8. PLO Process Improvement [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Optimise AI development and operational processes by coordinating complex workflows, applying integrated performance metrics, and embedding governance practices that ensure ethical, secure, and high-performing solutions.	
Unit Learning Outcomes	
8.1	Integrate complex AI performance metrics and governance practices to evaluate existing workflows in multi-team AI projects.
8.2	Coordinate multiple AI development and operational processes across teams or systems by implementing cross-functional workflows.
8.3	Refine and optimise AI workflows using data-driven insights and best practices from deployed AI systems.
8.4	Ensure ethical, compliance, and security considerations are incorporated into process improvements in enterprise AI deployments.
8.5	Monitor and assess the impact of workflow changes on organisational performance and AI solution effectiveness using measurable KPIs.
8.6	Facilitate communication and knowledge transfer between teams to support process improvement through workshops and documentation.
8.7	Identify opportunities for AI process innovation by analysing emerging trends and technologies.

Assessments AI BUSINESS ANALYST [EP 1.6]	
1	PLO IS and Business Strategy Alignment [EQF7]
1.1	Written Report, Case Study Analysis, and Data-Driven Mapping, assessed for evidence-based analysis of organisational strategies and operating models and for clear identification of IS and AI needs, priorities, risks, and opportunities.
1.2	Alignment Assessment Report, Portfolio Review, and Gap Analysis Presentation, assessed for justified mapping of IS, data, and AI capabilities to strategic objectives and for identification of gaps and improvement opportunities.
1.3	Governance Assessment Report and Compliance Checklist Submission, assessed for coverage of ethical, legal, regulatory, and risk considerations and for demonstrated compliance with industry standards and organisational policies.
1.4	IS/Architecture Design Diagrams and Modelling Artefact Review, assessed for correct use of modelling tools such as ArchiMate or UML and for alignment of integrated IS models and enterprise architectures with business objectives and strategic decision-making.
1.5	AI/Data Solution Prototype, Demonstration, and Performance Metrics Report, assessed for implemented use of predictive analytics, process automation, or recommendation systems and for evidence of business process, performance, or competitive-positioning improvement.

1.6	Organisational Impact Report, Value-Creation Analysis, and Oral Defence/Presentation, assessed for critical evaluation of organisational impact using appropriate performance and value-creation metrics such as ROI, KPIs, or balanced scorecards.
2	PLO Business Plan Development [EQF6]
2.1	Evaluation of business plan document and written report review, assessed for appropriate application of established business planning and cost-benefit methods to a data- or AI-driven initiative in a commercial or organizational context.
2.2	Alternatives comparison matrix and case study analysis, assessed for structured comparison of approaches and identification of basic advantages and limitations using frameworks such as SWOT or scenario analysis.
2.3	Cost-benefit analysis report with calculations checked against data, assessed for accurate estimation of costs, benefits, and expected value using standard data sources or publicly available AI datasets.
2.4	Feasibility summary and rubric-based evaluation of clarity and alignment, assessed for explanation of feasibility and fit with stated business objectives in written or oral presentation form.
2.5	Team contribution evidence, via peer evaluation, observation of group work, presentation or report assessed for effective communication through reports, slides, or discussions and for constructive participation in team work.
3	PLO Technology Trend Monitoring [EQF7]
3.1	Trend analysis report and written assignment with rubric, assessed for critical analysis of emerging AI technologies and trends using market reports, research publications, and pilot studies.
3.2	Opportunity assessment matrix and graded report or case study analysis, assessed for evaluation of AI adoption opportunities against technical, organisational, ethical, and regulatory criteria.
3.3	Integrated opportunity brief and written synthesis evaluated by rubric, assessed for synthesis of literature, industry analyses, and cross-domain technology insights into clearly identified AI innovation opportunities.
3.4	Solution design document and project proposal evaluation, assessed for design of transferable AI-enabled solutions or concepts informed by technological trends and emerging best practices.
3.5	Validation report and simulation or pilot data review, assessed for justification of design decisions using appropriate evaluation methods, metrics, and evidence from simulations, prototypes, or benchmarking exercises.
3.6	Presentation/report, oral defence, or stakeholder-style review, assessed for clear communication and defence of AI-related proposals to specialist and non-specialist audiences, including trends and rationale.
4	PLO Data Science and Analytics [EQF7]
4.1	Review of AI workflow documentation, assessed for design of AI-augmented analytics workflows and solutions appropriate to complex, multi-factor problems in organizational or research contexts.

4.2	Evaluation of analytical model outputs, assessed for appropriate application of advanced analytics, predictive models, and machine learning methods using large-scale or multi-source data.
4.3	Assessment of data integrity & ethics report, assessed for evaluation of data integrity, model performance, and ethical implications in professional or organizational AI and analytics initiatives.
4.4	Evaluation of insights & recommendations report, assessed for actionability, evidence base, and relevance of recommendations for improving decision-making and outcomes in business, organizational, or research settings.
4.5	Review of team coordination documentation, assessed for evidence of task allocation, coordination, progress monitoring, and efficient implementation of AI and data-driven analytics projects.
4.6	Assessment of performance & risk framework, assessed for integration of performance metrics, risk assessment, and operational evaluation in AI-enabled analytics workflows.
4.7	Evaluation of reproducible AI pipelines, assessed for completeness and reproducibility of scripts, notebooks, and workflow documentation.
5	PLO Information and Knowledge Management [EQF7]
5.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design, assessed for suitability for complex or cross-unit AI initiatives involving multiple stakeholders.
5.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines, assessed for coverage of creation, validation, governance, maintenance, and reuse of AI models, data, and related artifacts.
5.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment, assessed for integration of organizational, regulatory, ethical, and strategic considerations and evidence of improvement.
5.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model, assessed for support of collaborative knowledge sharing and learning across interdisciplinary AI development, deployment, or oversight teams.
5.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report, assessed for alignment with organizational objectives and contribution to innovation, effectiveness, and sustainable use of AI technologies.
6	PLO Needs Identification [EQF7]
6.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs, including evidence of cross-functional team coordination and validation of complex organizational needs.
6.2	AI Solution Alignment Report – assessed via written report analysing AI solutions against organizational strategy, regulatory requirements, and long-term value creation objectives using strategic planning frameworks or business model analysis.
6.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results for a comprehensive range of AI solution options, including make-or-buy, SaaS, cloud, low-code/no-code, and other emerging technologies.

6.4	AI Implementation & Enhancement Plan – assessed via documented implementation roadmap and iterative improvement strategy, including use of human-centred design principles, project management tools, or feedback loops.
7	PLO Relationship Management [EQF6]
7.1	Written stakeholder analysis report, graded on clarity, completeness, and identification of stakeholder expectations, concerns, ethical issues, and privacy issues using case studies, surveys, or system documentation.
7.2	Presentation or recorded team briefing assessed on clarity, relevance, communication effectiveness, and appropriate use of communication techniques to address AI adoption challenges.
7.3	Peer evaluation and review of collaborative project documentation, with assessment of contribution logs for effective participation in group tasks and use of digital collaboration tools.
7.4	Submission of coordinated project documentation with stakeholder feedback records, assessed by rubric for coordination of stakeholder interactions using digital platforms, shared repositories, or feedback loops.
7.5	Evaluation report or reflective log comparing proposed versus actual solutions, assessed for analytical reasoning and use of outcomes, feedback, or implementation results to evaluate effectiveness.
7.6	Recommendations report or lessons learned document, assessed for feasible, clear, and actionable improvements to stakeholder engagement strategies based on project simulations or peer review exercises.
8	PLO Process Improvement [EQF7]
8.1	Evaluation report assessed for completeness, accuracy, and integration of complex AI performance metrics and governance practices in the evaluation of existing multi-team AI workflows.
8.2	Consolidated workflow documentation or project plan graded on clarity, coordination, and integration of multiple AI development and operational processes across teams or systems.
8.3	Optimized workflow diagrams or implementation logs evaluated for measurable efficiency improvements supported by data-driven insights and best practices from deployed AI systems.
8.4	Compliance checklist or audit report reviewed for thoroughness, adherence to standards, and incorporation of ethical, compliance, and security considerations into enterprise AI process improvements.
8.5	KPI analysis report or dashboards graded on validity of analysis, conclusions, and evidence of the impact of workflow changes on organizational performance and AI solution effectiveness.
8.6	Knowledge repository, workshop materials, or presentations assessed for clarity, usefulness, dissemination quality, and support for communication and knowledge transfer between teams.
8.7	Innovation proposal evaluated on originality, feasibility, and alignment with emerging AI trends and technologies as opportunities for process innovation.

C.2 Development and Operations

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI ARCHITECT		[EP 2.1]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI architect. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Designs, integrates and implements AI solutions ensuring procedures and models for development are current and comply with common standards. Monitors new AI technology developments and applies if appropriate. Provides technological design leadership and guides the development of AI solutions.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.1.	IS and Business Strategy Alignment	e-4
	A.5.	Architecture Design	e-4
	A.7.	Technology Trend Monitoring	e-4
	A.8.	Sustainability Management	e-3
	B.2.	Component Integration	e-4
	B.6.	Systems Engineering	e-4
	E.3.	Risk Management	e-3
	E.8.	Information Security Management	e-3
Complexity	The profile has an EQF7 level.		

1. PLO IS and Business Strategy Alignment [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Analyse complex organisational environments to align information systems and AI capabilities with business strategy, evaluating governance, ethical, regulatory, and risk requirements, and designing integrated IS models and enterprise architectures that enhance organisational performance in dynamic, multidisciplinary contexts.	
Unit Learning Outcomes	
1.1	Analyse organisational strategies and operating models to identify business needs, priorities, risks, and opportunities for IS and AI enablement, using enterprise case studies or organisational datasets.

1.2	Evaluate the alignment between business strategy and existing IS, data, and AI capabilities, identifying gaps and improvement opportunities by mapping technology portfolios to strategic objectives.
1.3	Assess IS and AI governance frameworks, including ethical, legal, regulatory, and risk considerations, in support of strategic alignment, in compliance with industry standards and organisational policies.
1.4	Design and evaluate integrated IS models and enterprise architectures that support business objectives and strategic decision-making, using modelling tools such as ArchiMate or UML.
1.5	Apply AI and data-driven solutions to improve business processes, performance, and competitive positioning, by implementing predictive analytics, process automation, or recommendation systems.
1.6	Critically evaluate the organisational impact of IS-business alignment initiatives, using appropriate performance and value-creation metrics, such as ROI, KPIs, or balanced scorecards.

2. PLO Architecture Design [EQF7]

The learner has demonstrated ability to...

Lead the development and deployment of complex AI architectures across enterprise systems by coordinating teams, applying advanced design methodologies, and evaluating AI-specific risks, ethics, and compliance in unstructured and multidisciplinary contexts.

Unit Learning Outcomes

2.1	Analyse interdependencies among multiple AI systems and enterprise platforms by mapping data flows, service interactions, and integration points in real-world deployments.
2.2	Design integrated AI solutions ensuring scalability, security, and policy compliance using enterprise-grade frameworks and architecture standards.
2.3	Coordinate a team to deploy AI architectures in realistic, open-ended projects by assigning roles, tracking progress, and resolving integration issues in enterprise settings.
2.4	Evaluate AI risks, biases, and ethical implications in multi-factor decision-making using scenario analyses, audits, or simulation tools.
2.5	Document and present AI architecture solutions for diverse stakeholders through reports, visual diagrams, and presentations tailored to technical and non-technical audiences.
2.6	Optimise AI deployment and operational performance by monitoring system metrics, troubleshooting integration issues, and applying iterative improvements in enterprise projects.

3. PLO Technology Trend Monitoring [EQF7]

The learner has demonstrated ability to...

Design transferable AI-enabled solutions in complex contexts by critically analysing and evaluating emerging technology trends and organisational opportunities.

Unit Learning Outcomes

3.1	Critically analyse emerging AI technologies and trends in domains such as finance, healthcare, or smart systems using market reports, research publications, and pilot studies.

3.2	Evaluate AI adoption opportunities using technical, organisational, ethical, and regulatory criteria by considering the implications of recent trends and innovations.
3.3	Synthesize information from multiple sources to identify AI innovation opportunities using literature, industry analyses, and cross-domain technology insights.
3.4	Design AI-enabled solutions or concepts that are transferable across contexts informed by observed technological trends and emerging best practices.
3.5	Validate and justify design decisions using appropriate evaluation methods and metrics by testing solutions in simulations, prototypes, or benchmarking exercises.
3.6	Communicate and defend AI-related proposals to specialist and non-specialist audiences through presentations, reports, or workshops highlighting trends and rationale.

4. PLO Sustainability Management [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Evaluate and enhance the sustainability performance of AI-based systems in professional contexts by applying appropriate assessment methods, comparing implementation options, and communicating actionable improvements within project teams.	
Unit Learning Outcomes	
4.1	Analyse the environmental, social, and economic performance of AI systems in applied project settings, such as optimising machine-learning workflows for energy efficiency.
4.2	Evaluate alternative AI implementation strategies for their sustainability impact by comparing model, data, or infrastructure choices, and propose feasible improvements.
4.3	Apply sustainability assessment tools and methods to AI projects using established frameworks or metrics, under minimal supervision.
4.4	Report findings and recommendations to team members and stakeholders in professional project documentation or presentations, for improving AI practices.
4.5	Identify common sustainability risks and trade-offs in AI systems in practical development or deployment scenarios, such as data volume, model size, or hardware use.
4.6	Reflect on personal and team responsibilities in applying sustainable AI practices within supervised professional or educational projects.
5. PLO Component Integration [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Deliver functioning AI-enabled solutions by selecting, implementing and integrating AI models, data pipelines and services within existing systems, evaluating interoperability, performance and security, and articulating well-reasoned integration choices in applied project contexts.	
Unit Learning Outcomes	
5.1	Analyse and compare AI integration requirements within different application or system contexts, such as web-based, embedded or data-driven applications.
5.2	Design and implement AI component integration using appropriate architectures, APIs, microservices and deployment tools, by applying established integration patterns and frameworks.

5.3	Integrate and configure AI models, data pipelines and services to ensure interoperability with existing systems, in heterogeneous software environments.
5.4	Test, validate and evaluate AI-enabled solutions with respect to performance, security and reliability, using defined metrics and test procedures.
5.5	Explain and justify integration decisions, trade-offs and outcomes in project-based or team settings, by referring to technical constraints and design choices.

6. PLO Systems Engineering [EQF7]

The learner has demonstrated ability to...

Develop, optimise, and manage AI infrastructure systems for large-scale deployment, coordinating teams and resources to implement solutions that ensure performance, security, sustainability, and ethical AI practices in real-world operational contexts.

Unit Learning Outcomes

6.1	Develop and implement AI infrastructure solutions for operational use in organisational contexts, such as automated decision-making systems or AI-driven platforms
6.2	Optimise AI system workflows and resources by applying performance monitoring, load balancing, and cost-efficiency strategies to achieve reliability and efficiency
6.3	Coordinate teams and manage resources using leadership, project management, or DevOps practices to ensure successful deployment and integration of AI systems
6.4	Apply ethical AI practices, security measures, and sustainability principles such as GDPR compliance, energy-efficient model training, and secure cloud practices in operational AI infrastructure
6.5	Evaluate operational AI systems and propose improvements for efficiency, regulatory compliance, and team effectiveness using metrics, audits, and workflow analysis
6.6	Train and mentor team members in AI infrastructure best practices, tools, and processes to enhance operational capability and knowledge sharing
6.7	Monitor and report operational KPIs for AI systems, including uptime, performance, and cost metrics, to inform continuous improvement strategies

7. PLO Risk Management [EQF6]

The learner has demonstrated ability to...

Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities.

Unit Learning Outcomes

7.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
7.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
7.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.

7.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
7.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
7.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.

8. PLO Information Security Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Ensure the security and reliability of AI systems by assessing vulnerabilities, applying secure development practices, and implementing mitigation strategies using appropriate tools and collaborative methods	
Unit Learning Outcomes	
8.1	Analyse AI system components and workflows to identify potential security vulnerabilities in development or operational pipelines.
8.2	Evaluate AI risks related to data, models, deployment, and operation using established risk assessment frameworks and tools.
8.3	Apply secure AI development and operational practices (DevSecMLOps) to mitigate identified risks in practical project scenarios.
8.4	Implement AI monitoring and anomaly detection using software tools or supervised techniques.
8.5	Collaborate effectively in teams to plan and execute AI security measures in applied projects or simulated operational scenarios.

Assessments AI ARCHITECT [EP 2.1]	
1	PLO IS and Business Strategy Alignment [EQF7]
1.1	Written Report, Case Study Analysis, and Data-Driven Mapping, assessed for evidence-based analysis of organisational strategies and operating models and for clear identification of IS and AI needs, priorities, risks, and opportunities.
1.2	Alignment Assessment Report, Portfolio Review, and Gap Analysis Presentation, assessed for justified mapping of IS, data, and AI capabilities to strategic objectives and for identification of gaps and improvement opportunities.
1.3	Governance Assessment Report and Compliance Checklist Submission, assessed for coverage of ethical, legal, regulatory, and risk considerations and for demonstrated compliance with industry standards and organisational policies.
1.4	IS/Architecture Design Diagrams and Modelling Artefact Review, assessed for correct use of modelling tools such as ArchiMate or UML and for alignment of integrated IS models and enterprise architectures with business objectives and strategic decision-making.
1.5	AI/Data Solution Prototype, Demonstration, and Performance Metrics Report, assessed for implemented use of predictive analytics, process automation, or recommendation systems and for evidence of improvement in business processes, performance, or competitive positioning.

1.6	Organisational Impact Report, Value-Creation Analysis, and Oral Defence / Presentation, assessed for critical evaluation of organisational impact using appropriate performance and value-creation metrics such as ROI, KPIs, or balanced scorecards.
2	PLO Architecture Design [EQF7]
2.1	Review of dependency diagrams and analysis report evaluation, assessed for accurate mapping of data flows, service interactions, integration points, and interdependencies across multiple AI systems and enterprise platforms.
2.2	Assessment of architecture blueprint, design document grading, and prototype/simulation evaluation, assessed for scalability, security, policy compliance, and appropriate use of enterprise-grade frameworks and architecture standards.
2.3	Evaluation of team deployment plan and observation of deployment report outcomes, assessed for role assignment, progress tracking, issue resolution, and coordination of AI architecture deployment in an enterprise setting.
2.4	Assessment of risk & bias report and ethics evaluation report review, assessed for evaluation of AI risks, biases, and ethical implications using scenario analyses, audits, or simulation tools.
2.5	Grading of technical documentation and presentation slides review, assessed for completeness, technical accuracy, visual clarity, and suitability for both technical and non-technical stakeholders.
2.6	Evaluation of performance report and review of optimized system documentation, assessed for use of system metrics, troubleshooting of integration issues, and evidence of iterative operational improvements.
3	PLO Technology Trend Monitoring [EQF7]
3.1	Trend analysis report and written assignment with rubric, assessed for critical analysis of emerging AI technologies and trends using market reports, research publications, and pilot studies.
3.2	Opportunity assessment matrix and graded report or case study analysis, assessed for evaluation of AI adoption opportunities against technical, organisational, ethical, and regulatory criteria.
3.3	Integrated opportunity brief and written synthesis evaluated by rubric, assessed for synthesis of literature, industry analyses, and cross-domain technology insights into clearly identified AI innovation opportunities.
3.4	Solution design document and project proposal evaluation, assessed for design of transferable AI-enabled solutions or concepts informed by technological trends and emerging best practices.
3.5	Validation report and simulation or pilot data review, assessed for justification of design decisions using appropriate evaluation methods, metrics, and evidence from simulations, prototypes, or benchmarking exercises.
3.6	Presentation/report, oral defence, or stakeholder-style review, assessed for clear communication and defence of AI-related proposals to specialist and non-specialist audiences, including trends and rationale.
4	PLO Sustainability Management [EQF5]
4.1	Sustainability analysis report of an AI system, assessed for analysis of environmental, social, and economic performance in an applied project setting.

4.2	Comparative evaluation matrix with written improvement proposal, assessed for comparison of model, data, or infrastructure choices and for feasibility of proposed sustainability improvements.
4.3	Completed sustainability assessment framework applied to an AI project, assessed for correct use of established tools, frameworks, or metrics under minimal supervision.
4.4	Project presentation or written project memo, assessed for clear reporting of findings and actionable recommendations to team members and stakeholders for improving AI practices.
4.5	Sustainability risk and trade-off identification document, assessed for correct identification of common AI sustainability risks and trade-offs related to data volume, model size, or hardware use.
4.6	Structured reflective statement on sustainable AI practice, assessed for reflection on personal and team responsibilities within supervised professional or educational projects.
5	PLO Component Integration [EQF7]
5.1	Organisational AI integration requirements analysis with stakeholder and compliance mapping, assessed for comparison of AI integration requirements across web-based, embedded, or data-driven application contexts.
5.2	Operational AI integration architecture and deployment package with lead integration documentation, assessed for appropriate use of architectures, APIs, microservices, deployment tools, and established integration patterns or frameworks.
5.3	AI system validation report, including performance, security, regulatory compliance, and acceptance evidence, assessed for demonstrated interoperability of configured AI models, data pipelines, and services with existing systems.
5.4	AI integration coordination artefacts, including interface agreements and handover documents, with stakeholder communication summary, assessed for evidence that defined metrics and test procedures have been used to validate performance, security, and reliability.
5.5	AI integration strategy recommendation report and business-aligned justification dossier, assessed for evidence-based explanation of integration decisions, trade-offs, technical constraints, design choices, and outcomes.
6	PLO Systems Engineering [EQF7]
6.1	Review of deployed AI system and deployment documentation, assessed for implementation of AI infrastructure solutions for operational use in organizational contexts such as automated decision-making systems or AI-driven platforms.
6.2	Assessment of AI monitoring dashboard and optimization report, assessed for use of performance monitoring, load balancing, and cost-efficiency strategies to improve reliability and efficiency.
6.3	Evaluation of AI team coordination report and meeting logs, assessed for evidence of leadership, project management, or DevOps practices used to coordinate teams and resources for deployment and integration.
6.4	Review of AI compliance report and audit trail, assessed for evidence of GDPR compliance, ethical AI practices, security measures, energy-efficient model training, and secure cloud practices in operational AI infrastructure.

6.5	Assessment of AI KPI report and recommendation report, assessed for use of metrics, audits, and workflow analysis to evaluate operational AI systems and justify improvements for efficiency, regulatory compliance, and team effectiveness.
6.6	Evaluation of AI training materials and mentorship documentation, assessed for coverage of AI infrastructure best practices, tools, and processes and for evidence of knowledge sharing with team members.
6.7	Assessment of AI continuous improvement plan and monitoring dashboard, assessed for monitoring and reporting of uptime, performance, and cost metrics used to inform continuous improvement strategies.
7	PLO Risk Management [EQF6]
7.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks in project or service contexts.
7.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the operational environment of AI deployments.
7.3	Mitigation plan submission assessed for feasibility, relevance, application of mitigation measures, and alignment with defined project, product, or service boundaries.
7.4	Oral presentation or report evaluated for clarity, communication of AI risk findings and mitigation plans, and suitability for team members and stakeholders in project or organisational settings.
7.5	Review of AI system performance logs, annotated with identified emerging risks and analysis, assessed for detection of model drift, data anomalies, or other emerging AI risks.
7.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.
8	PLO Information Security Management [EQF6]
8.1	Evaluation of Vulnerability Analysis Report detailing AI components and workflow weaknesses, assessed for identification of potential security vulnerabilities in development or operational pipelines.
8.2	Review of Risk Assessment Matrix, including severity and mitigation measures, using rubric-based assessment of AI risks related to data, models, deployment, and operation.
8.3	Assessment of Secure Development Implementation Plan, including evidence of applied DevSecMLOps practices to mitigate identified risks in practical project scenarios.
8.4	Observation and review of Monitoring Dashboard or Log outputs during lab exercises, assessed for implementation of AI monitoring and anomaly detection using software tools or supervised techniques.
8.5	Assessment of Team Project Security Plan documentation, with peer and instructor evaluation of collaboration, security planning, and execution of AI security measures in applied or simulated operational scenarios.

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI PRODUCT DESIGNER		[EP 2.2]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI product designer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Ensures AI products and services are intuitive, usable, and aligned with user and business needs.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.4.	Product/Service Planning	e-3
	A.6.	Application Design	e-3
	A.9.	Innovating	e-3
	A.10.	User Experience	e-4
	B.5.	Documentation Production	e-3
	D.11.	Needs Identification	e-3
	E.4.	Relationship Management	e-3
Complexity	The profile has an EQF7 level.		

1. PLO Product/Service Planning [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Plan and deliver AI-enabled products or services by analysing components, applying structured planning methods, managing resources, and ensuring compliance with relevant standards and legislation in guided, partially predictable contexts.	
Unit Learning Outcomes	
1.1	Identify and explain the components, current status, and target objectives of products and services, including AI-enabled elements, using product roadmaps and system specifications.
1.2	Analyse and assess cost effectiveness, risks, opportunities, strengths, and weaknesses related to AI components in structured project or service planning scenarios.
1.3	Apply established methods and tools such as Gantt charts, workflow software, and AI project templates to develop structured product or service plans, including AI-specific timelines, milestones, and resource allocation.
1.4	Ensure appropriate AI documentation, delivery specifications, and compliance by adhering to industry standards, regulatory frameworks, and internal quality guidelines.
1.5	Communicate product or service plans and AI-related decisions effectively to team members and stakeholders using reports, presentations, or visual dashboards.

2. PLO Application Design [EQF6]	
The learner has demonstrated ability to...	
design and implement AI applications for routine or well-defined tasks by selecting suitable models, data structures, and workflows, ensuring proper integration into complex environments and alignment with user needs, performance, and resource considerations.	
Unit Learning Outcomes	
2.1	analyse and translate user or project requirements into AI application specifications using structured requirement-gathering methods.
2.2	design AI solutions for routine tasks, including data structures, workflows, and AI model selection in clearly defined project scenarios.
2.3	select suitable AI methods, frameworks, and tools by evaluating project constraints and available resources.
2.4	demonstrate awareness of the interactions between AI applications and complex system environments such as enterprise or multi-component systems to ensure correct integration.
2.5	apply user/customer needs and usability principles in prototype testing or iterative development cycles to ensure the AI solution is functional and user-aligned.
2.6	validate AI models and workflows through iterative testing and feedback using representative datasets or user scenarios, ensuring they meet intended outcomes.
3. PLO Innovating [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Create context-appropriate AI-enabled products, services, or process improvements by recognizing innovation opportunities, combining relevant technologies, and assessing their value for local business, societal, or research settings.	
Unit Learning Outcomes	
3.1	Identify opportunities where AI can enhance existing products, services, or processes, using basic analysis of local business, societal, or research contexts.
3.2	Develop functional and creative AI solutions in defined contexts, by applying established AI tools or frameworks.
3.3	Adapt multiple technological concepts to implement AI-enabled solutions, such as combining data processing, models, and digital platforms.
3.4	Evaluate the effectiveness of AI-based solutions in addressing local business, societal, or research challenges, using defined criteria or feedback.
3.5	Explain design choices and limitations of AI-enabled solutions, using basic AI concepts, assumptions, or constraints.
3.6	Iterate and refine AI-based solutions based on testing or feedback, by making incremental improvements within given requirements.

4. PLO User Experience [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Deliver high-quality human-centred UX for AI-enabled products by coordinating multidisciplinary teams, integrating organisational and regulatory requirements, applying industry standards, and managing ethical and user-related risks.	
Unit Learning Outcomes	
4.1	Analyse organisational, user, and regulatory requirements in AI product contexts, such as enterprise software or consumer apps.
4.2	Design, evaluate, and justify human-centred UX solutions by working with multidisciplinary teams in AI development projects.
4.3	Apply industry standards and ethical guidelines such as ISO/IEC 25010 or AI ethics frameworks to ensure transparency, usability, and responsible AI interaction.
4.4	Assess and manage UX-related risks in AI deployment contexts, such as autonomous systems or recommendation engines, including loss of user trust or unintended user behaviour.
4.5	Recommend and defend UX design decisions to stakeholders in AI projects, using data from user studies or metrics.
4.6	Support implementation and continuous improvement of AI-enabled UX solutions by integrating feedback from users and regulatory updates.
5. PLO Documentation Production [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Apply document-management practices and develop AI-specific documentation, including technical specifications, compliance records, and transparency reports, independently within broad project frameworks, by integrating information from multiple AI system components and ensuring alignment with regulatory and stakeholder requirements in projects with variable challenges.	
Unit Learning Outcomes	
5.1	Apply document-management and collaboration practices to AI projects independently, using systems that enable coordinated document creation and version control.
5.2	Develop AI-specific technical, compliance, and transparency documentation for multiple system components, such as model specifications, system interfaces, and regulatory reports.
5.3	Integrate information from different AI system elements into cohesive and accessible documentation, by consolidating data from datasets, model outputs, and system logs.
5.4	Ensure that AI documentation meets regulatory, ethical, and stakeholder requirements, in accordance with applicable legal, ethical, and organisational standards.
5.5	Adapt and modify existing templates or documentation structures to suit variable AI project contexts, by aligning documentation with project-specific requirements or new system components.

6. PLO Needs Identification [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Independently engages with stakeholders to identify and validate needs, translating them into feasible AI and technology solution options, while considering business objectives and organisational priorities.	
Unit Learning Outcomes	
6.1	Actively engage with internal and external stakeholders to elicit and validate their needs, using structured interviews, workshops, or observational techniques.
6.2	Analyse and articulate stakeholder needs, differentiating between functional, technical, and business requirements, by applying basic requirement-gathering frameworks or tools.
6.3	Translate validated stakeholder needs into feasible AI or technology solution options, considering constraints such as cost, technical feasibility, and organisational priorities.
6.4	Apply basic data analysis using datasets, dashboards, or simple statistical tools to support the identification of needs and evaluate potential solution options.
6.5	Recognize and consider ethical implications and relevant regulatory constraints in AI application scenarios or technology deployment when proposing solutions.
7. PLO Relationship Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Achieve effective stakeholder alignment and support ethical AI adoption by analysing expectations, addressing privacy concerns, and coordinating collaborative solutions using communication techniques, project documentation, and digital platforms.	
Unit Learning Outcomes	
7.1	Analyse stakeholder expectations and concerns in AI projects, including ethical and privacy issues, using case studies, surveys, or system documentation.
7.2	Apply communication techniques to address AI adoption challenges, such as team discussions, presentations, or messaging platforms.
7.3	Collaborate effectively with peers in AI projects by participating in group tasks and using digital collaboration tools.
7.4	Coordinate stakeholder interactions using project documentation and digital platforms, in contexts such as shared repositories or feedback loops.
7.5	Evaluate the effectiveness of proposed solutions for AI-related stakeholder issues by reviewing outcomes, feedback, or implementation results.
7.6	Suggest improvements to stakeholder engagement strategies using lessons learned from project simulations or peer review exercises.

Assessments AI PRODUCT DESIGNER [EP 2.2]	
1	PLO Product/Service Planning [EQF6]
1.1	Evaluation of system specification report, oral questioning, and peer review, assessed for correct identification and explanation of product or service components, current status, target objectives, and AI-enabled elements using product roadmaps and system specifications.

1.2	Assessment of risk and cost assessment matrix, case study analysis, and written report, assessed for analysis of cost effectiveness, risks, opportunities, strengths, and weaknesses related to AI components in structured project or service planning scenarios.
1.3	Review of structured product/service plan and project plan submission, using rubric-based scoring of established methods and tools such as Gantt charts, workflow software, and AI project templates, including AI-specific timelines, milestones, and resource allocation.
1.4	Audit of compliance and documentation package, checklist verification, and documented evidence evaluation, assessed for appropriate AI documentation, delivery specifications, and adherence to industry standards, regulatory frameworks, and internal quality guidelines.
1.5	Assessment of stakeholder communication deliverables, presentation evaluation, report grading, and feedback from simulated stakeholders, assessed for effective communication of product or service plans and AI-related decisions using reports, presentations, or visual dashboards.
2	PLO Application Design [EQF6]
2.1	Review of AI requirement specification document and oral questioning on requirement analysis, assessed for accurate translation of user or project requirements into AI application specifications using structured requirement-gathering methods.
2.2	Evaluation of AI design document, workflow diagrams, and design critique sessions, assessed for suitability of data structures, workflows, and AI model selection for routine tasks in clearly defined project scenarios.
2.3	Assessment of AI technology selection report, including justification of AI methods, frameworks, and tools against project constraints and available resources.
2.4	Analysis of AI integration assessment report with peer or instructor review, assessed for demonstrated awareness of interactions between AI applications and enterprise or multi-component system environments.
2.5	Assessment of AI usability report, including demonstration of prototype and user feedback summary, assessed for application of user/customer needs and usability principles in prototype testing or iterative development cycles.
2.6	Review of AI validation report with test results, automated model evaluation, and instructor feedback, assessed for iterative testing and feedback using representative datasets or user scenarios and for evidence that intended outcomes are met.
3	PLO Innovating [EQF6]
3.1	AI Opportunity Report, written assignment, and presentation of AI opportunity findings, assessed for identification of opportunities where AI can enhance existing products, services, or processes using basic analysis of local business, societal, or research contexts.
3.2	AI Prototype demonstration and code or model submission, assessed for development of functional and creative AI solutions in defined contexts using established AI tools or frameworks.
3.3	Technical documentation for AI implementation and portfolio entry, assessed for adaptation and combination of multiple technological concepts such as data processing, models, and digital platforms.
3.4	Evaluation report of AI solution with peer or tutor review, assessed for use of defined criteria or feedback to evaluate effectiveness in addressing local business, societal, or research challenges.

3.5	Design brief for AI solution and written justification of design choices, assessed for explanation of design choices and limitations using basic AI concepts, assumptions, or constraints.
3.6	Iteration log or versioned AI prototype with reflection note on improvements, assessed for incremental refinements based on testing or feedback within given requirements.
4	PLO User Experience [EQF7]
4.1	AI requirements analysis document, submission and review by instructor/stakeholders, assessed for analysis of organisational, user, and regulatory requirements in AI product contexts such as enterprise software or consumer apps.
4.2	Multidisciplinary AI UX package, team project deliverables, and portfolio evaluation, assessed for design, evaluation, and justification of human-centred UX solutions and evidence of multidisciplinary team work.
4.3	AI standards compliance report, rubric-based assessment, and audit of artefacts, assessed for application of industry standards and ethical guidelines such as ISO/IEC 25010 or AI ethics frameworks to transparency, usability, and responsible AI interaction.
4.4	AI UX risk assessment report, scenario analysis, and case study evaluation, assessed for identification, assessment, and management of UX-related risks in AI deployment contexts, including loss of user trust or unintended user behaviour.
4.5	AI stakeholder recommendation report, presentation to stakeholders, and written justification, assessed for data-supported recommendation and defence of UX design decisions using user studies or metrics.
4.6	AI implementation feedback log, reflective report, and evidence of iterative improvement, assessed for integration of user feedback and regulatory updates in the implementation and continuous improvement of AI-enabled UX solutions.
5	PLO Documentation Production [EQF6]
5.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence, with peer-review of contributions, assessed for independent application of document-management and collaboration practices in AI projects.
5.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components, using a grading rubric based on completeness, accuracy, and coverage of model specifications, system interfaces, and regulatory reports.
5.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs, assessed for clarity, cohesion, accessibility, and accurate integration of information from different AI system elements.
5.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements, with submission of compliance verification report assessed for alignment with applicable legal, ethical, and organizational standards.
5.5	Evaluation of customized AI documentation templates and modified project documentation, assessed for adaptability to variable AI project contexts, alignment with project-specific requirements, and accommodation of new system components.

6	PLO Needs Identification [EQF6]
6.1	Stakeholder Needs Report – assessed via written report of AI stakeholder needs and validation summary, including evidence from structured interviews, workshops, or observational techniques with internal and external stakeholders.
6.2	Requirement Analysis Matrix – assessed via submitted matrix mapping functional, technical, and business requirements to AI solutions, with traceable differentiation of stakeholder needs using basic requirement-gathering frameworks or tools.
6.3	AI Solution Options Brief – assessed via presentation or report proposing feasible AI solution options, including justification against validated stakeholder needs, cost, technical feasibility, and organizational priorities.
6.4	AI Data Analysis Summary – assessed via submitted dashboard, data visualization, or short report analysing data to support identification of needs and evaluation of potential AI solution options.
6.5	AI Ethical & Regulatory Assessment – assessed via written document outlining ethical implications and relevant regulatory constraints in AI application scenarios or technology deployment when proposing solution options.
7	PLO Relationship Management [EQF6]
7.1	Written stakeholder analysis report, graded on clarity, completeness, and identification of stakeholder expectations, concerns, ethical issues, and privacy issues using case studies, surveys, or system documentation.
7.2	Presentation or recorded team briefing assessed on clarity, relevance, communication effectiveness, and appropriate use of communication techniques to address AI adoption challenges.
7.3	Peer evaluation and review of collaborative project documentation, with assessment of contribution logs for effective participation in group tasks and use of digital collaboration tools.
7.4	Submission of coordinated project documentation with stakeholder feedback records, assessed by rubric for coordination of stakeholder interactions using digital platforms, shared repositories, or feedback loops.
7.5	Evaluation report or reflective log comparing proposed versus actual solutions, assessed for analytical reasoning and use of outcomes, feedback, or implementation results to evaluate effectiveness.
7.6	Recommendations report or lessons learned document, assessed for feasible, clear, and actionable improvements to stakeholder engagement strategies based on project simulations or peer review exercises.

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI ENGINEER		[EP 2.3]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI engineer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Ensures building and implementing AI systems that may encompass a wide range of techniques. Ensures scalability, dependability and efficiency of AI systems. Manages deployment pipelines for AI solutions.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.6.	Application Design	e-3
	A.7.	Technology Trend Monitoring	e-3
	B.1.	Application Development	e-3
	B.2.	Component Integration	e-3
	B.3.	Testing	e-3
	B.4.	Solution Deployment	e-3
	B.5.	Documentation Production	e-3
	C.4.	Problem Management	e-3
	D.7.	Data Science and Analytics	e-3
Complexity	The profile has an EQF6 level.		

1. PLO Application Design [EQF6]	
<i>The learner has demonstrated ability to...</i>	
design and implement AI applications for routine or well-defined tasks by selecting suitable models, data structures, and workflows, ensuring proper integration into complex environments and alignment with user needs, performance, and resource considerations	
Unit Learning Outcomes	
1.1	Analyse and translate user or project requirements into AI application specifications using structured requirement-gathering methods.
1.2	Design AI solutions for routine tasks, including data structures, workflows, and AI model selection in clearly defined project scenarios.
1.3	Select suitable AI methods, frameworks, and tools by evaluating project constraints and available resources.
1.4	Demonstrate awareness of the interactions between AI applications and complex system environments such as enterprise or multi-component systems to ensure correct integration.

1.5	Apply user/customer needs and usability principles in prototype testing or iterative development cycles to ensure the AI solution is functional and user-aligned.
1.6	Validate AI models and workflows through iterative testing and feedback using representative datasets or user scenarios, ensuring they meet intended outcomes.

2. PLO Technology Trend Monitoring [EQF6]

The learner has demonstrated ability to...

Monitor and assess emerging AI technologies in partially defined contexts by identifying trends, analysing developments, and applying insights to small-scale use cases.

Unit Learning Outcomes

2.1	Identify key concepts, techniques, and emerging areas in AI by tracking technological trends and innovations such as generative AI, reinforcement learning, and computer vision tools.
2.2	Analyse and compare AI technologies and tools using defined criteria such as potential, maturity, and applicability in the context of industry reports, vendor offerings, or research updates.
2.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
2.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.
2.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.
2.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.

3. PLO Application Development [EQF6]

The learner has demonstrated ability to...

Develop functional AI-enabled software solutions by selecting, applying, and integrating suitable AI models and tools to address moderately complex real-world problems collaboratively

Unit Learning Outcomes

3.1	Select appropriate AI models and software tools for a given application context, such as natural language processing or computer vision tasks.
3.2	Implement AI components and integrate them into software solutions independently, using frameworks like TensorFlow or PyTorch.
3.3	Analyse application requirements to adapt AI solutions for real-world scenarios, such as recommendation systems or predictive analytics.
3.4	Evaluate AI outputs for correctness, efficiency, and user relevance in team-based projects, using performance metrics and user feedback.
3.5	Document and communicate technical decisions and results to peers and stakeholders, using reports, diagrams, or presentations.
3.6	Test and debug AI components within software applications, using unit tests and scenario-based validation.

4. PLO Component Integration [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Deliver functioning AI-enabled solutions by selecting, implementing and integrating AI models, data pipelines and services within existing systems, evaluating interoperability, performance and security, and articulating well-reasoned integration choices in applied project contexts.	
Unit Learning Outcomes	
4.1	Analyse and compare AI integration requirements within different application or system contexts, such as web-based, embedded or data-driven applications.
4.2	Design and implement AI component integration using appropriate architectures, APIs, microservices and deployment tools, by applying established integration patterns and frameworks.
4.3	Integrate and configure AI models, data pipelines and services to ensure interoperability with existing systems, in heterogeneous software environments.
4.4	Test, validate and evaluate AI-enabled solutions with respect to performance, security and reliability, using defined metrics and test procedures.
4.5	Explain and justify integration decisions, trade-offs and outcomes in project-based or team settings, by referring to technical constraints and design choices.
5. PLO Testing [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Conduct comprehensive testing of AI and ICT systems to assess correctness, robustness, interpretability, and compliance by applying evaluation procedures that produce actionable improvement recommendations in complex scenarios.	
Unit Learning Outcomes	
5.1	Apply evaluation procedures to test AI systems in partially unpredictable scenarios.
5.2	Analyse AI model outputs for correctness, performance, robustness, and interpretability using quantitative metrics and exploratory techniques.
5.3	Evaluate AI outputs for fairness, bias, and compliance with ethical and regulatory standards in practical system deployments.
5.4	Report findings with actionable recommendations for system improvement through structured reports or team presentations.
5.5	Apply multiple AI evaluation metrics and explainability techniques such as SHAP, LIME, or model confidence analysis to assess AI system behaviour.
6. PLO Solution Deployment [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Effectively deliver and maintain AI solutions in operational environments by applying MLOps or other suitable methods, ensuring solution reliability, ethical integrity, security, and comprehensive lifecycle documentation.	

Unit Learning Outcomes	
6.1	Deploy and integrate AI solutions, including models, pipelines, or intelligent applications, into production systems independently using MLOps pipelines or other suitable methods, such as cloud-based or edge computing environments.
6.2	Monitor AI solution performance, evaluate operational metrics, and troubleshoot issues affecting deployment in real-time or batch-processing environments.
6.3	Implement updates or retraining processes, or modify system components, to maintain AI solution performance by leveraging automated pipelines or scheduled workflows.
6.4	Produce operational and lifecycle documentation to support handover and continued maintenance of AI solutions in enterprise or production settings.
6.5	Apply ethical and security considerations when deploying and managing AI solutions, such as data privacy compliance, fairness, and bias mitigation practices.
7. PLO Documentation Production [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Apply document-management practices and develop AI-specific documentation, including technical specifications, compliance records, and transparency reports, independently within broad project frameworks, by integrating information from multiple AI system components and ensuring alignment with regulatory and stakeholder requirements in projects with variable challenges.	
Unit Learning Outcomes	
7.1	Apply document-management and collaboration practices to AI projects independently, using systems that enable coordinated document creation and version control.
7.2	Develop AI-specific technical, compliance, and transparency documentation for multiple system components, such as model specifications, system interfaces, and regulatory reports.
7.3	Integrate information from different AI system elements into cohesive and accessible documentation, by consolidating data from datasets, model outputs, and system logs.
7.4	Ensure that AI documentation meets regulatory, ethical, and stakeholder requirements, in accordance with applicable legal, ethical, and organisational standards.
7.5	Adapt and modify existing templates or documentation structures to suit variable AI project contexts, by aligning documentation with project-specific requirements or new system components.

8. PLO Problem Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Investigate and evaluate ICT and AI incidents, including emerging failures, model drift, or bias, apply corrective and preventive measures, and design monitoring strategies or knowledge management practices to optimise system and AI performance, in situations with varying and partially undefined problems.	
Unit Learning Outcomes	
8.1	Investigate complex ICT and AI incidents, including subtle system failures, AI model drift, and emerging bias patterns, using diagnostic tools and historical performance data.
8.2	Evaluate root causes of incidents and their impact on system and AI performance through structured analysis and impact assessment methods.

8.3	Apply corrective and preventive measures to mitigate incidents in less predictable operational situations.
8.4	Design monitoring strategies or knowledge management practices to track recurring AI failures and support system optimisation.
8.5	Advise or collaborate with team members by sharing findings and recommending improvements in AI system performance and ethical compliance.
9. PLO Data Science and Analytics [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Analyse and integrate data from multiple sources using statistical and predictive analytics methods to produce actionable insights, evaluate data quality and bias, and communicate findings to support AI-driven decision-making in situations with partially defined problems and varying data availability.	
Unit Learning Outcomes	
9.1	Analyse data from multiple sources such as databases, APIs, or log files to identify patterns and trends relevant for AI-enhanced decision-making.
9.2	Integrate structured and unstructured datasets using data integration tools or programming languages to improve AI model performance.
9.3	Apply predictive analytics and basic machine learning methods in Python, R, or equivalent tools to support AI-assisted decision-making.
9.4	Evaluate datasets for quality, bias, and compliance in accordance with ethical, privacy, or regulatory standards.
9.5	Communicate findings effectively through reports, dashboards, or presentations to support organisational AI-driven processes.
9.6	Produce data storytelling artifacts such as visual narratives or annotated dashboards to convey insights for AI-enabled decisions.

Assessments AI ENGINEER [EP 2.3]	
1	PLO Application Design [EQF6]
1.1	Review of AI requirement specification document and oral questioning on requirement analysis, assessed for accurate translation of user or project requirements into AI application specifications using structured requirement-gathering methods.
1.2	Evaluation of AI design document, workflow diagrams, and design critique sessions, assessed for suitability of data structures, workflows, and AI model selection for routine tasks in clearly defined project scenarios.
1.3	Assessment of AI technology selection report, including justification of selected AI methods, frameworks, and tools against project constraints and available resources.
1.4	Analysis of AI integration assessment report with peer or instructor review, assessed for demonstrated awareness of interactions between AI applications and enterprise or multi-component system environments.
1.5	Assessment of AI usability report, including demonstration of prototype and user feedback summary, assessed for application of user/customer needs and usability principles in prototype testing or iterative development cycles.

1.6	Review of AI validation report with test results, automated model evaluation, and instructor feedback, assessed for iterative testing and feedback using representative datasets or user scenarios and for evidence that intended outcomes are met.
2	PL0 Technology Trend Monitoring [EQF6]
2.1	Annotated portfolio submission and short written test, assessed for correct identification of key AI concepts, techniques, and emerging areas through tracked technological trends and innovations.
2.2	Comparative analysis table with oral explanation or peer review, assessed for comparison of AI technologies and tools using defined criteria such as potential, maturity, and applicability.
2.3	Trend mapping report and written report evaluation, assessed for investigation and classification of internal and external AI innovation sources, including trend reports, patents, newsfeeds, and academic publications.
2.4	Mini prototype/simulation demonstration and lab report, assessed for application of basic methods and tools to explore AI-enabled use cases using trending technologies.
2.5	Ethics and impact briefing with rubric-based report assessment, assessed for description and consideration of ethical, data protection, and organisational issues related to AI adoption.
2.6	Presentation/dashboard with peer and instructor evaluation, assessed for clear presentation and justification of observations and insights about AI trends and technology developments.
3	PL0 Application Development [EQF6]
3.1	AI Model Selection Report and Written Justification, assessed for appropriateness of selected AI models and software tools for the given application context, such as natural language processing or computer vision tasks.
3.2	AI Component Demonstration and Code Submission, assessed for independent implementation and integration of AI components into software solutions using frameworks like TensorFlow or PyTorch.
3.3	Requirements Analysis Document and Use Case Mapping, assessed for analysis of application requirements and adaptation of AI solutions to real-world scenarios such as recommendation systems or predictive analytics.
3.4	AI Performance Evaluation Report and Metric Analysis, assessed for evaluation of AI outputs for correctness, efficiency, and user relevance using performance metrics and user feedback.
3.5	Technical Documentation and Presentation, assessed for clear documentation and communication of technical decisions and results to peers and stakeholders.
3.6	Test Reports, Unit Test Logs, and Debugging Evidence, assessed for testing and debugging of AI components within software applications using unit tests and scenario-based validation.
4	PL0 Component Integration [EQF6]
4.1	AI integration requirements analysis report and comparative system context matrix, assessed for complete and justified comparison of AI integration requirements across web-based, embedded, or data-driven application contexts.
4.2	Implemented AI integration solution, including code and configuration, and AI integration architecture diagram, assessed for appropriate use of architectures, APIs, microservices, deployment tools, and established integration patterns or frameworks.

4.3	Configured AI models and data pipelines with AI API/interface specification, assessed for interoperability with existing systems and consistency across heterogeneous software environments.
4.4	AI system test results and AI evaluation summary, assessed against defined performance, security, and reliability metrics and documented test procedures.
4.5	Written AI integration justification report and oral project defence or presentation, assessed for evidence-based explanation of integration decisions, trade-offs, technical constraints, design choices, and outcomes.
5	PLO Testing [EQF6]
5.1	Review of AI evaluation plan, assessed for appropriate application of evaluation procedures to test AI systems in partially unpredictable scenarios.
5.2	Assessment of AI analytical report, assessed for analysis of AI model outputs for correctness, performance, robustness, and interpretability using quantitative metrics and exploratory techniques.
5.3	Evaluation of AI fairness/compliance report, assessed for evaluation of AI outputs against fairness, bias, ethical, and regulatory compliance criteria in practical system deployments.
5.4	Review of AI recommendation report, assessed for clear reporting of findings and actionable recommendations for system improvement.
5.5	Inspection of AI metric/explainability outputs, assessed for correct application of multiple AI evaluation metrics and explainability techniques such as SHAP, LIME, or model confidence analysis.
6	PLO Solution Deployment [EQF6]
6.1	Deployed AI solution demonstration, integration scripts review, and architecture diagram evaluation, assessed for independent deployment and integration of models, pipelines, or intelligent applications into production systems using MLOps or other suitable methods.
6.2	AI performance report review, monitoring dashboard evaluation, and troubleshooting log analysis, assessed for monitoring of AI solution performance, evaluation of operational metrics, and troubleshooting of deployment issues.
6.3	Updated/retrained AI model verification, workflow documentation review, and test result analysis, assessed for implementation of updates, retraining processes, or system modifications using automated pipelines or scheduled workflows.
6.4	Operational manual evaluation, lifecycle documentation review, and handover report assessment, assessed for completeness and usefulness in supporting handover and continued maintenance of AI solutions in enterprise or production settings.
6.5	Bias/fairness report evaluation, data privacy compliance review, and security assessment evaluation, assessed for application of ethical and security considerations, including privacy compliance, fairness, and bias mitigation, in AI deployment and management.
7	PLO Documentation Production [EQF6]
7.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence, with peer-review of contributions, assessed for independent application of document-management and collaboration practices in AI projects.

7.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components, using a grading rubric based on completeness, accuracy, and coverage of model specifications, system interfaces, and regulatory reports.
7.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs, assessed for clarity, cohesion, accessibility, and accurate integration of information from different AI system elements.
7.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements, with submission of compliance verification report assessed for alignment with applicable legal, ethical, and organizational standards.
7.5	Evaluation of customized AI documentation templates and modified project documentation, assessed for adaptability to variable AI project contexts, alignment with project-specific requirements, and accommodation of new system components.
8	PLO Problem Management [EQF6]
8.1	Assessment of AI incident investigation report, including depth and accuracy of data analysis, evaluated for investigation of complex ICT and AI incidents using diagnostic tools and historical performance data.
8.2	Evaluation of root cause evaluation and impact analysis review, assessed for use of structured analysis and impact assessment methods to determine effects on system and AI performance.
8.3	Review of mitigation plan, assessed for effectiveness and applicability of corrective and preventive measures in less predictable operational situations.
8.4	Assessment of monitoring/knowledge strategy document, assessed for clarity, feasibility, and ability to track recurring AI failures and support system optimization.
8.5	Review of advisory report, assessed for quality of recommendations, evidence of shared findings, and relevance to AI system performance and ethical compliance.
9	PLO Data Science and Analytics [EQF6]
9.1	Evaluation of integrated datasets, assessed for analysis of data from multiple sources such as databases, APIs, or log files and identification of patterns and trends relevant for AI-enhanced decision-making.
9.2	Assessment of analytics report, assessed for integration of structured and unstructured datasets using data integration tools or programming languages and for contribution to AI model performance.
9.3	Review of predictive model outputs, assessed for appropriate application of predictive analytics and basic machine learning methods in Python, R, or equivalent tools to support AI-assisted decision-making.
9.4	Audit of dataset evaluation report, assessed for evaluation of dataset quality, bias, and compliance with ethical, privacy, or regulatory standards.
9.5	Assessment of findings presentation, assessed for effective communication of findings and relevance to organizational AI-driven processes.
9.6	Evaluation of data storytelling artifacts, assessed for clarity, accuracy, and effectiveness of visual narratives or annotated dashboards in conveying insights for AI-enabled decisions.

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI APPLICATION DEVELOPER		[EP 2.4]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI application developer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Ensures developing, coding, and testing AI applications and algorithms. Writes code for AI models and develops AI algorithms. Implements AI solutions into applications and finetunes the AI models based on performance.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.6.	Application Design	e-3
	B.1.	Application Development	e-3
	B.2.	Component Integration	e-3
	B.3.	Testing	e-2
	B.5.	Documentation Production	e-3
Complexity	The profile has an EQF6 level.		

1. PLO Application Design [EQF6]	
<i>The learner has demonstrated ability to...</i>	
design and implement AI applications for routine or well-defined tasks by selecting suitable models, data structures, and workflows, ensuring proper integration into complex environments and alignment with user needs, performance, and resource considerations	
Unit Learning Outcomes	
1.1	Analyse and translate user or project requirements into AI application specifications using structured requirement-gathering methods.
1.2	Design AI solutions for routine tasks, including data structures, workflows, and AI model selection in clearly defined project scenarios.
1.3	Select suitable AI methods, frameworks, and tools by evaluating project constraints and available resources.
1.4	Demonstrate awareness of the interactions between AI applications and complex system environments such as enterprise or multi-component systems to ensure correct integration.
1.5	Apply user/customer needs and usability principles in prototype testing or iterative development cycles to ensure the AI solution is functional and user-aligned.
1.6	Validate AI models and workflows through iterative testing and feedback using representative datasets or user scenarios, ensuring they meet intended outcomes.

2. PLO Application Development [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Develop functional AI-enabled software solutions by selecting, applying, and integrating suitable AI models and tools to address moderately complex real-world problems collaboratively	
Unit Learning Outcomes	
2.1	Select appropriate AI models and software tools for a given application context, such as natural language processing or computer vision tasks.
2.2	Implement AI components and integrate them into software solutions independently, using frameworks like TensorFlow or PyTorch.
2.3	Analyse application requirements to adapt AI solutions for real-world scenarios, such as recommendation systems or predictive analytics.
2.4	Evaluate AI outputs for correctness, efficiency, and user relevance in team-based projects, using performance metrics and user feedback.
2.5	Document and communicate technical decisions and results to peers and stakeholders, using reports, diagrams, or presentations.
2.6	Test and debug AI components within software applications, using unit tests and scenario-based validation.
3. PLO Component Integration [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Deliver functioning AI-enabled solutions by selecting, implementing and integrating AI models, data pipelines and services within existing systems, evaluating interoperability, performance and security, and articulating well-reasoned integration choices in applied project contexts.	
Unit Learning Outcomes	
3.1	Analyse and compare AI integration requirements within different application or system contexts, such as web-based, embedded or data-driven applications.
3.2	Design and implement AI component integration using appropriate architectures, APIs, microservices and deployment tools, by applying established integration patterns and frameworks.
3.3	Integrate and configure AI models, data pipelines and services to ensure interoperability with existing systems, in heterogeneous software environments.
3.4	Test, validate and evaluate AI-enabled solutions with respect to performance, security and reliability, using defined metrics and test procedures.
3.5	Explain and justify integration decisions, trade-offs and outcomes in project-based or team settings, by referring to technical constraints and design choices.
4. PLO Testing [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Perform structured testing of AI and ICT systems to detect basic errors or biases and ensure ethical compliance by executing guided procedures and clearly documenting results.	

Unit Learning Outcomes	
4.1	Apply predefined test procedures to AI and ICT systems using guided examples and structured exercises.
4.2	Identify basic errors, anomalies, or inconsistencies in AI model outputs in controlled datasets or simulated scenarios.
4.3	Recognize simple biases in AI outputs and flag them for further review by comparing outputs against reference standards or simple fairness checks.
4.4	Document testing activities, results, and observations following established templates and reporting formats.
4.5	Recall relevant ethical and regulatory standards applicable to AI testing in academic or guided professional contexts.

5. PLO Documentation Production [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Apply document-management practices and develop AI-specific documentation, including technical specifications, compliance records, and transparency reports, independently within broad project frameworks, by integrating information from multiple AI system components and ensuring alignment with regulatory and stakeholder requirements in projects with variable challenges.	
Unit Learning Outcomes	
5.1	Apply document-management and collaboration practices to AI projects independently, using systems that enable coordinated document creation and version control.
5.2	Develop AI-specific technical, compliance, and transparency documentation for multiple system components, such as model specifications, system interfaces, and regulatory reports.
5.3	Integrate information from different AI system elements into cohesive and accessible documentation, by consolidating data from datasets, model outputs, and system logs.
5.4	Ensure that AI documentation meets regulatory, ethical, and stakeholder requirements, in accordance with applicable legal, ethical, and organisational standards.
5.5	Adapt and modify existing templates or documentation structures to suit variable AI project contexts, by aligning documentation with project-specific requirements or new system components.

Assessments AI APPLICATION DEVELOPER [EP 2.4]	
1	PLO Application Design [EQF6]
1.1	Review of AI requirement specification document and oral questioning on requirement analysis, assessed for accurate translation of user or project requirements into AI application specifications using structured requirement-gathering methods.
1.2	Evaluation of AI design document, workflow diagrams, and design critique sessions, assessed for suitability of data structures, workflows, and AI model selection for routine tasks in clearly defined project scenarios.
1.3	Assessment of AI technology selection report, including justification of selected AI methods, frameworks, and tools against project constraints and available resources.

1.4	Analysis of AI integration assessment report with peer or instructor review, assessed for demonstrated awareness of interactions between AI applications and enterprise or multi-component system environments.
1.5	Assessment of AI usability report, including demonstration of prototype and user feedback summary, assessed for application of user/customer needs and usability principles in prototype testing or iterative development cycles.
1.6	Review of AI validation report with test results, automated model evaluation, and instructor feedback, assessed for iterative testing and feedback using representative datasets or user scenarios and for evidence that intended outcomes are met.
2	PLO Application Development [EQF6]
2.1	AI Model Selection Report and Written Justification, assessed for appropriateness of selected AI models and software tools for the given application context, such as natural language processing or computer vision tasks.
2.2	AI Component Demonstration and Code Submission, assessed for independent implementation and integration of AI components into software solutions using frameworks like TensorFlow or PyTorch.
2.3	Requirements Analysis Document and Use Case Mapping, assessed for analysis of application requirements and adaptation of AI solutions to real-world scenarios such as recommendation systems or predictive analytics.
2.4	AI Performance Evaluation Report and Metric Analysis, assessed for evaluation of AI outputs for correctness, efficiency, and user relevance using performance metrics and user feedback.
2.5	Technical Documentation and Presentation / Slide Deck, assessed for clear documentation and communication of technical decisions and results to peers and stakeholders.
2.6	Test Reports, Unit Test Logs, and Debugging Evidence, assessed for testing and debugging of AI components within software applications using unit tests and scenario-based validation.
3	PLO Component Integration [EQF6]
3.1	AI integration requirements analysis report and comparative system context matrix, assessed for complete and justified comparison of AI integration requirements across web-based, embedded, or data-driven application contexts.
3.2	Implemented AI integration solution, including code and configuration, and AI integration architecture diagram, assessed for appropriate use of architectures, APIs, microservices, deployment tools, and established integration patterns or frameworks.
3.3	Configured AI models and data pipelines with AI API/interface specification, assessed for interoperability with existing systems and consistency across heterogeneous software environments.
3.4	AI system test results and AI evaluation summary, assessed against defined performance, security, and reliability metrics and documented test procedures.
3.5	Written AI integration justification report and oral project defence or presentation, assessed for evidence-based explanation of integration decisions, trade-offs, technical constraints, design choices, and outcomes.
4	PLO Testing [EQF5]
4.1	Review of AI test execution report, assessed for correct execution of predefined test procedures on AI and ICT systems using guided examples and structured exercises.

4.2	Evaluation of AI error/anomaly log, assessed for accurate identification and description of basic errors, anomalies, or inconsistencies in AI model outputs from controlled datasets or simulated scenarios.
4.3	Assessment of AI bias report, assessed for recognition and flagging of simple biases in AI outputs through comparison with reference standards or simple fairness checks.
4.4	Inspection of AI test documentation, assessed for complete and accurate recording of testing activities, results, and observations using established templates and reporting formats.
4.5	Review of AI compliance checklist, assessed for correct identification of relevant ethical and regulatory standards applicable to AI testing in academic or guided professional contexts.
5	PLO Documentation Production [EQF6]
5.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence, with peer-review of contributions, assessed for independent application of document-management and collaboration practices in AI projects.
5.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components, using a grading rubric based on completeness, accuracy, and coverage of model specifications, system interfaces, and regulatory reports.
5.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs, assessed for clarity, cohesion, accessibility, and accurate integration of information from different AI system elements.
5.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements, with submission of compliance verification report assessed for alignment with applicable legal, ethical, and organizational standards.
5.5	Evaluation of customized AI documentation templates and modified project documentation, assessed for adaptability to variable AI project contexts, alignment with project-specific requirements, and accommodation of new system components.

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI RESEARCHER		[EP 2.5]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI researcher. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Advances AI technology by creating novel methods, improving model capabilities, and contributing research that enables safe, ethical, and impactful AI systems for the benefit of society. Operates at the intersection of computer science, mathematics, and domain knowledge to push the boundaries of what machines can learn, reason, and do.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.7.	Technology Trend Monitoring	e-5
	A.9.	Innovating	e-5
	D.7.	Data Science and Analytics	e-5
	D.10.	Information and Knowledge Management	e-4
	D.11.	Needs Identification	e-4
Complexity	The profile has an EQF8 level.		

1. PLO Technology Trend Monitoring [EQF8]	
<i>The learner has demonstrated ability to...</i>	
Provide strategic vision and authority to investigate, anticipate, and lead AI-enabled innovations and transformations, shaping long-term organisational and societal impact through informed technology trend monitoring in AI and ICT domains.	
Unit Learning Outcomes	
1.1	Critically monitor and evaluate emerging AI and ICT technologies and trends using sector-relevant data and literature to inform strategic research or organisational decisions.
1.2	Formulate and justify original AI-driven strategies, frameworks, or problem definitions by anticipating technological evolution that leverage emerging trends.
1.3	Initiate, govern, and lead AI-enabled transformation initiatives in organisational or societal contexts that deliver measurable impact.
1.4	Integrate ethical, regulatory, technical, and sustainability considerations in AI adoption and trend-informed governance.
1.5	Assess and balance competing approaches, evidence, and risks in AI innovation and technology trend application.
1.6	Communicate, defend, and advocate for AI strategies, innovations, and trend-informed decisions to expert, executive, and stakeholder audiences.

1.7	Reflect on and enhance leadership, governance, and trend monitoring practices by applying lessons from AI-driven organisational or research change.

2. PLO Innovating [EQF8]

The learner has demonstrated ability to...

Formulate and direct the strategic orientation for AI-driven innovation by envisioning and realising transformative AI applications that generate new organisational capabilities, markets, or societal value, integrating advanced AI approaches and critically evaluating their professional and societal impact.

Unit Learning Outcomes

2.1	Define and justify strategic directions and priorities for AI-driven innovation in complex organisational or societal contexts.
2.2	Envision and conceptualize transformative AI applications that create new markets, services, organisational capabilities, or societal value.
2.3	Lead and influence multidisciplinary teams and stakeholders in the realization of AI-enabled innovation initiatives at organisational or ecosystem level.
2.4	Select, adapt, and integrate advanced AI methods and architectures to maximize innovation impact, scalability, and sustainability.
2.5	Translate advanced AI capabilities into viable innovation pathways by aligning technical potential with strategic, operational, and business considerations.
2.6	Critically evaluate the outcomes and impacts of AI-driven innovations using qualitative and quantitative approaches.
2.7	Anticipate, assess, and govern ethical, legal, and societal implications of AI-driven innovation, embedding responsible AI principles into strategic decision-making.
2.8	Generate practice-based knowledge and original insights that advance professional practice in AI-driven innovation through rigorous inquiry and critical reflection.
2.9	Reflect on and adapt AI innovation strategies in response to uncertainty, emerging evidence, and evolving technological or societal conditions.

3. PLO Data Science and Analytics [EQF8]

The learner has demonstrated ability to...

Lead, develop, and implement advanced data science and AI-enabled analytics initiatives by integrating complex datasets, applying advanced analytics and AI techniques, evaluating ethical, operational, and societal impact, and generating transformative insights that drive AI-supported and data-informed decision-making in complex, multi-factor, and interdisciplinary contexts.

Unit Learning Outcomes

3.1	Develop innovative AI and data science methodologies for complex, multi-source and interdisciplinary challenges.
3.2	Integrate diverse datasets and apply advanced analytics to inform AI models and high-level decision-making.
3.3	Design and implement AI solutions using data-driven insights to enhance organisational, professional, or research outcomes.
3.4	Evaluate ethical, operational, societal, and data quality implications of AI and analytics initiatives across multiple domains.
3.5	Formulate original research questions, hypotheses, or frameworks in AI and data science contexts.

3.6	Conduct experiments, analyses, or AI-driven studies using data science as input for AI models.
3.7	Critically evaluate methods, AI model performance, data integrity, and research outcomes for validity, reliability, and ethical compliance.
3.8	Disseminate AI and data science insights through publications, presentations, collaborations, or practical applications.

4. PLO Information and Knowledge Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organisational units by aligning AI knowledge management with organisational objectives, governance requirements, and innovation needs.	
Unit Learning Outcomes	
4.1	Design and evaluate AI knowledge management structures for complex or cross-unit AI initiatives involving multiple stakeholders.
4.2	Advise on the AI knowledge lifecycle, including creation, validation, governance, maintenance, and reuse of AI models, data, and related artifacts.
4.3	Develop and improve governance approaches for AI knowledge and information by integrating organisational, regulatory, ethical, and strategic considerations.
4.4	Facilitate collaborative knowledge sharing and learning across interdisciplinary teams engaged in AI development, deployment, or oversight.
4.5	Align AI knowledge management practices with organisational objectives to support innovation, effectiveness, and sustainable use of AI technologies.
5. PLO Needs Identification [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Lead the end-to-end needs identification process with stakeholders, ensuring AI-driven solution recommendations are strategically aligned with organisational goals, regulatory requirements, and value creation objectives, and ensures the effective implementation, adoption, and iterative enhancement of implemented solutions.	
Unit Learning Outcomes	
5.1	Lead cross-functional teams in stakeholder engagement by coordinating workshops, co-creation sessions, or advisory meetings to define and validate complex organisational needs.
5.2	Critically assess and ensure that AI-driven solution proposals align with organisational strategy, regulatory requirements, and long-term value creation objectives, using strategic planning frameworks or business model analysis.
5.3	Evaluate and co-create a comprehensive range of AI solution options, including make-or-buy, SaaS, cloud, low-code/no-code, and other emerging technologies, by applying feasibility studies, prototyping, or comparative analysis.
5.4	Ensure the effective implementation, adoption, and iterative enhancement of AI solutions, using human-centred design principles, project management tools, or feedback loops.

Assessments AI RESEARCHER [EP 2.5]	
1	PLO Technology Trend Monitoring [EQF8]
1.1	Evaluation of AI trend reports, critical review of AI comparative analyses, and annotated AI bibliographies, assessed for critical monitoring and evaluation of emerging AI and ICT technologies using sector-relevant data and literature to inform strategic research or organisational decisions.
1.2	Assessment of AI innovation proposals, review of AI frameworks, and evaluation of AI strategy papers, assessed for originality, strategic justification, and anticipation of technological evolution based on emerging trends.
1.3	Assessment of AI transformation plans, review of AI governance frameworks, and case study evaluation of AI interventions, assessed for initiation, governance, leadership, and measurable impact in organisational or societal contexts.
1.4	Evaluation of AI ethical assessments, review of AI compliance reports, and assessment of AI sustainability matrices, assessed for integrated treatment of ethical, regulatory, technical, and sustainability considerations in AI adoption and trend-informed governance.
1.5	Assessment of AI evaluation reports, review of AI decision matrices, and evaluation of AI risk management plans, assessed for balanced comparison of competing approaches, evidence, and risks in AI innovation and technology trend application.
1.6	Assessment of AI executive briefings, review of AI policy reports, and evaluation of AI white papers, assessed for clear communication, defence, and advocacy of AI strategies, innovations, and trend-informed decisions for expert, executive, and stakeholder audiences.
1.7	Evaluation of AI leadership reflections, review of AI change case studies, and assessment of AI governance documentation, assessed for critical reflection on and enhancement of leadership, governance, and trend monitoring practices using lessons from AI-driven organisational or research change.
2	PLO Innovating [EQF8]
2.1	Assessment of an AI strategic priority framework and AI contextual analysis report, supported by a written strategic justification, assessed for definition and justification of AI-driven innovation priorities in complex organizational or societal contexts.
2.2	Evaluation of a transformative AI application concept dossier and AI market or ecosystem model, assessed through a vision paper review for creation of new markets, services, organizational capabilities, or societal value.
2.3	Assessment of an AI innovation governance model and AI stakeholder strategy, supported by documented AI leadership decisions and a reflective leadership narrative, assessed for leadership and influence across multidisciplinary teams and stakeholders at organizational or ecosystem level.
2.4	Technical assessment of an advanced AI architecture document and AI method selection justification, including review of an AI prototype or proof-of-concept, assessed for selection, adaptation, and integration of advanced AI methods and architectures to maximize innovation impact, scalability, and sustainability.
2.5	Evaluation of an AI-enabled business or operating model and AI scalability and feasibility analysis, assessed through a written innovation case for alignment of advanced AI capabilities with strategic, operational, and business considerations.

2.6	Assessment of an AI innovation evaluation framework and AI impact assessment report, supported by evidence-based performance analysis, assessed for critical evaluation of AI-driven innovation outcomes and impacts using qualitative and quantitative approaches.
2.7	Evaluation of a responsible AI governance framework and AI ethical, legal, and risk assessment, assessed through a policy or governance review for anticipation, assessment, and governance of ethical, legal, and societal implications in strategic AI decision-making.
2.8	Examination of a doctoral-level AI practice-based research report and original AI innovation contribution, including defence or viva, assessed for rigorous inquiry, critical reflection, and advancement of professional practice in AI-driven innovation.
2.9	Assessment of an AI reflective strategy portfolio and revised AI innovation strategy, evaluated through critical reflection and adaptive reasoning in response to uncertainty, emerging evidence, and evolving technological or societal conditions.
3	PLO Data Science and Analytics [EQF8]
3.1	Review of innovative AI methodology, assessed for originality, methodological rigour, and suitability for complex, multi-source and interdisciplinary challenges.
3.2	Assessment of integrated datasets & analytics outputs, assessed for integration of diverse datasets and application of advanced analytics to inform AI models and high-level decision-making.
3.3	Evaluation of AI solution implementation, assessed for design and implementation quality and for use of data-driven insights to enhance organizational, professional, or research outcomes.
3.4	Review of evaluation report, covering ethics, operational, societal, and data quality, assessed for evaluation of implications of AI and analytics initiatives across multiple domains.
3.5	Assessment of research questions & frameworks, assessed for originality, relevance, and coherence in AI and data science contexts.
3.6	Evaluation of experiment/analysis outputs, assessed for appropriate conduct of experiments, analyses, or AI-driven studies using data science as input for AI models.
3.7	Critical appraisal of methods, AI models, and research outcomes, assessed for validity, reliability, data integrity, AI model performance, and ethical compliance.
3.8	Review of dissemination outputs, including publications, presentations, collaborations, or practical applications, assessed for clarity, relevance, and effectiveness in communicating AI and data science insights.
4	PLO Information and Knowledge Management [EQF7]
4.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design, assessed for suitability for complex or cross-unit AI initiatives involving multiple stakeholders.
4.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines, assessed for coverage of creation, validation, governance, maintenance, and reuse of AI models, data, and related artifacts.
4.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment, assessed for integration of organizational, regulatory, ethical, and strategic considerations and evidence of improvement.

4.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model, assessed for support of collaborative knowledge sharing and learning across interdisciplinary AI development, deployment, or oversight teams.
4.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report, assessed for alignment with organizational objectives and contribution to innovation, effectiveness, and sustainable use of AI technologies.
5	PLO Needs Identification [EQF7]
5.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs, including evidence of cross-functional team coordination and validation of complex organizational needs.
5.2	AI Solution Alignment Report – assessed via written report analysing AI solutions against organizational strategy, regulatory requirements, and long-term value creation objectives using strategic planning frameworks or business model analysis.
5.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results for a comprehensive range of AI solution options, including make-or-buy, SaaS, cloud, low-code/no-code, and other emerging technologies.
5.4	AI Implementation & Enhancement Plan – assessed via documented implementation roadmap and iterative improvement strategy, including use of human-centred design principles, project management tools, or feedback loops.

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI QUALITY & EVALUATION SPECIALIST		[EP 2.6]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI quality & evaluation specialist. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Designs and executes testing, validation, and evaluation processes that assess AI models and systems against technical, ethical, and business requirements.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.8.	Sustainability Management	e-3
	B.3.	Testing	e-4
	B.5.	Documentation Production	e-3
	D.2.	ICT Quality Strategy Development	e-4
	D.7.	Data Science and Analytics	e-2
	E.3.	Risk Management	e-3
	E.6.	ICT Quality Management	e-3
	E.8.	Information Security Management	e-3
Complexity	The profile has an EQF7 level.		

1. PLO Sustainability Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Evaluate and enhance the sustainability performance of AI-based systems in professional contexts by applying appropriate assessment methods, comparing implementation options, and communicating actionable improvements within project teams.	
Unit Learning Outcomes	
1.1	Analyse the environmental, social, and economic performance of AI systems in applied project settings, such as optimising machine-learning workflows for energy efficiency.
1.2	Evaluate alternative AI implementation strategies for their sustainability impact by comparing model, data, or infrastructure choices, and propose feasible improvements.
1.3	Apply sustainability assessment tools and methods to AI projects using established frameworks or metrics, under minimal supervision.
1.4	Report findings and recommendations to team members and stakeholders in professional project documentation or presentations, for improving AI practices.

1.5	Identify common sustainability risks and trade-offs in AI systems in practical development or deployment scenarios, such as data volume, model size, or hardware use.
1.6	Reflect on personal and team responsibilities in applying sustainable AI practices within supervised professional or educational projects.

2. PLO Testing [EQF7]

The learner has demonstrated ability to...

Lead the testing of AI and ICT systems to ensure robustness, fairness, and accountability by designing strategic frameworks, innovating validation methods, and critically evaluating AI model behaviour in multidisciplinary environments.

Unit Learning Outcomes

2.1	Lead the design and implementation of AI and ICT testing frameworks in multidisciplinary project environments.
2.2	Critically evaluate complex AI models for robustness, fairness, interpretability, explainability, and compliance using advanced evaluation tools and domain-specific criteria.
2.3	Innovate AI testing methodologies to improve model evaluation, validation, and auditing practices by integrating research findings or new algorithmic approaches.
2.4	Ensure ethical, legal, and organisational accountability in AI testing processes through governance frameworks and compliance audits.
2.5	Coordinate testing activities across teams and integrate AI evaluation with overall system assessment in collaborative or cross-functional projects.

3. PLO Documentation Production [EQF6]

The learner has demonstrated ability to...

Apply document-management practices and develop AI-specific documentation, including technical specifications, compliance records, and transparency reports, independently within broad project frameworks, by integrating information from multiple AI system components and ensuring alignment with regulatory and stakeholder requirements in projects with variable challenges

Unit Learning Outcomes

3.1	Apply document-management and collaboration practices to AI projects independently, using systems that enable coordinated document creation and version control.
3.2	Develop AI-specific technical, compliance, and transparency documentation for multiple system components, such as model specifications, system interfaces, and regulatory reports.
3.3	Integrate information from different AI system elements into cohesive and accessible documentation, by consolidating data from datasets, model outputs, and system logs.
3.4	Ensure that AI documentation meets regulatory, ethical, and stakeholder requirements, in accordance with applicable legal, ethical, and organisational standards.
3.5	Adapt and modify existing templates or documentation structures to suit variable AI project contexts, by aligning documentation with project-specific requirements or new system components.

4. PLO ICT Quality Strategy Development [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Define, evaluate, coordinate, and optimise AI quality strategies by integrating ethical, resilience, and performance considerations across AI systems, using relevant frameworks and monitoring to address complex problems and enhance organisational outcomes.	
Unit Learning Outcomes	
4.1	Define AI quality strategies by applying principles of ethics, performance, and resilience, using frameworks such as ISO/IEC 42001, EU AI Ethics Guidelines, and Explainable AI best practices.
4.2	Evaluate AI system interactions, interdependencies, and quality objectives against organisational goals, using AI performance metrics, KPIs, and benchmarking tools.
4.3	Coordinate cross-functional activities to implement AI quality strategies and ensure alignment with organisational objectives.
4.4	Optimise AI quality strategies by integrating strategic monitoring, feedback loops, and continuous improvement practices.
4.5	Solve strategic AI quality challenges across multiple systems by applying evidence-based decision-making.
4.6	Report and communicate strategic AI quality outcomes, lessons learned, and recommendations for organisational decision-making.
5. PLO Data Science and Analytics [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Identify and collect structured and unstructured data from common sources, and apply basic data cleaning and descriptive analytics techniques to generate insights that support AI-assisted decision-making within defined, predictable tasks and workflows.	
Unit Learning Outcomes	
5.1	Identify common structured and unstructured datasets such as CSV files, JSON, text, or sensor data relevant to AI-assisted applications.
5.2	Apply basic data cleaning and preprocessing techniques using standard tools or scripts to prepare data for AI-enabled analysis.
5.3	Demonstrate the use of simple descriptive analytics in spreadsheets or basic statistical software to produce insights for AI-supported decision-making.
5.4	Recognize ethical and privacy considerations when handling personal, sensitive, or AI-relevant data.
5.5	Create basic visualizations such as charts or dashboards to communicate AI-relevant insights.

6. PLO Risk Management [EQF6]
<i>The learner has demonstrated ability to...</i>
Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities

Unit Learning Outcomes	
6.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
6.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
6.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
6.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
6.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
6.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.

7. PLO ICT Quality Management [EQF6]

The learner has demonstrated ability to...

Analyse and apply AI quality management practices by selecting and combining appropriate quality indicators, governance mechanisms, and evaluation methods to assess and improve the performance, reliability, security, and fairness of AI systems, while contributing to team-based quality decisions aligned with business needs.

Unit Learning Outcomes	
7.1	Select appropriate AI quality metrics and indicators using recognised AI standards and system documentation.
7.2	Combine governance frameworks and monitoring tools for different types of AI systems in operational contexts.
7.3	Analyse AI performance, reliability, fairness, and security data to identify quality risks and improvement opportunities.
7.4	Apply AI quality improvement measures in team-based development or operational AI projects.
7.5	Document and communicate AI quality findings using structured reports or dashboards for stakeholders.
7.6	Evaluate AI system outcomes against business, ethical, and regulatory requirements in organisational settings.

8. PLO Information Security Management [EQF6]

The learner has demonstrated ability to...

Ensure the security and reliability of AI systems by assessing vulnerabilities, applying secure development practices, and implementing mitigation strategies using appropriate tools and collaborative methods.

Unit Learning Outcomes	
8.1	Analyse AI system components and workflows to identify potential security vulnerabilities in development or operational pipelines.

8.2	Evaluate AI risks related to data, models, deployment, and operation using established risk assessment frameworks and tools.
8.3	Apply secure AI development and operational practices (DevSecMLOps) to mitigate identified risks in practical project scenarios.
8.4	Implement AI monitoring and anomaly detection using software tools or supervised techniques.
8.5	Collaborate effectively in teams to plan and execute AI security measures in applied projects or simulated operational scenarios.

Assessments AI QUALITY & EVALUATION SPECIALIST [EP 2.6]	
1	PLO Sustainability Management [EQF6]
1.1	Sustainability analysis report of an AI system, assessed for analysis of environmental, social, and economic performance in an applied project setting, including energy-efficiency considerations where relevant.
1.2	Comparative evaluation matrix with written improvement proposal, assessed for comparison of model, data, or infrastructure choices and for feasibility of proposed sustainability improvements.
1.3	Completed sustainability assessment framework applied to an AI project, assessed for correct use of established sustainability tools, frameworks, or metrics under minimal supervision.
1.4	Project presentation or written project memo, assessed for clear reporting of findings and actionable recommendations to team members and stakeholders for improving AI practices.
1.5	Sustainability risk and trade-off identification document, assessed for correct identification of common AI sustainability risks and trade-offs related to data volume, model size, or hardware use in practical development or deployment scenarios.
1.6	Structured reflective statement on sustainable AI practice, assessed for reflection on personal and team responsibilities in applying sustainable AI practices within supervised professional or educational projects.
2	PLO Testing [EQF7]
2.1	Review of AI testing framework documentation, assessed for leadership in the design and implementation of AI and ICT testing frameworks in multidisciplinary project environments.
2.2	Evaluation of AI critical evaluation report, assessed for critical evaluation of robustness, fairness, interpretability, explainability, and compliance using advanced evaluation tools and domain-specific criteria.
2.3	Assessment of AI methodology innovation report, assessed for innovation in AI testing methodologies and integration of research findings or new algorithmic approaches to improve evaluation, validation, and auditing practices.
2.4	Review of AI ethics/compliance record, assessed for evidence of ethical, legal, and organizational accountability through governance frameworks and compliance audits in AI testing processes.
2.5	Evaluation of AI team coordination report, assessed for coordination of testing activities across teams and integration of AI evaluation with overall system assessment in collaborative or cross-functional projects.

3	PLO Documentation Production [EQF6]
3.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence, with peer-review of contributions, assessed for independent application of document-management and collaboration practices in AI projects.
3.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components, using a grading rubric based on completeness, accuracy, and coverage of model specifications, system interfaces, and regulatory reports.
3.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs, assessed for clarity, cohesion, accessibility, and accurate integration of information from different AI system elements.
3.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements, with submission of compliance verification report assessed for alignment with applicable legal, ethical, and organizational standards.
3.5	Evaluation of customized AI documentation templates and modified project documentation, assessed for adaptability to variable AI project contexts, alignment with project-specific requirements, and accommodation of new system components.
4	PLO ICT Quality Strategy Development [EQF7]
4.1	AI strategy document submission, Strategy alignment matrix review, and Risk brief presentation, assessed for definition of AI quality strategies that apply ethics, performance, and resilience principles using frameworks such as ISO/IEC 42001, EU AI Ethics Guidelines, and Explainable AI best practices.
4.2	AI evaluation report analysis, KPI framework submission, and Benchmarking report review, assessed for evaluation of AI system interactions, interdependencies, and quality objectives against organizational goals using AI performance metrics, KPIs, and benchmarking tools.
4.3	Coordination plan review, Stakeholder map submission, and Executive summary presentation, assessed for coordination of cross-functional activities and alignment of AI quality strategy implementation with organizational objectives.
4.4	AI optimization plan submission, Monitoring framework evaluation, and Recommendation report review, assessed for integration of strategic monitoring, feedback loops, and continuous improvement practices in AI quality strategy optimisation.
4.5	Problem-solving case study submission, Decision log analysis, and Scenario planning report presentation, assessed for evidence-based decision-making in solving strategic AI quality challenges across multiple systems.
4.6	AI Quality Outcomes Report, Lessons Learned Brief, and Executive Recommendation Presentation – assessed for evidence-based reporting of strategic AI quality outcomes, clarity of lessons learned, actionability of recommendations, and suitability for organizational decision-making
5	PLO Data Science and Analytics [EQF5]
5.1	Review of dataset inventory, assessed for correct identification and classification of common structured and unstructured datasets relevant to AI-assisted applications.
5.2	Inspection of cleaned dataset, assessed for appropriate application of basic data cleaning and preprocessing techniques using standard tools or scripts.

5.3	Evaluation of descriptive analytics report, assessed for correct use of simple descriptive analytics in spreadsheets or basic statistical software and relevance of insights for AI-supported decision-making.
5.4	Ethics checklist audit, assessed for correct recognition of ethical and privacy considerations when handling personal, sensitive, or AI-relevant data.
5.5	Assessment of data visualizations, assessed for accuracy, appropriateness, and clarity of basic charts or dashboards communicating AI-relevant insights.
6	PLO Risk Management [EQF6]
6.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks in project or service contexts.
6.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the operational environment of AI deployments.
6.3	Mitigation plan submission assessed for feasibility, relevance, application of mitigation measures, and alignment with defined project, product, or service boundaries.
6.4	Oral presentation or report evaluated for clarity, communication of AI risk findings and mitigation plans, and suitability for team members and stakeholders in project or organisational settings.
6.5	Review of AI system performance logs, annotated with identified emerging risks and analysis, assessed for detection of model drift, data anomalies, or other emerging AI risks.
6.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.
7	PLO ICT Quality Management [EQF6]
7.1	Individual assignment evaluating AI quality metrics selection with written justification, assessed for appropriate selection of AI quality metrics and indicators using recognised AI standards and system documentation.
7.2	Case-based exercise analysing governance and monitoring configurations, assessed for combining governance frameworks and monitoring tools for different types of AI systems in operational contexts.
7.3	Data analysis report on AI performance, fairness, reliability, and security, assessed for identification of quality risks and improvement opportunities.
7.4	Group project with documented implementation of AI quality improvement measures, assessed for application of improvement measures in team-based development or operational AI projects.
7.5	Written report or dashboard presenting AI quality findings, assessed for structured documentation, clarity of communication, and relevance for stakeholders.
7.6	Structured evaluation paper or exam question assessing AI outcomes against business, ethical, and regulatory criteria in organisational settings.
8	PLO Information Security Management [EQF6]
8.1	Evaluation of Vulnerability Analysis Report detailing AI components and workflow weaknesses, assessed for identification of potential security vulnerabilities in development or operational pipelines.

8.2	Review of Risk Assessment Matrix, including severity and mitigation measures, using rubric-based assessment of AI risks related to data, models, deployment, and operation.
8.3	Assessment of Secure Development Implementation Plan, including evidence of applied DevSecMLOps practices to mitigate identified risks in practical project scenarios.
8.4	Observation and review of Monitoring Dashboard or Log outputs during lab exercises, assessed for implementation of AI monitoring and anomaly detection using software tools or supervised techniques.
8.5	Assessment of Team Project Security Plan documentation, with peer and instructor evaluation of collaboration, security planning, and execution of AI security measures in applied or simulated operational scenarios.

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI DEPLOYMENT ENGINEER		[EP 2.7]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI deployment engineer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Ensures AI solutions move reliably from development to production by managing deployment pipelines, environment configurations, and release processes while minimising operational risk and downtime.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	B.2.	Component Integration	e-3
	B.3.	Testing	e-2
	B.4.	Solution Deployment	e-3
	B.5.	Documentation Production	e-2
	C.2.	Change Support	e-3
	C.3.	Service Delivery	e-3
Complexity	The profile has an EQF6 level.		

1. PLO Component Integration [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Deliver functioning AI-enabled solutions by selecting, implementing and integrating AI models, data pipelines and services within existing systems, evaluating interoperability, performance and security, and articulating well-reasoned integration choices in applied project contexts.	
Unit Learning Outcomes	
1.1	Analyse and compare AI integration requirements within different application or system contexts, such as web-based, embedded or data-driven applications.
1.2	Design and implement AI component integration using appropriate architectures, APIs, microservices and deployment tools, by applying established integration patterns and frameworks.
1.3	Integrate and configure AI models, data pipelines and services to ensure interoperability with existing systems, in heterogeneous software environments.
1.4	Test, validate and evaluate AI-enabled solutions with respect to performance, security and reliability, using defined metrics and test procedures.
1.5	Explain and justify integration decisions, trade-offs and outcomes in project-based or team settings, by referring to technical constraints and design choices.

2. PLO Testing [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Perform structured testing of AI and ICT systems to detect basic errors or biases and ensure ethical compliance by executing guided procedures and clearly documenting results.	
Unit Learning Outcomes	
2.1	Apply predefined test procedures to AI and ICT systems using guided examples and structured exercises.
2.2	Identify basic errors, anomalies, or inconsistencies in AI model outputs in controlled datasets or simulated scenarios.
2.3	Recognize simple biases in AI outputs and flag them for further review by comparing outputs against reference standards or simple fairness checks.
2.4	Document testing activities, results, and observations following established templates and reporting formats.
2.5	Recall relevant ethical and regulatory standards applicable to AI testing in academic or guided professional contexts.

3. PLO Solution Deployment [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Effectively deliver and maintain AI solutions in operational environments by applying MLOps or other suitable methods, ensuring solution reliability, ethical integrity, security, and comprehensive lifecycle documentation.	
Unit Learning Outcomes	
3.1	Deploy and integrate AI solutions, including models, pipelines, or intelligent applications, into production systems independently using MLOps pipelines or other suitable methods, such as cloud-based or edge computing environments.
3.2	Monitor AI solution performance, evaluate operational metrics, and troubleshoot issues affecting deployment in real-time or batch-processing environments.
3.3	Implement updates or retraining processes, or modify system components, to maintain AI solution performance by leveraging automated pipelines or scheduled workflows.
3.4	Produce operational and lifecycle documentation to support handover and continued maintenance of AI solutions in enterprise or production settings.
3.5	Apply ethical and security considerations when deploying and managing AI solutions, such as data privacy compliance, fairness, and bias mitigation practices.

4. PLO Data Science and Analytics [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Identify and collect structured and unstructured data from common sources, and apply basic data cleaning and descriptive analytics techniques to generate insights that support AI-assisted decision-making within defined, predictable tasks and workflows.	

Unit Learning Outcomes	
4.1	Identify common structured and unstructured datasets such as CSV files, JSON, text, or sensor data relevant to AI-assisted applications.
4.2	Apply basic data cleaning and preprocessing techniques using standard tools or scripts to prepare data for AI-enabled analysis.
4.3	Demonstrate the use of simple descriptive analytics in spreadsheets or basic statistical software to produce insights for AI-supported decision-making.
4.4	Recognize ethical and privacy considerations when handling personal, sensitive, or AI-relevant data.
4.5	Create basic visualizations such as charts or dashboards to communicate AI-relevant insights.

5. PLO Change Support [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Plan, deploy, and optimise updates to AI models and datasets by independently analysing operational, ethical, and service impacts, monitoring system behaviour, and ensuring compliance with AI governance and service standards.	
Unit Learning Outcomes	
5.1	Analyse the impact of AI-related changes on operational performance, service continuity, and compliance, using metrics, logs, or simulation results.
5.2	Plan deployment and versioning strategies for AI models and datasets to avoid conflicting updates, in multi-team or production environments.
5.3	Evaluate ethical, fairness, and explainability considerations when implementing AI changes, by reviewing decision-making outputs or bias reports.
5.4	Coordinate with multiple teams to implement AI changes in accordance with organisational AI governance and SLAs, using project management practices or communication tools.
5.5	Apply monitoring techniques to detect AI model drift or unexpected outputs after deployment, in live or staged AI environments.
5.6	Recommend corrective actions or improvements based on performance and compliance assessment, by analysing operational logs, performance metrics, or audit results.

6. PLO Service Delivery [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Enhance the reliability, security, and effectiveness of AI-enabled services by analysing performance, availability, data quality, and incidents, and applying monitoring tools and collaborative practices to implement improvements in dynamic operational contexts.	
Unit Learning Outcomes	
6.1	Explain AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.

6.2	Apply AI monitoring tools, dashboards, and logs to assess service availability, model performance, and data quality using real-time operational data.
6.3	Analyse trends in AI service performance, incident patterns, and operational metrics to detect risks or deviations by evaluating historical service records.
6.4	Evaluate AI service effectiveness, security and continuity against defined criteria, suggesting improvements in practical operational scenarios.
6.5	Collaborate with multidisciplinary teams to implement corrective measures that enhance AI service reliability and compliance in organisational or cross-functional contexts.

Assessments AI DEPLOYMENT ENGINEER [EP 2.7]	
1	PLO Component Integration [EQF6]
1.1	AI integration requirements analysis report and comparative system context matrix, assessed for complete and justified comparison of AI integration requirements across web-based, embedded, or data-driven application contexts.
1.2	Implemented AI integration solution, including code and configuration, and AI integration architecture diagram, assessed for appropriate use of architectures, APIs, microservices, deployment tools, and established integration patterns or frameworks.
1.3	Configured AI models and data pipelines with AI API/interface specification, assessed for interoperability with existing systems and consistency across heterogeneous software environments.
1.4	AI system test results and AI evaluation summary, assessed against defined performance, security, and reliability metrics and documented test procedures.
1.5	Written AI integration justification report and oral project defence or presentation, assessed for evidence-based explanation of integration decisions, trade-offs, technical constraints, design choices, and outcomes.
2	PLO Testing [EQF5]
2.1	Review of AI test execution report, assessed for correct execution of predefined test procedures on AI and ICT systems using guided examples and structured exercises.
2.2	Evaluation of AI error/anomaly log, assessed for accurate identification and description of basic errors, anomalies, or inconsistencies in AI model outputs from controlled datasets or simulated scenarios.
2.3	Assessment of AI bias report, assessed for recognition and flagging of simple biases in AI outputs through comparison with reference standards or simple fairness checks.
2.4	Inspection of AI test documentation, assessed for complete and accurate recording of testing activities, results, and observations using established templates and reporting formats.
2.5	Review of AI compliance checklist, assessed for correct identification of relevant ethical and regulatory standards applicable to AI testing in academic or guided professional contexts.
3	PLO Solution Deployment [EQF6]
3.1	Deployed AI solution demonstration, integration scripts review, and architecture diagram evaluation, assessed for independent deployment and integration of models, pipelines, or intelligent applications into production systems using MLOps or other suitable methods.

3.2	AI performance report review, monitoring dashboard evaluation, and troubleshooting log analysis, assessed for monitoring of AI solution performance, evaluation of operational metrics, and troubleshooting of deployment issues.
3.3	Updated/retrained AI model verification, workflow documentation review, and test result analysis, assessed for implementation of updates, retraining processes, or system modifications using automated pipelines or scheduled workflows.
3.4	Operational manual evaluation, lifecycle documentation review, and handover report assessment, assessed for completeness and usefulness in supporting handover and continued maintenance of AI solutions in enterprise or production settings.
3.5	Bias/fairness report evaluation, data privacy compliance review, and security assessment evaluation, assessed for application of ethical and security considerations, including privacy compliance, fairness, and bias mitigation, in AI deployment and management.
4	PLO Data Science and Analytics [EQF5]
4.1	Review of dataset inventory or reference table; assessed for correct identification, classification, and relevance of structured and unstructured datasets such as CSV files, JSON, text, or sensor data for AI-assisted applications.
4.2	Inspection of cleaned and preprocessed dataset; assessed for appropriate use of standard tools or scripts, correct application of basic cleaning and preprocessing techniques, and readiness of the data for AI-enabled analysis.
4.3	Evaluation of descriptive analytics report; assessed for correct use of spreadsheets or basic statistical software, appropriate descriptive statistics, and relevance of generated insights for AI-supported decision-making.
4.4	Ethics and privacy checklist audit; assessed for recognition of ethical and privacy considerations when handling personal, sensitive, or AI-relevant data, including appropriate identification of handling risks.
4.5	Assessment of data visualizations such as charts or dashboard; assessed for accuracy, clarity, appropriateness of chart or dashboard type, and effectiveness in communicating AI-relevant insights.
5	PLO Change Support [EQF6]
5.1	Evaluation of AI impact analysis report, assessed for correctness of metrics, operational insights, and analysis of AI-related change impacts on performance, service continuity, and compliance.
5.2	Review of AI deployment/versioning plan, assessed for feasibility, completeness, conflict mitigation, and suitability for AI model and dataset versioning in multi-team or production environments.
5.3	Assessment of AI ethical assessment report, evaluating fairness, explainability, bias considerations, and evidence from decision-making outputs or bias reports.
5.4	Review of AI coordination documentation, including evidence of multi-team collaboration, project management or communication tool use, and adherence to organisational AI governance and SLAs.
5.5	Evaluation of AI post-deployment monitoring report, assessed for application of monitoring techniques to detect model drift, unexpected outputs, or anomalies in live or staged AI environments.

5.6	Assessment of AI corrective action report, focusing on clarity, rationale, practicality, and use of operational logs, performance metrics, or audit results to justify proposed improvements.
6	PLO Service Delivery [EQF6]
6.1	Written AI principles report, assessed for explanation of AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.
6.2	Submission of AI monitoring dashboard outputs or screenshots, assessed for use of monitoring tools, dashboards, and logs to assess service availability, model performance, and data quality using real-time operational data.
6.3	Analysis report of AI trends and incident patterns, assessed for analysis of service performance, incident patterns, and operational metrics to detect risks or deviations using historical service records.
6.4	AI service evaluation report, assessed for evaluation of service effectiveness, security, and continuity against defined criteria and for practical improvement suggestions.
6.5	Documented AI corrective action plan or team report, assessed for multidisciplinary collaboration and implementation of corrective measures that enhance AI service reliability and compliance.

	DEVELOPMENT & OPERATIONS		[2]
Profile title	MLOPS ENGINEER		[EP 2.8]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile MLOps engineer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Deploys and maintains the ML models in the production environment. Focuses on automating, simplifying, and streamlining ML models across the entire development lifecycle and improving workflows to develop, deploy, and manage them faster and easier. This includes standardising processes, increasing visibility and collaboration, and automating AI/MLOps tasks.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	B.1.	Application Development	e-3
	B.2.	Component Integration	e-3
	B.4.	Solution Deployment	e-3
	B.6.	Systems Engineering	e-3
	C.2.	Change Support	e-3
	C.3.	Service Delivery	e-3
	C.5.	Systems Management	e-3
	E.5.	Process Improvement	e-3
Complexity	The profile has an EQF6 level.		

1. PLO Application Development [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Develop functional AI-enabled software solutions by selecting, applying, and integrating suitable AI models and tools to address moderately complex real-world problems collaboratively	
Unit Learning Outcomes	
1.1	Select appropriate AI models and software tools for a given application context, such as natural language processing or computer vision tasks
1.2	Implement AI components and integrate them into software solutions independently, using frameworks like TensorFlow or PyTorch
1.3	Analyse application requirements to adapt AI solutions for real-world scenarios, such as recommendation systems or predictive analytics
1.4	Evaluate AI outputs for correctness, efficiency, and user relevance in team-based projects, using performance metrics and user feedback

1.5	Document and communicate technical decisions and results to peers and stakeholders, using reports, diagrams, or presentations
1.6	Test and debug AI components within software applications, using unit tests and scenario-based validation

2. PLO Component Integration [EQF6]

The learner has demonstrated ability to...

Deliver functioning AI-enabled solutions by selecting, implementing and integrating AI models, data pipelines and services within existing systems, evaluating interoperability, performance and security, and articulating well-reasoned integration choices in applied project contexts.

Unit Learning Outcomes

2.1	Analyse and compare AI integration requirements within different application or system contexts, such as web-based, embedded or data-driven applications.
2.2	Design and implement AI component integration using appropriate architectures, APIs, microservices and deployment tools, by applying established integration patterns and frameworks.
2.3	Integrate and configure AI models, data pipelines and services to ensure interoperability with existing systems, in heterogeneous software environments.
2.4	Test, validate and evaluate AI-enabled solutions with respect to performance, security and reliability, using defined metrics and test procedures.
2.5	Explain and justify integration decisions, trade-offs and outcomes in project-based or team settings, by referring to technical constraints and design choices.

3. PLO Solution Deployment [EQF6]

The learner has demonstrated ability to...

Effectively deliver and maintain AI solutions in operational environments by applying MLOps or other suitable methods, ensuring solution reliability, ethical integrity, security, and comprehensive lifecycle documentation.

Unit Learning Outcomes

3.1	Deploy and integrate AI solutions, including models, pipelines, or intelligent applications, into production systems independently using MLOps pipelines or other suitable methods, such as cloud-based or edge computing environments.
3.2	Monitor AI solution performance, evaluate operational metrics, and troubleshoot issues affecting deployment in real-time or batch-processing environments.
3.3	Implement updates or retraining processes, or modify system components, to maintain AI solution performance by leveraging automated pipelines or scheduled workflows.
3.4	Produce operational and lifecycle documentation to support handover and continued maintenance of AI solutions in enterprise or production settings.
3.5	Apply ethical and security considerations when deploying and managing AI solutions, such as data privacy compliance, fairness, and bias mitigation practices.

4. PLO Systems Engineering [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Design, integrate, and validate AI infrastructure systems independently using appropriate tools and frameworks to solve complex AI problems while ensuring performance, security, and ethical AI practices.	
Unit Learning Outcomes	
4.1	Design AI infrastructure solutions, including cloud-based pipelines and model deployment environments, for specific operational scenarios such as predictive analytics or recommendation systems.
4.2	Integrate AI components and services with existing IT systems using APIs, microservices, or containerization tools to ensure functional reliability.
4.3	Validate AI system performance and security through structured testing procedures such as unit tests, load testing, or penetration testing.
4.4	Apply ethical AI practices, such as bias detection in datasets, privacy safeguards, and explainable AI techniques, when implementing AI systems.
4.5	Evaluate solutions and propose improvements to AI infrastructure systems within team-based projects using performance metrics and user feedback.
4.6	Document AI infrastructure design and implementation processes clearly, using diagrams, code comments, or reports, to support maintainability and knowledge transfer.

5. PLO Change Support [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Plan, deploy, and optimise updates to AI models and datasets by independently analysing operational, ethical, and service impacts, monitoring system behaviour, and ensuring compliance with AI governance and service standards.	
Unit Learning Outcomes	
5.1	Analyse the impact of AI-related changes on operational performance, service continuity, and compliance, using metrics, logs, or simulation results.
5.2	Plan deployment and versioning strategies for AI models and datasets to avoid conflicting updates, in multi-team or production environments.
5.3	Evaluate ethical, fairness, and explainability considerations when implementing AI changes, by reviewing decision-making outputs or bias reports.
5.4	Coordinate with multiple teams to implement AI changes in accordance with organisational AI governance and SLAs, using project management practices or communication tools.
5.5	Apply monitoring techniques to detect AI model drift or unexpected outputs after deployment, in live or staged AI environments.
5.6	Recommend corrective actions or improvements based on performance and compliance assessment, by analysing operational logs, performance metrics, or audit results.

6. PLO Service Delivery [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Enhance the reliability, security, and effectiveness of AI-enabled services by analysing performance, availability, data quality, and incidents, and applying monitoring tools and collaborative practices to implement improvements in dynamic operational contexts.	
Unit Learning Outcomes	
6.1	Explain AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.
6.2	Apply AI monitoring tools, dashboards, and logs to assess service availability, model performance, and data quality using real-time operational data.
6.3	Analyse trends in AI service performance, incident patterns, and operational metrics to detect risks or deviations by evaluating historical service records.
6.4	Evaluate AI service effectiveness, security and continuity against defined criteria, suggesting improvements in practical operational scenarios.
6.5	Collaborate with multidisciplinary teams to implement corrective measures that enhance AI service reliability and compliance in organisational or cross-functional contexts.

7. PLO Systems Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Ensure the reliable, secure, and optimised operation of AI systems in hybrid and cloud environments by managing deployments, monitoring performance, mitigating risks, and continuously improving processes through operational, analytical, and compliance-oriented practices.	
Unit Learning Outcomes	
7.1	Explain and relate AI system architectures, including model serving, data pipelines, and integration with IT services, in hybrid and cloud computing environments.
7.2	Apply operational methods to deploy, configure, and scale AI platforms and inference services, using automation, containerization, and orchestration tools.
7.3	Analyse AI system behaviour by examining performance metrics, logs, and operational indicators, to identify bottlenecks, inefficiencies, and anomalies in AI workflows.
7.4	Resolve AI system operational issues by applying incident management and troubleshooting practices, using structured problem-solving approaches and diagnostic tools.
7.5	Evaluate AI system performance, reliability, and operational risks, including degradation and dependency issues, by assessing service-level metrics and potential failure scenarios.
7.6	Apply security, access control, and compliance requirements to ensure secure and compliant AI operations, in accordance with organisational policies and regulatory frameworks.
7.7	Contribute to improvements of AI operational practices by proposing adjustments based on observed system behaviour, through iterative monitoring and feedback in evolving organisational contexts.

8. PLO Process Improvement [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Enhance AI process performance by designing and implementing data-driven improvements that integrate multiple AI concepts, address operational risks, uphold ethical standards, and support effective team collaboration.	
Unit Learning Outcomes	
8.1	Design modifications to AI workflows to improve performance and efficiency using practical AI development projects.
8.2	Apply multiple AI process concepts and metrics to identify, analyse, and solve process problems in real-world AI applications.
8.3	Assess operational risks and ethical considerations in AI development and deployment by evaluating AI systems in operational environments.
8.4	Collaborate effectively within a team to implement process improvements in AI project settings.
8.5	Evaluate the outcomes of AI process changes against performance, ethical, and compliance criteria using defined metrics and benchmarks.
8.6	Document AI process modifications and lessons learned for knowledge sharing within the team.

Assessments MLOPS ENGINEER [EP 2.8]	
1	PLO Application Development [EQF6]
1.1	AI Model Selection Report and Written Justification, assessed for appropriateness of selected AI models and software tools for the given application context, such as natural language processing or computer vision tasks.
1.2	AI Component Demonstration and Code Submission, assessed for independent implementation and integration of AI components into software solutions using frameworks like TensorFlow or PyTorch.
1.3	Requirements Analysis Document and Use Case Mapping, assessed for analysis of application requirements and adaptation of AI solutions to real-world scenarios such as recommendation systems or predictive analytics.
1.4	AI Performance Evaluation Report and Metric Analysis, assessed for evaluation of AI outputs for correctness, efficiency, and user relevance using performance metrics and user feedback in team-based projects.
1.5	Technical Documentation and Presentation / Slide Deck, assessed for clear documentation and communication of technical decisions and results to peers and stakeholders.
1.6	Test Reports, Unit Test Logs, and Debugging Evidence, assessed for testing and debugging of AI components within software applications using unit tests and scenario-based validation.
2	PLO Component Integration [EQF6]
2.1	AI integration requirements analysis report and comparative system context matrix, assessed for complete and justified comparison of AI integration requirements across web-based, embedded, or data-driven application contexts.

2.2	Implemented AI integration solution, including code and configuration, and AI integration architecture diagram, assessed for appropriate use of architectures, APIs, microservices, deployment tools, and established integration patterns or frameworks.
2.3	Configured AI models and data pipelines with AI API/interface specification, assessed for interoperability with existing systems and consistency across heterogeneous software environments.
2.4	AI system test results and AI evaluation summary, assessed against defined performance, security, and reliability metrics and documented test procedures.
2.5	Written AI integration justification report and oral project defence or presentation, assessed for evidence-based explanation of integration decisions, trade-offs, technical constraints, design choices, and outcomes.
3	PLO Solution Deployment [EQF6]
3.1	Deployed AI solution demonstration, integration scripts review, and architecture diagram evaluation, assessed for independent deployment and integration of models, pipelines, or intelligent applications into production systems using MLOps pipelines or other suitable methods.
3.2	AI performance report review, monitoring dashboard evaluation, and troubleshooting log analysis, assessed for monitoring of AI solution performance, evaluation of operational metrics, and troubleshooting of deployment issues in real-time or batch-processing environments.
3.3	Updated/retrained AI model verification, workflow documentation review, and test result analysis, assessed for implementation of updates, retraining processes, or system modifications using automated pipelines or scheduled workflows to maintain AI solution performance.
3.4	Operational manual evaluation, lifecycle documentation review, and handover report assessment, assessed for completeness and usefulness in supporting handover and continued maintenance of AI solutions in enterprise or production settings.
3.5	Bias/fairness report evaluation, data privacy compliance review, and security assessment evaluation, assessed for application of ethical and security considerations, including privacy compliance, fairness, and bias mitigation, in AI deployment and management.
4	PLO Systems Engineering [EQF6]
4.1	Evaluation of AI design diagrams and design report submission, assessed for fit between cloud-based pipelines, model deployment environments, and the specified operational scenario.
4.2	Review of integrated AI module and integration report, assessed for correct use of APIs, microservices, or containerization tools and evidence of functional reliability within existing IT systems.
4.3	Assessment of AI test report and performance dashboard, reviewed for structured unit, load, or penetration testing evidence covering AI system performance and security.
4.4	Review of AI bias report, privacy documentation, and explainability report, assessed for demonstrated application of bias detection, privacy safeguards, and explainable AI techniques during implementation.
4.5	Evaluation of AI evaluation report and recommendations report, assessed for use of performance metrics and user feedback to justify proposed improvements to AI infrastructure systems.

4.6	Review of AI project documentation, assessed for clarity, completeness, and usefulness of diagrams, code comments, or reports for maintainability and knowledge transfer.
5	PLO Change Support [EQF6]
5.1	Evaluation of AI impact analysis report, assessed for correctness of metrics, operational insights, and analysis of AI-related change impacts on performance, service continuity, and compliance.
5.2	Review of AI deployment/versioning plan, assessed for feasibility, completeness, conflict mitigation, and suitability for AI model and dataset versioning in multi-team or production environments.
5.3	Assessment of AI ethical assessment report, evaluating fairness, explainability, bias considerations, and evidence from decision-making outputs or bias reports.
5.4	Review of AI coordination documentation, including evidence of multi-team collaboration, project management or communication tool use, and adherence to organisational AI governance and SLAs.
5.5	Evaluation of AI post-deployment monitoring report, assessed for application of monitoring techniques to detect model drift, unexpected outputs, or anomalies in live or staged AI environments.
5.6	Assessment of AI corrective action report, focusing on clarity, rationale, practicality, and use of operational logs, performance metrics, or audit results to justify proposed improvements.
6	PLO Service Delivery [EQF6]
7.1	Written AI principles report, assessed for explanation of AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.
7.2	Submission of AI monitoring dashboard outputs or screenshots, assessed for use of monitoring tools, dashboards, and logs to assess service availability, model performance, and data quality using real-time operational data.
7.3	Analysis report of AI trends and incident patterns, assessed for analysis of service performance, incident patterns, and operational metrics to detect risks or deviations using historical service records.
7.4	AI service evaluation report, assessed for evaluation of service effectiveness, security, and continuity against defined criteria and for practical improvement suggestions.
7.5	Documented AI corrective action plan or team report, assessed for multidisciplinary collaboration and implementation of corrective measures that enhance AI service reliability and compliance.
7	PLO Systems Management [EQF6]
7.1	AI system architecture diagram review with oral or written explanation of AI architecture, assessed for correct relation of model serving, data pipelines, and IT-service integration in hybrid and cloud computing environments.
7.2	Evaluation of AI deployment/configuration files and automated deployment simulation check, assessed for application of operational methods to deploy, configure, and scale AI platforms and inference services using automation, containerization, and orchestration tools.
7.3	AI performance report assessment, data analysis exercises, and case study analysis, assessed for analysis of performance metrics, logs, and operational indicators to identify bottlenecks, inefficiencies, and anomalies in AI workflows.

7.4	AI incident log evaluation, problem-solving case study, and practical troubleshooting demonstration, assessed for application of incident management, structured problem-solving, and diagnostic tools to resolve AI system operational issues.
7.5	AI risk & reliability assessment report review and scenario-based evaluation, assessed for evaluation of AI system performance, reliability, operational risks, degradation, dependency issues, service-level metrics, and potential failure scenarios.
7.6	AI security & compliance checklist audit with written or practical assessment of compliance procedures, assessed for application of security, access control, and compliance requirements in accordance with organisational policies and regulatory frameworks.
8	PLO Process Improvement [EQF6]
8.1	Graded workflow diagrams and updated AI pipelines, with rubric-based evaluation of performance improvements, assessed for design of AI workflow modifications that improve performance and efficiency in practical AI development projects.
8.2	Analysis report submission with metrics calculations, peer review, or instructor feedback, assessed for application of multiple AI process concepts and metrics to identify, analyse, and solve process problems in real-world AI applications.
8.3	Risk and ethical assessment report evaluated against a checklist with case study review, assessed for operational risk and ethical consideration assessment in AI development and deployment environments.
8.4	Team project documentation assessed via contribution logs and peer evaluation, assessed for effective team collaboration and implementation of process improvements in AI project settings.
8.5	Comparative performance report graded against metrics and benchmarks, with optional oral defence or presentation, assessed for evaluation of AI process-change outcomes against performance, ethical, and compliance criteria.
8.6	Lessons-learned or reflective report reviewed for completeness, clarity, insightfulness, and usefulness for team knowledge sharing on AI process modifications.

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI RELIABILITY ENGINEER		[EP 2.9]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI reliability engineer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Delivers resilient and dependable AI systems by building fault-tolerant architectures, implementing safeguards, and optimising operational processes, ensuring AI performs reliably under all conditions.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.5.	Architecture Design	e-3
	B.3.	Testing	e-3
	B.5.	Systems Management	e-3
	E.3.	Risk Management	e-3
	E.6.	ICT Quality Management	e-3
Complexity	The profile has an EQF6 level.		

1. PLO Architecture Design [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Deliver functional AI-enabled solutions in enterprise settings by analysing requirements, designing and integrating AI components, and applying standard architectural practices to ensure scalability, security, and interoperability under guided supervision.	
Unit Learning Outcomes	
1.1	Identify and describe core AI architecture components, such as hardware accelerators, cloud AI services, and data pipelines, in enterprise AI systems.
1.2	Apply standard AI design patterns and implement AI modules using Python frameworks, pre-trained models, or microservices architectures in guided projects.
1.3	Evaluate AI risks, ethical considerations, and adherence to policies by applying standardized checklists and reflection exercises in lab or project scenarios.
1.4	Integrate AI components into simple enterprise systems using APIs, cloud services, or modular pipelines in partially unpredictable business contexts.

2. PLO Testing [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Conduct comprehensive testing of AI and ICT systems to assess correctness, robustness, interpretability, and compliance by applying evaluation procedures that produce actionable improvement recommendations in complex scenarios.	
Unit Learning Outcomes	
2.1	Apply evaluation procedures to test AI systems in partially unpredictable scenarios.
2.2	Analyse AI model outputs for correctness, performance, robustness, and interpretability using quantitative metrics and exploratory techniques.
2.3	Evaluate AI outputs for fairness, bias, and compliance with ethical and regulatory standards in practical system deployments.
2.4	Report findings with actionable recommendations for system improvement through structured reports or team presentations.
2.5	Apply multiple AI evaluation metrics and explainability techniques such as SHAP, LIME, or model confidence analysis to assess AI system behaviour.

3. PLO Systems Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Ensure the reliable, secure, and optimised operation of AI systems in hybrid and cloud environments by managing deployments, monitoring performance, mitigating risks, and continuously improving processes through operational, analytical, and compliance-oriented practices.	
Unit Learning Outcomes	
3.1	Explain and relate AI system architectures, including model serving, data pipelines, and integration with IT services, in hybrid and cloud computing environments.
3.2	Apply operational methods to deploy, configure, and scale AI platforms and inference services, using automation, containerization, and orchestration tools.
3.3	Analyse AI system behaviour by examining performance metrics, logs, and operational indicators, to identify bottlenecks, inefficiencies, and anomalies in AI workflows.
3.4	Resolve AI system operational issues by applying incident management and troubleshooting practices, using structured problem-solving approaches and diagnostic tools.
3.5	Evaluate AI system performance, reliability, and operational risks, including degradation and dependency issues, by assessing service-level metrics and potential failure scenarios.
3.6	Apply security, access control, and compliance requirements to ensure secure and compliant AI operations, in accordance with organisational policies and regulatory frameworks.
3.7	Contribute to improvements of AI operational practices by proposing adjustments based on observed system behaviour, through iterative monitoring and feedback in evolving organisational contexts.

4. PLO Risk Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities	
Unit Learning Outcomes	
4.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
4.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
4.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
4.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
4.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
4.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.

5. PLO ICT Quality Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Analyse and apply AI quality management practices by selecting and combining appropriate quality indicators, governance mechanisms, and evaluation methods to assess and improve the performance, reliability, security, and fairness of AI systems, while contributing to team-based quality decisions aligned with business needs.	
Unit Learning Outcomes	
5.1	Select appropriate AI quality metrics and indicators using recognised AI standards and system documentation.
5.2	Combine governance frameworks and monitoring tools for different types of AI systems in operational contexts.
5.3	Analyse AI performance, reliability, fairness, and security data to identify quality risks and improvement opportunities.
5.4	Apply AI quality improvement measures in team-based development or operational AI projects.
5.5	Document and communicate AI quality findings using structured reports or dashboards for stakeholders.
5.6	Evaluate AI system outcomes against business, ethical, and regulatory requirements in organisational settings.

Assessments AI RELIABILITY ENGINEER [EP 2.9]	
1	PLO Architecture Design [EQF6]
1.1	Evaluation of architecture diagrams and component inventory review, assessed for correct identification and description of hardware accelerators, cloud AI services, data pipelines, and their role in enterprise AI systems.
1.2	Grading of AI module code and review of module documentation, assessed for application of standard AI design patterns and implementation using Python frameworks, pre-trained models, or microservices architectures in guided projects.
1.3	Assessment of risk checklist and ethics report evaluation, assessed for identification of AI risks, ethical considerations, and adherence to policies using standardized checklists and reflection exercises.
1.4	Evaluation of integrated prototype and deployment report review, assessed for integration of AI components using APIs, cloud services, or modular pipelines in partially unpredictable business contexts.
2	PLO Testing [EQF6]
2.1	Review of AI evaluation plan, assessed for appropriate application of evaluation procedures to test AI systems in partially unpredictable scenarios.
2.2	Assessment of AI analytical report, assessed for analysis of AI model outputs for correctness, performance, robustness, and interpretability using quantitative metrics and exploratory techniques.
2.3	Evaluation of AI fairness/compliance report, assessed for evaluation of AI outputs against fairness, bias, ethical, and regulatory compliance criteria in practical system deployments.
2.4	Review of AI recommendation report, assessed for clear reporting of findings and actionable recommendations for system improvement.
2.5	Inspection of AI metric/explainability outputs, assessed for correct application of multiple AI evaluation metrics and explainability techniques such as SHAP, LIME, or model confidence analysis.
3	PLO Systems Management [EQF6]
3.1	Evaluation of AI documentation repository for organisation, version control, and collaborative workflow evidence; peer-review of contributions.
3.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components; grading rubric based on completeness and accuracy.
3.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs; assessment of clarity, cohesion, and accessibility.
3.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements; submission of compliance verification report.
3.5	Evaluation of customized AI documentation templates and modified project documentation; assessment based on alignment with project-specific requirements and adaptability.
4	PLO Risk Management [EQF6]
4.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks in project or service contexts.
4.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the operational environment of AI deployments.

4.3	Mitigation plan submission assessed for feasibility, relevance, application of mitigation measures, and alignment with defined project, product, or service boundaries.
4.4	Oral presentation or report evaluated for clarity, communication of AI risk findings and mitigation plans, and suitability for team members and stakeholders in project or organisational settings.
4.5	Review of AI system performance logs, annotated with identified emerging risks and analysis, assessed for detection of model drift, data anomalies, or other emerging AI risks.
4.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.
5	PLO ICT Quality Management [EQF6]
5.1	Case-based exercise analysing governance and monitoring configurations
5.2	Data analysis report on AI performance, fairness, reliability, and security
5.3	Group project with documented implementation of AI quality improvement measures
5.4	Written report or dashboard presenting AI quality findings
5.5	Structured evaluation paper or exam question assessing AI outcomes against business, ethical, and regulatory criteria

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI OBSERVABILITY & MONITORING SPECIALIST		[EP 2.10]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI observability & monitoring specialist. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Enables timely detection and diagnosis of issues by monitoring AI performance and drift, and by delivering actionable insights to support operational, technical, and business decision-making. Enables timely, informed responses that protect performance, compliance, and user trust.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	B.3.	Testing	e-3
	C.3.	Service Delivery	e-3
	C.4.	Problem Management	e-3
	C.5.	Systems Management	e-3
	D.7.	Data Science and Analytics	e-3
	D.10.	Information and Knowledge Management	e-3
Complexity	The profile has an EQF6 level.		

1. PLO Testing [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Conduct comprehensive testing of AI and ICT systems to assess correctness, robustness, interpretability, and compliance by applying evaluation procedures that produce actionable improvement recommendations in complex scenarios.	
Unit Learning Outcomes	
1.1	Apply evaluation procedures to test AI systems in partially unpredictable scenarios.
1.2	Analyse AI model outputs for correctness, performance, robustness, and interpretability using quantitative metrics and exploratory techniques.
1.3	Evaluate AI outputs for fairness, bias, and compliance with ethical and regulatory standards in practical system deployments.
1.4	Report findings with actionable recommendations for system improvement through structured reports or team presentations.
1.5	Apply multiple AI evaluation metrics and explainability techniques such as SHAP, LIME, or model confidence analysis to assess AI system behaviour.

2. PLO Service Delivery [EQF6]	
The learner has demonstrated ability to...	
Enhance the reliability, security, and effectiveness of AI-enabled services by analysing performance, availability, data quality, and incidents, and applying monitoring tools and collaborative practices to implement improvements in dynamic operational contexts.	
Unit Learning Outcomes	
2.1	Explain AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.
2.2	Apply AI monitoring tools, dashboards, and logs to assess service availability, model performance, and data quality using real-time operational data.
2.3	Analyse trends in AI service performance, incident patterns, and operational metrics to detect risks or deviations by evaluating historical service records.
2.4	Evaluate AI service effectiveness, security and continuity against defined criteria, suggesting improvements in practical operational scenarios.
2.5	Collaborate with multidisciplinary teams to implement corrective measures that enhance AI service reliability and compliance in organisational or cross-functional contexts.

3. PLO Problem Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Investigate and evaluate ICT and AI incidents, including emerging failures, model drift, or bias, apply corrective and preventive measures, and design monitoring strategies or knowledge management practices to optimise system and AI performance, in situations with varying and partially undefined problems.	
Unit Learning Outcomes	
3.1	Investigate complex ICT and AI incidents, including subtle system failures, AI model drift, and emerging bias patterns, using diagnostic tools and historical performance data.
3.2	Evaluate root causes of incidents and their impact on system and AI performance through structured analysis and impact assessment methods.
3.3	Apply corrective and preventive measures to mitigate incidents in less predictable operational situations.
3.4	Design monitoring strategies or knowledge management practices to track recurring AI failures and support system optimisation.
3.5	Advise or collaborate with team members by sharing findings and recommending improvements in AI system performance and ethical compliance.

4. PLO Systems Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Ensure the reliable, secure, and optimised operation of AI systems in hybrid and cloud environments by managing deployments, monitoring performance, mitigating risks, and continuously improving processes through operational, analytical, and compliance-oriented practices.	

Unit Learning Outcomes	
4.1	Explain and relate AI system architectures, including model serving, data pipelines, and integration with IT services, in hybrid and cloud computing environments.
4.2	Apply operational methods to deploy, configure, and scale AI platforms and inference services, using automation, containerization, and orchestration tools.
4.3	Analyse AI system behaviour by examining performance metrics, logs, and operational indicators, to identify bottlenecks, inefficiencies, and anomalies in AI workflows.
4.4	Resolve AI system operational issues by applying incident management and troubleshooting practices, using structured problem-solving approaches and diagnostic tools.
4.5	Evaluate AI system performance, reliability, and operational risks, including degradation and dependency issues, by assessing service-level metrics and potential failure scenarios.
4.6	Apply security, access control, and compliance requirements to ensure secure and compliant AI operations, in accordance with organisational policies and regulatory frameworks.
4.7	Contribute to improvements of AI operational practices by proposing adjustments based on observed system behaviour, through iterative monitoring and feedback in evolving organisational contexts.

5. PLO Data Science and Analytics [EQF5]

The learner has demonstrated ability to...

Identify and collect structured and unstructured data from common sources, and apply basic data cleaning and descriptive analytics techniques to generate insights that support AI-assisted decision-making within defined, predictable tasks and workflows.

Unit Learning Outcomes

5.1	Identify common structured and unstructured datasets such as CSV files, JSON, text, or sensor data relevant to AI-assisted applications.
5.2	Apply basic data cleaning and preprocessing techniques using standard tools or scripts to prepare data for AI-enabled analysis.
5.3	Demonstrate the use of simple descriptive analytics in spreadsheets or basic statistical software to produce insights for AI-supported decision-making.
5.4	Recognize ethical and privacy considerations when handling personal, sensitive, or AI-relevant data.
5.5	Create basic visualizations such as charts or dashboards to communicate AI-relevant insights.

6. PLO Information and Knowledge Management [EQF6]

The learner has demonstrated ability to...

Manage AI-related knowledge and information by independently identifying AI-related knowledge needs and systematically organising, maintaining, and sharing AI knowledge assets within defined operational contexts.

Unit Learning Outcomes	
6.1	Identify AI-related knowledge and information assets, such as datasets, models, documentation, and policies, relevant to defined organisational processes.
6.2	Analyse operational processes to determine AI-related information and knowledge requirements in support of AI-enabled tasks or decision-making.
6.3	Apply appropriate methods and tools to organise, document, and maintain AI knowledge and information using structured repositories and standardized documentation practices.
6.4	Ensure the accessibility, quality, and consistency of AI knowledge and information by applying established validation, versioning, and basic governance procedures.
6.5	Share and reuse AI knowledge effectively within teams or projects to support operational efficiency and informed use of AI systems.

Assessments AI OBSERVABILITY & MONITORING SPECIALIST [EP 2.10]	
1	PLO Testing [EQF6]
1.1	Review of AI evaluation plan, assessed for appropriate application of evaluation procedures to test AI systems in partially unpredictable scenarios.
1.2	Assessment of AI analytical report, assessed for analysis of AI model outputs for correctness, performance, robustness, and interpretability using quantitative metrics and exploratory techniques.
1.3	Evaluation of AI fairness/compliance report, assessed for evaluation of AI outputs against fairness, bias, ethical, and regulatory compliance criteria in practical system deployments.
1.4	Review of AI recommendation report, assessed for clear reporting of findings and actionable recommendations for system improvement.
1.5	Inspection of AI metric/explainability outputs, assessed for correct application of multiple AI evaluation metrics and explainability techniques such as SHAP, LIME, or model confidence analysis.
2	PLO Service Delivery [EQF6]
2.1	Written AI principles report, assessed for explanation of AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.
2.2	Submission of AI monitoring dashboard outputs or screenshots, assessed for use of AI monitoring tools, dashboards, and logs to assess service availability, model performance, and data quality using real-time operational data.
2.3	Analysis report of AI trends and incident patterns, assessed for analysis of AI service performance, incident patterns, and operational metrics to detect risks or deviations using historical service records.
2.4	AI service evaluation report, assessed for evaluation of AI service effectiveness, security, and continuity against defined criteria and for practical improvement suggestions.
2.5	Documented AI corrective action plan or team report, assessed for multidisciplinary collaboration and implementation of corrective measures that enhance AI service reliability and compliance.

3	PLO Problem Management [EQF6]
3.1	Assessment of AI incident investigation report, including depth and accuracy of data analysis, evaluated for investigation of complex ICT and AI incidents using diagnostic tools and historical performance data.
3.2	Evaluation of root cause evaluation and impact analysis review, assessed for use of structured analysis and impact assessment methods to determine effects on system and AI performance.
3.3	Review of mitigation plan, assessed for effectiveness and applicability of corrective and preventive measures in less predictable operational situations.
3.4	Assessment of monitoring/knowledge strategy document, assessed for clarity, feasibility, and ability to track recurring AI failures and support system optimization.
3.5	Review of advisory report, assessed for quality of recommendations, evidence of shared findings, and relevance to AI system performance and ethical compliance.
4	PLO Systems Management [EQF6]
4.1	AI system architecture diagram review with oral or written explanation of AI architecture, assessed for correct relation of model serving, data pipelines, and IT-service integration in hybrid and cloud computing environments.
4.2	Evaluation of AI deployment/configuration files and automated deployment simulation check, assessed for application of operational methods to deploy, configure, and scale AI platforms and inference services using automation, containerization, and orchestration tools.
4.3	AI performance report assessment, data analysis exercises, and case study analysis, assessed for analysis of performance metrics, logs, and operational indicators to identify bottlenecks, inefficiencies, and anomalies in AI workflows.
4.4	AI incident log evaluation, problem-solving case study, and practical troubleshooting demonstration, assessed for application of incident management, structured problem-solving, and diagnostic tools to resolve AI system operational issues.
4.5	AI risk & reliability assessment report review and scenario-based evaluation, assessed for evaluation of AI system performance, reliability, operational risks, degradation, dependency issues, service-level metrics, and potential failure scenarios.
4.6	AI security & compliance checklist audit with written or practical assessment of compliance procedures, assessed for application of security, access control, and compliance requirements in accordance with organisational policies and regulatory frameworks.
4.7	AI operational improvement proposal review and presentation of recommended improvements, assessed for proposed adjustments based on observed system behaviour, iterative monitoring, and feedback in evolving organisational contexts.
5	PLO Data Science and Analytics [EQF5]
5.1	Review of dataset inventory or reference table; assessed for correct identification, classification, and relevance of structured and unstructured datasets such as CSV files, JSON, text, or sensor data for AI-assisted applications.
5.2	Inspection of cleaned and preprocessed dataset; assessed for correct application of basic cleaning and preprocessing techniques using standard tools or scripts, and for readiness of the data for AI-enabled analysis.

5.3	Evaluation of descriptive analytics report; assessed for correct use of spreadsheets or basic statistical software, appropriate descriptive analytics, and relevance of generated insights for AI-supported decision-making.
5.4	Ethics and privacy checklist audit; assessed for recognition of ethical and privacy considerations when handling personal, sensitive, or AI-relevant data, including identification of basic data-handling risks.
5.5	Assessment of data visualizations or dashboard; assessed for accuracy, clarity, appropriateness of chart or dashboard type, and effectiveness in communicating AI-relevant insights.
6	PLO Information and Knowledge Management [EQF6]
6.1	Assessment of an AI knowledge asset inventory and AI asset classification document, assessed for correct identification and classification of datasets, models, documentation, and policies relevant to defined organizational processes.
6.2	Evaluation of a written AI information needs analysis and AI process-knowledge mapping, assessed for analysis of operational processes and determination of AI-related information and knowledge requirements supporting AI-enabled tasks or decision-making.
6.3	Review of a structured AI knowledge repository with AI documentation templates and version control evidence, assessed for appropriate organization, documentation, and maintenance of AI knowledge and information using standardized documentation practices.
6.4	Assessment of an AI knowledge quality checklist and documented AI knowledge governance procedures, assessed for accessibility, quality, consistency, validation, versioning, and basic governance of AI knowledge and information.
6.5	Evaluation of an AI knowledge sharing package with documented AI knowledge reuse evidence, assessed for effective sharing and reuse of AI knowledge within teams or projects to support operational efficiency and informed use of AI systems.

	DEVELOPMENT & OPERATIONS	[2]
Profile title	AI INCIDENT RESPONSE & REPORTING LEAD	[EP 2.11]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI incident response & reporting lead. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Ensures safe, reliable, and accountable AI operations by leading incident response, analysing root causes, and providing clear, actionable reporting to stakeholders and regulators.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.	
		Level
Competences	B.5.	Documentation Production e-3
	C.3.	Service Delivery e-3
	C.4.	Problem Management e-4
	E.3.	Risk Management e-3
	E.4.	Relationship Management e-3
	E.8.	Information Security Management e-4
Complexity	The profile has an EQF7 level.	

1. PLO Documentation Production [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Apply document-management practices and develop AI-specific documentation, including technical specifications, compliance records, and transparency reports, independently within broad project frameworks, by integrating information from multiple AI system components and ensuring alignment with regulatory and stakeholder requirements in projects with variable challenges.	
Unit Learning Outcomes	
1.1	Apply document-management and collaboration practices to AI projects independently, using systems that enable coordinated document creation and version control.
1.2	Develop AI-specific technical, compliance, and transparency documentation for multiple system components, such as model specifications, system interfaces, and regulatory reports.
1.3	Integrate information from different AI system elements into cohesive and accessible documentation, by consolidating data from datasets, model outputs, and system logs.
1.4	Ensure that AI documentation meets regulatory, ethical, and stakeholder requirements, in accordance with applicable legal, ethical, and organisational standards.

1.5	Adapt and modify existing templates or documentation structures to suit variable AI project contexts, by aligning documentation with project-specific requirements or new system components.

2. PLO Service Delivery [EQF6]

The learner has demonstrated ability to...

Enhance the reliability, security, and effectiveness of AI-enabled services by analysing performance, availability, data quality, and incidents, and applying monitoring tools and collaborative practices to implement improvements in dynamic operational contexts.

Unit Learning Outcomes

2.1	Explain AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.
2.2	Apply AI monitoring tools, dashboards, and logs to assess service availability, model performance, and data quality using real-time operational data.
2.3	Analyse trends in AI service performance, incident patterns, and operational metrics to detect risks or deviations by evaluating historical service records.
2.4	Evaluate AI service effectiveness, security and continuity against defined criteria, suggesting improvements in practical operational scenarios.
2.5	Collaborate with multidisciplinary teams to implement corrective measures that enhance AI service reliability and compliance in organisational or cross-functional contexts.

3. PLO Problem Management [EQF7]

The learner has demonstrated ability to...

Coordinate the resolution of complex ICT and AI incidents, apply advanced methods to prevent recurring failures or bias, implement monitoring and knowledge management strategies, evaluate AI system performance, and lead multi-stakeholder teams in operational decisions to ensure reliable, efficient, and ethically responsible AI and ICT services in real-world organisational settings.

Unit Learning Outcomes

3.1	Coordinate teams in resolving complex ICT and AI incidents, including failures, performance issues, and bias, using collaborative tools and operational procedures.
3.2	Apply advanced preventive measures to avoid recurring AI or ICT failures by implementing proactive monitoring and mitigation strategies.
3.3	Implement monitoring systems and knowledge management tools to maintain AI and system performance across organisational units.
3.4	Evaluate AI system performance using metrics such as accuracy, model drift, and bias indicators.
3.5	Assess ethical and compliance risks in AI system operation and organisational practices.
3.6	Lead multi-stakeholder teams in operational decision-making to mitigate AI or ICT incidents effectively and ensure responsible AI service delivery.
3.7	Advise management on strategies to enhance efficiency, reliability, and ethical compliance in AI and ICT operations.

4. PLO Risk Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities	
Unit Learning Outcomes	
4.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
4.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
4.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
4.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
4.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
4.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.
5. PLO Relationship Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Achieve effective stakeholder alignment and support ethical AI adoption by analysing expectations, addressing privacy concerns, and coordinating collaborative solutions using communication techniques, project documentation, and digital platforms.	
Unit Learning Outcomes	
5.1	Analyse stakeholder expectations and concerns in AI projects, including ethical and privacy issues, using case studies, surveys, or system documentation.
5.2	Apply communication techniques to address AI adoption challenges, such as team discussions, presentations, or messaging platforms.
5.3	Collaborate effectively with peers in AI projects by participating in group tasks and using digital collaboration tools.
5.4	Coordinate stakeholder interactions using project documentation and digital platforms, in contexts such as shared repositories or feedback loops.
5.5	Evaluate the effectiveness of proposed solutions for AI-related stakeholder issues by reviewing outcomes, feedback, or implementation results.
5.6	Suggest improvements to stakeholder engagement strategies using lessons learned from project simulations or peer review exercises.

6. PLO Information Security Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Secure organisational AI operations by developing and implementing comprehensive strategies, managing multidisciplinary teams, and aligning risk mitigation with regulatory, ethical, and business objectives in real-world contexts	
Unit Learning Outcomes	
6.1	Develop AI security policies and operational procedures for real-world organisational AI deployments.
6.2	Implement AI risk mitigation plans addressing model manipulation, adversarial attacks, and privacy concerns in live operational systems.
6.3	Manage multidisciplinary teams to execute AI security and compliance initiatives in organisational projects.
6.4	Evaluate AI security operations in live organisational environments using compliance and audit frameworks to ensure regulatory and ethical alignment.
6.5	Apply AI governance frameworks across organisational AI systems to optimise operational resilience and trustworthiness.
Assessments AI INCIDENT RESPONSE & REPORTING LEAD [EP 2.11]	
1	PLO Documentation Production [EQF6]
1.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence, with peer-review of contributions, assessed for independent application of document-management and collaboration practices in AI projects.
1.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components, using a grading rubric based on completeness, accuracy, and coverage of model specifications, system interfaces, and regulatory reports.
1.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs, assessed for clarity, cohesion, accessibility, and accurate integration of information from different AI system elements.
1.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements, with submission of compliance verification report assessed for alignment with applicable legal, ethical, and organizational standards.
1.5	Evaluation of customized AI documentation templates and modified project documentation, assessed for adaptability to variable AI project contexts, alignment with project-specific requirements, and accommodation of new system components.
2	PLO Service Delivery [EQF6]
2.1	Written AI principles report, assessed for explanation of AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.
2.2	Submission of AI monitoring dashboard outputs or screenshots, assessed for use of AI monitoring tools, dashboards, and logs to assess service availability, model performance, and data quality using real-time operational data.

2.3	Analysis report of AI trends and incident patterns, assessed for analysis of AI service performance, incident patterns, and operational metrics to detect risks or deviations using historical service records.
2.4	AI service evaluation report, assessed for evaluation of AI service effectiveness, security, and continuity against defined criteria and for practical improvement suggestions.
2.5	Documented AI corrective action plan or team report, assessed for multidisciplinary collaboration and implementation of corrective measures that enhance AI service reliability and compliance.
3	PLO Problem Management [EQF7]
3.1	Assessment of monitoring/knowledge output; completeness and reliability of AI/system monitoring
3.2	Review of AI performance report; correctness and interpretation of metrics (accuracy, drift, bias)
3.3	Evaluation of ethical/compliance assessment; identification and mitigation of AI operational risks
3.4	Review of operational decision record; rationale and outcomes of decisions for AI/ICT incidents
3.5	Assessment of management advisory; actionable recommendations for AI system reliability and ethical compliance
4	PLO Risk Management [EQF6]
4.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks in project or service contexts.
4.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the operational environment of AI deployments.
4.3	Mitigation plan submission assessed for feasibility, relevance, application of mitigation measures, and alignment with defined project, product, or service boundaries.
4.4	Oral presentation or report evaluated for clarity, communication of AI risk findings and mitigation plans, and suitability for team members and stakeholders in project or organisational settings.
4.5	Review of AI system performance logs, annotated with identified emerging risks and analysis, assessed for detection of model drift, data anomalies, or other emerging AI risks.
4.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.
5	PLO Relationship Management [EQF6]
5.1	Written stakeholder analysis report, graded on clarity, completeness, and identification of stakeholder expectations, concerns, ethical issues, and privacy issues using case studies, surveys, or system documentation.
5.2	Presentation or recorded team briefing assessed on clarity, relevance, communication effectiveness, and appropriate use of communication techniques to address AI adoption challenges.

5.3	Peer evaluation and review of collaborative project documentation, with assessment of contribution logs for effective participation in group tasks and use of digital collaboration tools.
5.4	Submission of coordinated project documentation with stakeholder feedback records, assessed by rubric for coordination of stakeholder interactions using digital platforms, shared repositories, or feedback loops.
5.5	Evaluation report or reflective log comparing proposed versus actual solutions, assessed for analytical reasoning and use of outcomes, feedback, or implementation results to evaluate effectiveness.
5.6	Recommendations report or lessons learned document, assessed for feasible, clear, and actionable improvements to stakeholder engagement strategies based on project simulations or peer review exercises.
6	PLO Information Security Management [EQF7]
6.1	Review of Organizational Security Policy Document, using rubric-based evaluation for completeness, operational usability, and regulatory alignment for real-world organizational AI deployments.
6.2	Evaluation of Mitigation Implementation Report, assessed for evidence of implemented controls addressing model manipulation, adversarial attacks, and privacy concerns in live operational systems.
6.3	Review of Team Management Log and project records, assessed for coordination of multidisciplinary team activities, allocation of responsibilities, and execution evidence for AI security and compliance initiatives.
6.4	Assessment of Operational Compliance Report, using audit-style evaluation of AI security operations in live organizational environments for regulatory and ethical adherence.
6.5	Review of Governance Application Report, assessed for evidence that AI governance frameworks are applied across organizational AI systems to support operational resilience and trustworthiness.

	DEVELOPMENT & OPERATIONS		[2]
Profile title	AI PLATFORM ENGINEER		[EP 2.12]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI platform engineer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Provides secure, scalable, and cost-efficient infrastructure and platforms by managing compute, storage, environments, and access controls that enable teams to build and run AI solutions effectively.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competence	B.2.	Component Integration	e-3
	B.3.	Testing	e-2
	B.6.	Systems Engineering	e-3
	C.3.	Service Delivery	e-3
	C.5.	Systems Management	e-3
	E.3.	Risk Management	e-3
	E.8.	Information Security Management	e-2
Complexity	The profile has an EQF6 level.		

1. PLO Component Integration [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Deliver functioning AI-enabled solutions by selecting, implementing and integrating AI models, data pipelines and services within existing systems, evaluating interoperability, performance and security, and articulating well-reasoned integration choices in applied project contexts.	
Unit Learning Outcomes	
1.1	Analyse and compare AI integration requirements within different application or system contexts, such as web-based, embedded or data-driven applications.
1.2	Design and implement AI component integration using appropriate architectures, APIs, microservices and deployment tools, by applying established integration patterns and frameworks.
1.3	Integrate and configure AI models, data pipelines and services to ensure interoperability with existing systems, in heterogeneous software environments.
1.4	Test, validate and evaluate AI-enabled solutions with respect to performance, security and reliability, using defined metrics and test procedures.

1.5	Explain and justify integration decisions, trade-offs and outcomes in project-based or team settings, by referring to technical constraints and design choices.

2. PLO Testing [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Perform structured testing of AI and ICT systems to detect basic errors or biases and ensure ethical compliance by executing guided procedures and clearly documenting results.	
Unit Learning Outcomes	
2.1	Apply predefined test procedures to AI and ICT systems using guided examples and structured exercises.
2.2	Identify basic errors, anomalies, or inconsistencies in AI model outputs in controlled datasets or simulated scenarios.
2.3	Recognize simple biases in AI outputs and flag them for further review by comparing outputs against reference standards or simple fairness checks.
2.4	Document testing activities, results, and observations following established templates and reporting formats.
2.5	Recall relevant ethical and regulatory standards applicable to AI testing in academic or guided professional contexts.
3. PLO Systems Engineering [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Design, integrate, and validate AI infrastructure systems independently using appropriate tools and frameworks to solve complex AI problems while ensuring performance, security, and ethical AI practices.	
Unit Learning Outcomes	
3.1	Design AI infrastructure solutions, including cloud-based pipelines and model deployment environments, for specific operational scenarios such as predictive analytics or recommendation systems.
3.2	Integrate AI components and services with existing IT systems using APIs, microservices, or containerization tools to ensure functional reliability.
3.3	Validate AI system performance and security through structured testing procedures such as unit tests, load testing, or penetration testing.
3.4	Apply ethical AI practices, such as bias detection in datasets, privacy safeguards, and explainable AI techniques, when implementing AI systems.
3.5	Evaluate solutions and propose improvements to AI infrastructure systems within team-based projects using performance metrics and user feedback.
3.6	Document AI infrastructure design and implementation processes clearly, using diagrams, code comments, or reports, to support maintainability and knowledge transfer.

4. PLO Service Delivery [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Enhance the reliability, security, and effectiveness of AI-enabled services by analysing performance, availability, data quality, and incidents, and applying monitoring tools and collaborative practices to implement improvements in dynamic operational contexts.	
Unit Learning Outcomes	
4.1	Explain AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.
4.2	Apply AI monitoring tools, dashboards, and logs to assess service availability, model performance, and data quality using real-time operational data.
4.3	Analyse trends in AI service performance, incident patterns, and operational metrics to detect risks or deviations by evaluating historical service records.
4.4	Evaluate AI service effectiveness, security and continuity against defined criteria, suggesting improvements in practical operational scenarios.
4.5	Collaborate with multidisciplinary teams to implement corrective measures that enhance AI service reliability and compliance in organisational or cross-functional contexts.
5. PLO Systems Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Ensure the reliable, secure, and optimised operation of AI systems in hybrid and cloud environments by managing deployments, monitoring performance, mitigating risks, and continuously improving processes through operational, analytical, and compliance-oriented practices.	
Unit Learning Outcomes	
5.1	Explain and relate AI system architectures, including model serving, data pipelines, and integration with IT services, in hybrid and cloud computing environments.
5.2	Apply operational methods to deploy, configure, and scale AI platforms and inference services, using automation, containerization, and orchestration tools.
5.3	Analyse AI system behaviour by examining performance metrics, logs, and operational indicators, to identify bottlenecks, inefficiencies, and anomalies in AI workflows.
5.4	Resolve AI system operational issues by applying incident management and troubleshooting practices, using structured problem-solving approaches and diagnostic tools.
5.5	Evaluate AI system performance, reliability, and operational risks, including degradation and dependency issues, by assessing service-level metrics and potential failure scenarios.
5.6	Apply security, access control, and compliance requirements to ensure secure and compliant AI operations, in accordance with organisational policies and regulatory frameworks.
5.7	Contribute to improvements of AI operational practices by proposing adjustments based on observed system behaviour, through iterative monitoring and feedback in evolving organisational contexts.

6. PLO Risk Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities	
Unit Learning Outcomes	
6.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
6.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
6.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
6.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
6.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
6.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.
7. PLO Information Security Management [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Secure AI systems by identifying key components, understanding AI-specific risks, and applying established policies and procedures in structured environments.	
Unit Learning Outcomes	
7.1	Identify the components of AI systems, including models, datasets, and decision processes, relevant to their security in typical AI applications.
7.2	Describe common AI-specific threats such as data poisoning, model manipulation, adversarial inputs, and privacy violations using real-world AI examples.
7.3	Recall organisational AI security policies and procedures for safe AI use in compliance with standard guidelines.
7.4	Follow prescribed AI security guidelines to assist in monitoring and incident reporting within controlled or supervised AI environments.
7.5	Recognize abnormal AI system behaviours by observing AI outputs and performance metrics under guided supervision.

Assessments AI PLATFORM ENGINEER [2.12]	
1	PLO Component Integration [EQF6]
1.1	AI integration requirements analysis report and comparative system context matrix, assessed for complete and justified comparison of AI integration requirements across web-based, embedded, or data-driven application contexts.

1.2	Implemented AI integration solution, including code and configuration, and AI integration architecture diagram, assessed for appropriate use of architectures, APIs, microservices, deployment tools, and established integration patterns or frameworks.
1.3	Configured AI models and data pipelines with AI API/interface specification, assessed for interoperability with existing systems and consistency across heterogeneous software environments.
1.4	AI system test results and AI evaluation summary, assessed against defined performance, security, and reliability metrics and documented test procedures.
1.5	Written AI integration justification report and oral project defence or presentation, assessed for evidence-based explanation of integration decisions, trade-offs, technical constraints, design choices, and outcomes.
2	PLO Testing [EQF5]
2.1	Review of AI test execution report, assessed for correct execution of predefined test procedures on AI and ICT systems using guided examples and structured exercises.
2.2	Evaluation of AI error/anomaly log, assessed for accurate identification and description of basic errors, anomalies, or inconsistencies in AI model outputs from controlled datasets or simulated scenarios.
2.3	Assessment of AI bias report, assessed for recognition and flagging of simple biases in AI outputs through comparison with reference standards or simple fairness checks.
2.4	Inspection of AI test documentation, assessed for complete and accurate recording of testing activities, results, and observations using established templates and reporting formats.
2.5	Review of AI compliance checklist, assessed for correct identification of relevant ethical and regulatory standards applicable to AI testing in academic or guided professional contexts.
3	PLO Systems Engineering [EQF6]
3.1	Evaluation of AI design diagrams and design report submission, assessed for fit between cloud-based pipelines, model deployment environments, and the specified operational scenario.
3.2	Review of integrated AI module and integration report, assessed for correct use of APIs, microservices, or containerization tools and evidence of functional reliability within existing IT systems.
3.3	Assessment of AI test report and performance dashboard, reviewed for structured unit, load, or penetration testing evidence covering AI system performance and security.
3.4	Review of AI bias report, privacy documentation, and explainability report, assessed for demonstrated application of bias detection, privacy safeguards, and explainable AI techniques during implementation.
3.5	Evaluation of AI evaluation report and recommendations report, assessed for use of performance metrics and user feedback to justify proposed improvements to AI infrastructure systems.
3.6	Review of AI project documentation, assessed for clarity, completeness, and usefulness of diagrams, code comments, or reports for maintainability and knowledge transfer.

4	PLO Service Delivery [EQF6]
4.1	Written AI principles report, assessed for explanation of AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.
4.2	Submission of AI monitoring dashboard outputs or screenshots, assessed for use of AI monitoring tools, dashboards, and logs to assess service availability, model performance, and data quality using real-time operational data.
4.3	Analysis report of AI trends and incident patterns, assessed for analysis of AI service performance, incident patterns, and operational metrics to detect risks or deviations using historical service records.
4.4	AI service evaluation report, assessed for evaluation of AI service effectiveness, security, and continuity against defined criteria and for practical improvement suggestions.
4.5	Documented AI corrective action plan or team report, assessed for multidisciplinary collaboration and implementation of corrective measures that enhance AI service reliability and compliance.
5	PLO Systems Management [EQF6]
5.1	AI system architecture diagram review, with oral or written explanation of AI architecture; assessed for correct explanation and relation of model serving, data pipelines, IT-service integration, and hybrid or cloud computing environment characteristics.
5.2	Evaluation of AI deployment/configuration files and automated deployment simulation check; assessed for correct application of operational methods to deploy, configure, and scale AI platforms and inference services using automation, containerization, and orchestration tools.
5.3	AI performance report assessment, data analysis exercises, and case study analysis; assessed for analysis of performance metrics, logs, and operational indicators to identify bottlenecks, inefficiencies, and anomalies in AI workflows.
5.4	AI incident log evaluation, problem-solving case study, and practical troubleshooting demonstration; assessed for application of incident management, structured problem-solving, and diagnostic tools to resolve AI system operational issues.
5.5	AI risk & reliability assessment report review and scenario-based evaluation; assessed for evaluation of AI system performance, reliability, operational risks, degradation, dependency issues, service-level metrics, and potential failure scenarios.
5.6	AI security & compliance checklist audit, with written or practical assessment of compliance procedures; assessed for application of security, access control, and compliance requirements in accordance with organisational policies and regulatory frameworks.
5.7	AI operational improvement proposal review and presentation of recommended improvements; assessed for proposed adjustments based on observed AI system behaviour, iterative monitoring evidence, feedback, and feasibility in evolving organisational contexts.
6	PLO Risk Management [EQF6]
6.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks in project or service contexts.

6.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the operational environment of AI deployments.
6.3	Mitigation plan submission assessed for feasibility, relevance, application of mitigation measures, and alignment with defined project, product, or service boundaries.
6.4	Oral presentation or report evaluated for clarity, communication of AI risk findings and mitigation plans, and suitability for team members and stakeholders in project or organisational settings.
6.5	Review of AI system performance logs, annotated with identified emerging risks and analysis, assessed for detection of model drift, data anomalies, or other emerging AI risks.
6.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.
7	PLO Information Security Management [EQF5]
7.1	Review of Component Inventory document and oral questioning on AI system components, assessed for correct identification of models, datasets, and decision processes relevant to AI system security in typical AI applications.
7.2	Evaluation of Threat Summary Report and short quizzes using real-world AI examples, assessed for accurate description of AI-specific threats such as data poisoning, model manipulation, adversarial inputs, and privacy violations.
7.3	Observation of adherence to AI security policies via Monitoring and Incident Log review, assessed for correct recall and application of organizational AI security policies and procedures in compliance with standard guidelines.
7.4	Review of Monitoring and Incident Log entries with instructor evaluation of correct procedure following, assessed for adherence to prescribed AI security guidelines in controlled or supervised monitoring and incident reporting.
7.5	Assessment of documented observations of abnormal AI behaviours within supervised exercises, assessed for correct recognition of abnormal AI outputs and performance metrics under guided supervision.

C.3 Support and Guidance

	SUPPORT & GUIDANCE	[3]
Profile title	AI SECURITY SPECIALIST	[EP 3.1]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI security specialist. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Defines, proposes and implements necessary information security techniques and practices to address AI-based threats and attacks that specifically target AI technologies, compliant with legal requirements, information security standards and procedures. Contributes to AI security practices, awareness and compliance by providing advice, support, information and training.</i>	

	This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.5.	Architecture Design	e-3
	A.7.	Technology Trend Monitoring	e-4
	C.4.	Problem Management	e-3
	D.1.	Information Security Strategy Development	e-4
	E.3.	Risk Management	e-3
	E.8.	Information Security Management	e-4
Complexity	The profile has an EQF7 level.		

1. PLO Architecture Design [EQF6]

The learner has demonstrated ability to...

Deliver functional AI-enabled solutions in enterprise settings by analysing requirements, designing and integrating AI components, and applying standard architectural practices to ensure scalability, security, and interoperability under guided supervision.

Unit Learning Outcomes

1.1	Identify and describe core AI architecture components, such as hardware accelerators, cloud AI services, and data pipelines, in enterprise AI systems.
1.2	Apply standard AI design patterns and implement AI modules using Python frameworks, pre-trained models, or microservices architectures in guided projects.
1.3	Evaluate AI risks, ethical considerations, and adherence to policies by applying standardized checklists and reflection exercises in lab or project scenarios.
1.4	Integrate AI components into simple enterprise systems using APIs, cloud services, or modular pipelines in partially unpredictable business contexts.

2. PLO Technology Trend Monitoring [EQF7]

The learner has demonstrated ability to...

Design transferable AI-enabled solutions in complex contexts by critically analysing and evaluating emerging technology trends and organisational opportunities.

Unit Learning Outcomes

2.1	Critically analyse emerging AI technologies and trends in domains such as finance, healthcare, or smart systems using market reports, research publications, and pilot studies.
2.2	Evaluate AI adoption opportunities using technical, organisational, ethical, and regulatory criteria by considering the implications of recent trends and innovations.
2.3	Synthesize information from multiple sources to identify AI innovation opportunities using literature, industry analyses, and cross-domain technology insights.

2.4	Design AI-enabled solutions or concepts that are transferable across contexts informed by observed technological trends and emerging best practices.
2.5	Validate and justify design decisions using appropriate evaluation methods and metrics by testing solutions in simulations, prototypes, or benchmarking exercises.
2.6	Communicate and defend AI-related proposals to specialist and non-specialist audiences through presentations, reports, or workshops highlighting trends and rationale.

3. PLO Problem Management [EQF6]

The learner has demonstrated ability to...

Investigate and evaluate ICT and AI incidents, including emerging failures, model drift, or bias, apply corrective and preventive measures, and design monitoring strategies or knowledge management practices to optimise system and AI performance, in situations with varying and partially undefined problems.

Unit Learning Outcomes

3.1	Investigate complex ICT and AI incidents, including subtle system failures, AI model drift, and emerging bias patterns, using diagnostic tools and historical performance data.
3.2	Evaluate root causes of incidents and their impact on system and AI performance through structured analysis and impact assessment methods.
3.3	Apply corrective and preventive measures to mitigate incidents in less predictable operational situations.
3.4	Design monitoring strategies or knowledge management practices to track recurring AI failures and support system optimisation.
3.5	Advise or collaborate with team members by sharing findings and recommending improvements in AI system performance and ethical compliance.

4. PLO Information Security Strategy Development [EQF7]

The learner has demonstrated ability to...

Develop and lead AI security strategies across organisational functions and systems by analysing risks, establishing governance frameworks aligned with recognized standards, integrating ethical and regulatory requirements, coordinating multi-disciplinary teams, and ensuring resilient, compliant, and business-aligned AI operations.

Unit Learning Outcomes

4.1	Analyse AI risks, vulnerabilities, and potential impacts across organisational units, services, and systems, using structured risk assessment frameworks such as NIST AI RMF or threat modelling approaches.
4.2	Develop and implement AI security strategies that align with organisational objectives, ethical principles, and regulatory requirements, by referencing widely adopted standards such as ISO/IEC 27001, ISO/IEC 23894, GDPR, or OWASP AI Security guidelines.
4.3	Establish governance frameworks, roles, responsibilities, policies, and monitoring mechanisms for AI systems at the organisational level, in alignment with corporate compliance and operational structures.
4.4	Guide and coordinate multi-disciplinary teams to implement AI security measures in line with ethical, regulatory, and strategic objectives, by facilitating collaboration across IT, data science, and business units.
4.5	Evaluate the effectiveness of AI security strategies, monitor compliance, and recommend improvements for resilience, trust, and business alignment, using audits, metrics, and performance monitoring systems.

4.6	Integrate strategic security-by-design principles into organisational AI system lifecycles to ensure proactive risk mitigation, by incorporating security checkpoints and governance reviews in design and deployment phases.
4.7	Anticipate emerging AI threats, regulatory changes, and ethical considerations to adapt organisational security strategies proactively, by monitoring industry trends, regulatory updates, and threat intelligence reports.
4.8	Communicate AI security priorities and strategies to stakeholders to foster a culture of security and ethical responsibility across the organisation, using presentations, briefings, and strategic documentation targeted at executives and teams.

5. PLO Risk Management [EQF6]

The learner has demonstrated ability to...

Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities

Unit Learning Outcomes

5.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
5.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
5.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
5.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
5.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
5.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.

6. PLO Information Security Management [EQF7]

The learner has demonstrated ability to...

Secure organisational AI operations by developing and implementing comprehensive strategies, managing multidisciplinary teams, and aligning risk mitigation with regulatory, ethical, and business objectives in real-world contexts.

Unit Learning Outcomes

6.1	Develop AI security policies and operational procedures for real-world organisational AI deployments.
6.2	Implement AI risk mitigation plans addressing model manipulation, adversarial attacks, and privacy concerns in live operational systems.
6.3	Manage multidisciplinary teams to execute AI security and compliance initiatives in organisational projects.
6.4	Evaluate AI security operations in live organisational environments using compliance and audit frameworks to ensure regulatory and ethical alignment.

6.5	Apply AI governance frameworks across organisational AI systems to optimise operational resilience and trustworthiness.

Assessments AI SECURITY SPECIALIST [EP 3.1]	
1	PLO Architecture Design [EQF6]
1.1	Evaluation of architecture diagrams and component inventory review, assessed for correct identification and description of hardware accelerators, cloud AI services, data pipelines, and their role in enterprise AI systems.
1.2	Grading of AI module code and review of module documentation, assessed for application of standard AI design patterns and implementation using Python frameworks, pre-trained models, or microservices architectures in guided projects.
1.3	Assessment of risk checklist and ethics report evaluation, assessed for identification of AI risks, ethical considerations, and adherence to policies using standardized checklists and reflection exercises.
1.4	Evaluation of integrated prototype and deployment report review, assessed for integration of AI components using APIs, cloud services, or modular pipelines in partially unpredictable business contexts.
2	PLO Technology Trend Monitoring [EQF7]
2.1	Trend analysis report and written assignment with rubric, assessed for critical analysis of emerging AI technologies and trends using market reports, research publications, and pilot studies.
2.2	Opportunity assessment matrix and graded report or case study analysis, assessed for evaluation of AI adoption opportunities against technical, organisational, ethical, and regulatory criteria.
2.3	Integrated opportunity brief and written synthesis evaluated by rubric, assessed for synthesis of literature, industry analyses, and cross-domain technology insights into clearly identified AI innovation opportunities.
2.4	Solution design document and project proposal evaluation, assessed for design of transferable AI-enabled solutions or concepts informed by technological trends and emerging best practices.
2.5	Validation report and simulation or pilot data review, assessed for justification of design decisions using appropriate evaluation methods, metrics, and evidence from simulations, prototypes, or benchmarking exercises.
2.6	Presentation/report, oral defence, or stakeholder-style review, assessed for clear communication and defence of AI-related proposals to specialist and non-specialist audiences, including trends and rationale.
3	PLO Problem Management [EQF6]
3.1	Assessment of AI incident investigation report, including depth and accuracy of data analysis, evaluated for investigation of complex ICT and AI incidents using diagnostic tools and historical performance data.
3.2	Evaluation of root cause evaluation and impact analysis review, assessed for use of structured analysis and impact assessment methods to determine effects on system and AI performance.

3.3	Review of mitigation plan, assessed for effectiveness and applicability of corrective and preventive measures in less predictable operational situations.
3.4	Assessment of monitoring/knowledge strategy document, assessed for clarity, feasibility, and ability to track recurring AI failures and support system optimization.
3.5	Review of advisory report, assessed for quality of recommendations, evidence of shared findings, and relevance to AI system performance and ethical compliance.
4	PLO Information Security Strategy Development [EQF7]
4.1	AI Risk Assessment Report, case study analysis, and scenario-based risk evaluation, assessed for analysis of AI risks, vulnerabilities, and potential impacts across organizational units, services, and systems using structured risk assessment frameworks such as NIST AI RMF or threat modelling approaches.
4.2	AI Security Strategy Document, policy proposal, and peer review of strategy alignment, assessed for development and implementation of AI security strategies aligned with organizational objectives, ethical principles, regulatory requirements, and widely adopted standards.
4.3	AI Governance Framework Specification, rubric-based evaluation, and audit simulation, assessed for establishment of governance frameworks, roles, responsibilities, policies, and monitoring mechanisms for AI systems at the organizational level.
4.4	AI Implementation Guidance Report, team coordination plan, presentation of AI implementation roadmap, and reflective report on team guidance, assessed for coordination of multi-disciplinary teams and implementation of AI security measures across IT, data science, and business units.
4.5	AI Strategy Evaluation Report, KPI/metric analysis, and compliance review exercises, assessed for evaluation of AI security strategy effectiveness, compliance monitoring, and recommendations for resilience, trust, and business alignment.
4.6	AI Security-by-Design Plan, lifecycle mapping submission, and strategic design checklist evaluation, assessed for integration of security-by-design principles, security checkpoints, and governance reviews across organizational AI system lifecycles.
4.7	AI Threat & Regulation Foresight Brief, scenario planning exercise, and policy adaptation proposal, assessed for anticipation of emerging AI threats, regulatory changes, and ethical considerations using industry trends, regulatory updates, and threat intelligence reports.
4.8	AI Stakeholder Communication Package, peer/expert review, and communication effectiveness rubric, assessed for clear communication of AI security priorities and strategies to executives and teams and for contribution to a culture of security and ethical responsibility.
5	PLO Risk Management [EQF6]
5.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks in project or service contexts.
5.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the operational environment of AI deployments.
5.3	Mitigation plan submission assessed for feasibility, relevance, application of mitigation measures, and alignment with defined project, product, or service boundaries.

5.4	Oral presentation or report evaluated for clarity, communication of AI risk findings and mitigation plans, and suitability for team members and stakeholders in project or organisational settings.
5.5	Review of AI system performance logs, annotated with identified emerging risks and analysis, assessed for detection of model drift, data anomalies, or other emerging AI risks.
5.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.
6	PLO Information Security Management [EQF7]
6.1	Review of Organizational Security Policy Document, using rubric-based evaluation for completeness, operational usability, and regulatory alignment for real-world organizational AI deployments.
6.2	Evaluation of Mitigation Implementation Report, assessed for evidence of implemented controls addressing model manipulation, adversarial attacks, and privacy concerns in live operational systems.
6.3	Review of Team Management Log and project records, assessed for coordination of multidisciplinary team activities, allocation of responsibilities, and execution evidence for AI security and compliance initiatives.
6.4	Assessment of Operational Compliance Report, using audit-style evaluation of AI security operations in live organizational environments for regulatory and ethical adherence.
6.5	Review of Governance Application Report, assessed for evidence that AI governance frameworks are applied across organizational AI systems to support operational resilience and trustworthiness.

	SUPPORT & GUIDANCE		[3]
Profile title	AI SERVICE SUPPORT SPECIALIST		[EP 3.2]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI service support specialist. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: Enables users to have an efficient and secure use of AI services and a positive user experience. Maintains a smooth operation of AI services by feeding insights back into continuous service improvement, while addressing issues and supporting users. This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	C.1.	User Support	e-2
	C.2.	Change Support	e-2
	C.3.	Service Delivery	e-2
	C.4.	Problem Management	e-2
Complexity	The profile has an EQF5 level.		

1. PLO User Support [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Ensure effective user support for AI-enabled services by managing incidents, monitoring system performance, explaining AI behaviour to users, and implementing operational improvements related to user support practices in line with organisational procedures and service agreements.	
Unit Learning Outcomes	
1.1	Identify AI system components, functions, and common user interactions within AI-enabled services, such as chatbots, recommendation engines, or virtual assistants.
1.2	Apply standard procedures to resolve routine AI-related incidents and operational issues, using troubleshooting guides or predefined diagnostic tools.
1.3	Record and escalate AI system incidents according to organisational guidelines and predefined SLAs, by documenting logs and user reports.
1.4	Explain to users the behaviour, outputs, and limitations of AI systems in a clear and understandable way, using examples or visual aids.
1.5	Monitor basic AI service performance indicators, such as response times, availability, and output quality, in dashboards or reporting tools.
1.6	Implement simple improvements or adjustments to user support practices under existing procedures, such as updating FAQs, templates, or workflow checklists.

2. PLO Change Support [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Apply controlled updates to AI models and datasets by following guided procedures, while ensuring reliable system operation, monitoring performance, and complying with security, data protection, and AI governance standards.	
Unit Learning Outcomes	
2.1	Recall and describe the basic structure and components of AI-based systems, including models, data pipelines, and software modules, using real-world examples of AI applications.
2.2	Apply defined procedures to implement updates to AI models, software, or datasets under supervision, in a controlled development or testing environment.
2.3	Monitor the operational behaviour of AI solutions after changes and report deviations from expected performance, using standard system monitoring tools or dashboards.
2.4	Identify and follow security, data protection, and AI governance requirements when applying changes, such as organisational policies or regulatory guidelines.
2.5	Demonstrate awareness of service continuity principles by performing rollback or fallback operations under guidance, in case of system failures or unexpected behaviour.
3. PLO Service Delivery [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Ensure the reliable operation and support of AI-enabled services by applying established procedures, tools, and monitoring solutions, while recording incidents and maintaining documentation in accordance with operational guidelines.	
Unit Learning Outcomes	
3.1	Identify key AI service components, including models, data pipelines, inference services, and supporting ICT infrastructure in typical operational environments.
3.2	Explain AI service level indicators (e.g., availability, latency, accuracy) and their relevance to operational performance using real-world AI services.
3.3	Apply standard procedures and tools to monitor AI service performance and availability in routine operational contexts.
3.4	Record and report AI-related incidents or anomalies by following established operational guidelines.
3.5	Maintain operational documentation and monitoring tools for AI services using standard templates and instructions.
4. PLO Problem Management [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Identify and analyse common ICT and AI incidents, including system failures, performance issues, or AI bias, and apply established procedures to resolve or escalate them, using standard monitoring tools and knowledge systems in structured, well-defined situations.	
Unit Learning Outcomes	
4.1	Identify common ICT and AI incidents, such as system failures, performance degradation, or obvious AI bias, using monitoring dashboards and log analysis tools.

4.2	Analyse the immediate causes of these incidents within structured troubleshooting procedures.
4.3	Apply standard corrective or preventive actions to resolve incidents following predefined operational guidelines.
4.4	Document incidents and solutions in knowledge management systems for future reference and team communication.
4.5	Escalate incidents appropriately according to established organisational protocols and reporting chains.

Assessments AI SERVICE SUPPORT SPECIALIST [EP 3.2]	
1	PLO User Support [EQF5]
1.1	Evaluation of AI system diagrams and written summaries showing correctly identified AI components, functions, and common user interactions for a selected AI-enabled service.
1.2	Review of incident resolution logs and diagnostic reports for routine AI-related issues, assessed for correct application of troubleshooting guides or predefined diagnostic tools and completeness of resolution evidence.
1.3	Assessment of documented incident records and escalation reports, checked for complete logs, user reports, SLA references, escalation decisions, and alignment with organisational AI service procedures.
1.4	Evaluation of user guidance materials and logged communications explaining AI behaviour, outputs, and limitations, assessed for clarity, correctness, user understandability, and use of examples or visual aids.
1.5	Review of AI performance monitoring reports and dashboards for accurate recording of response times, availability, output quality, completeness, and basic trend interpretation.
1.6	Assessment of updated support templates, workflow checklists, and improvement logs showing simple adjustments to AI user support practices under existing procedures.
2	PLO Change Support [EQF5]
2.1	Review of AI system architecture diagram and oral questioning on models, data pipelines, software modules, components, and structure in a real-world AI application.
2.2	Practical evaluation of updated AI model/dataset/software in a controlled environment, supported by implementation notes or change log showing adherence to defined procedures and supervision requirements.
2.3	Assessment of AI monitoring report after change implementation, evaluated for accuracy, completeness of performance tracking, and clear reporting of deviations from expected operational behaviour.
2.4	Verification of AI compliance checklist, with audit evidence that security, data protection, and AI governance requirements were identified and followed during the change.
2.5	Review of AI rollback/fallback record, including demonstration or documentation that the learner performed the procedure under guidance and evaluated its effectiveness for service continuity.

3	PLO Service Delivery [EQF5]
3.1	Written AI service inventory and practical identification exercise assessing correct identification of models, data pipelines, inference services, and supporting ICT infrastructure in a typical operational environment.
3.2	Short report or presentation of AI service metrics explaining availability, latency, and accuracy and their relevance to operational performance in a real-world AI service.
3.3	Lab submission of AI performance monitoring logs demonstrating correct use of standard procedures and tools to monitor AI service performance and availability in a routine operational context.
3.4	Completed AI incident report form assessed for accurate recording and reporting of AI-related incidents or anomalies according to established operational guidelines.
3.5	Updated AI operational documentation review assessing completeness, accuracy, template use, and maintenance of monitoring-tool documentation according to standard instructions.
4	PLO Problem Management [EQF5]
4.1	Review of AI incident log entries and instructor-verified checklist of detected incidents, assessed for correct identification of system failures, performance degradation, or obvious AI bias using monitoring dashboards and log analysis tools.
4.2	Evaluation of root cause report using a rubric-based analysis of troubleshooting steps and evidence for immediate causes within structured troubleshooting procedures.
4.3	Assessment of corrective action report, compared with predefined guidelines for appropriateness and completeness of standard corrective or preventive actions.
4.4	Review of knowledge system entries using a completeness and clarity check for documented incidents, solutions, future reference value, and team communication.
4.5	Verification of escalation documentation through audit against organizational protocol, including escalation trigger, reporting chain, and evidence of appropriate incident routing.

	SUPPORT & GUIDANCE		[3]
Profile title	AI EDUCATOR		[EP 3.3]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI educator. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Provide the knowledge and skills required to ensure that people are able to effectively perform AI related tasks in the workplace.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.7.	Technology Trend Monitoring	e-3
	B.5.	Documentation Production	e-3
	D.3.	Education and Training Provision	e-4
	D.9.	Personnel Development	e-3
	D.10.	Information and Knowledge Management	e-4
	D.11.	Needs Identification	e-3
	E.4.	Relationship Management	e-3
Complexity	The profile has an EQF7 level.		

1. PLO Technology Trend Monitoring [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Monitor and assess emerging AI technologies in partially defined contexts by identifying trends, analysing developments, and applying insights to small-scale use cases.	
Unit Learning Outcomes	
1.1	Identify key concepts, techniques, and emerging areas in AI by tracking technological trends and innovations such as generative AI, reinforcement learning, and computer vision tools.
1.2	Analyse and compare AI technologies and tools using defined criteria such as potential, maturity, and applicability in the context of industry reports, vendor offerings, or research updates.
1.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
1.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.
1.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.

1.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.

2. PLO Documentation Production [EQF6]

The learner has demonstrated ability to...

Apply document-management practices and develop AI-specific documentation, including technical specifications, compliance records, and transparency reports, independently within broad project frameworks, by integrating information from multiple AI system components and ensuring alignment with regulatory and stakeholder requirements in projects with variable challenges

Unit Learning Outcomes

2.1	Apply document-management and collaboration practices to AI projects independently, using systems that enable coordinated document creation and version control.
2.2	Develop AI-specific technical, compliance, and transparency documentation for multiple system components, such as model specifications, system interfaces, and regulatory reports.
2.3	Integrate information from different AI system elements into cohesive and accessible documentation, by consolidating data from datasets, model outputs, and system logs.
2.4	Ensure that AI documentation meets regulatory, ethical, and stakeholder requirements, in accordance with applicable legal, ethical, and organisational standards.
2.5	Adapt and modify existing templates or documentation structures to suit variable AI project contexts, by aligning documentation with project-specific requirements or new system components.

3. PLO Education and Training Provision [EQF7]

The learner has demonstrated ability to...

Develop, coordinate, and evaluate enterprise-wide AI competence strategies by planning AI literacy and training initiatives that align organisational AI capability with emerging technologies, ethical standards, and strategic business objectives.

Unit Learning Outcomes

3.1	Develop enterprise-wide AI training strategies that enhance organisational AI capability and workforce AI literacy, by aligning learning initiatives with business strategy and AI maturity levels.
3.2	Coordinate cross-functional AI training initiatives across departments, aligning resources, objectives, and stakeholder needs, in complex organisational and multi-disciplinary contexts.
3.3	Evaluate the effectiveness of AI competence programs using performance indicators, organisational impact data, and AI adoption metrics, such as productivity gains, capability growth, and responsible AI usage.
3.4	Plan and align AI learning initiatives with emerging AI technologies, governance frameworks, and ethical standards to drive strategic organisational goals, in response to evolving technological and regulatory developments.
3.5	Design scalable AI competence development frameworks that support long-term organisational learning, across multiple roles, functions, and levels of AI expertise.
3.6	Advise organisational leadership on AI training priorities and investments, using evidence from competence assessments, risk analyses, and strategic AI roadmaps.

4. PLO Personnel Development [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Advance individual and team AI capabilities to support responsible, effective, and collaborative performance across organisational contexts by analysing skill data, designing tailored learning pathways, and coaching peers in the application of AI for decision-making, problem-solving, and team collaboration.	
Unit Learning Outcomes	
4.1	Analyse AI competence data to identify skill gaps, trends, and development opportunities across individuals and teams using organisational assessment tools and performance metrics.
4.2	Evaluate the relevance of AI skills for organisational objectives and diverse work contexts in current projects and operational settings.
4.3	Design role-specific AI learning pathways and interventions using organisational resources, learning platforms, and professional development frameworks.
4.4	Implement AI learning programmes that enable team members to apply AI responsibly and effectively in workplace tasks and collaborative projects.
4.5	Coach peers to apply AI in decision-making, problem-solving, and team collaboration through mentoring sessions, workshops, or team-based exercises.
4.6	Apply AI insights to enhance team-level collaboration, decision-making, and problem-solving processes by integrating data-driven tools and analytic techniques.
4.7	Demonstrate responsible and context-aware use of AI tools such as AI-assisted analytics, automation tools, or knowledge management systems in organisational activities
5. PLO Information and Knowledge Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organisational units by aligning AI knowledge management with organisational objectives, governance requirements, and innovation needs.	
Unit Learning Outcomes	
5.1	Design and evaluate AI knowledge management structures for complex or cross-unit AI initiatives involving multiple stakeholders.
5.2	Advise on the AI knowledge lifecycle, including creation, validation, governance, maintenance, and reuse of AI models, data, and related artifacts.
5.3	Develop and improve governance approaches for AI knowledge and information by integrating organisational, regulatory, ethical, and strategic considerations.
5.4	Facilitate collaborative knowledge sharing and learning across interdisciplinary teams engaged in AI development, deployment, or oversight.
5.5	Align AI knowledge management practices with organisational objectives to support innovation, effectiveness, and sustainable use of AI technologies.

6. PLO Needs Identification [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Independently engage with stakeholders to identify and validate needs, translating them into feasible AI and technology solution options, while considering business objectives and organisational priorities.	
Unit Learning Outcomes	
6.1	Actively engages with internal and external stakeholders to elicit and validate their needs, using structured interviews, workshops, or observational techniques.
6.2	Analyse and articulate stakeholder needs, differentiating between functional, technical, and business requirements, by applying basic requirement-gathering frameworks or tools.
6.3	Translate validated stakeholder needs into feasible AI or technology solution options, considering constraints such as cost, technical feasibility, and organisational priorities.
6.4	Apply basic data analysis using datasets, dashboards, or simple statistical tools to support the identification of needs and evaluate potential solution options.
6.5	Recognize and consider ethical implications and relevant regulatory constraints in AI application scenarios or technology deployment when proposing solutions.
7. PLO Relationship Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Achieve effective stakeholder alignment and support ethical AI adoption by analysing expectations, addressing privacy concerns, and coordinating collaborative solutions using communication techniques, project documentation, and digital platforms.	
Unit Learning Outcomes	
7.1	Analyse stakeholder expectations and concerns in AI projects, including ethical and privacy issues, using case studies, surveys, or system documentation.
7.2	Apply communication techniques to address AI adoption challenges, such as team discussions, presentations, or messaging platforms.
7.3	Collaborate effectively with peers in AI projects by participating in group tasks and using digital collaboration tools.
7.4	Coordinate stakeholder interactions using project documentation and digital platforms, in contexts such as shared repositories or feedback loops.
7.5	Evaluate the effectiveness of proposed solutions for AI-related stakeholder issues by reviewing outcomes, feedback, or implementation results.
7.6	Suggest improvements to stakeholder engagement strategies using lessons learned from project simulations or peer review exercises.
Assessment AI EDUCATOR [EP 3.3]	
1	PLO Technology Trend Monitoring [EQF6]
1.1	Annotated portfolio submission and short written test assessing correct identification of AI concepts, techniques, and emerging areas, including examples such as generative AI, reinforcement learning, and computer vision tools.

1.2	Comparative analysis table with oral explanation or peer review, assessed for use of defined criteria such as potential, maturity, and applicability based on industry reports, vendor offerings, or research updates.
1.3	Trend mapping report and written report evaluation assessing classification of internal and external AI innovation sources, including trend reports, patents, newsfeeds, and academic publications.
1.4	Mini prototype or simulation demonstration with lab report, assessed for correct application of basic methods and tools to explore AI-enabled use cases using trending technologies.
1.5	Ethics and impact briefing assessed with a rubric for description and consideration of ethical, data protection, and organisational issues in emerging technologies and current AI applications.
1.6	Presentation or dashboard, evaluated by peers and instructor, assessing clear presentation and justification of AI trend observations and insights summarising technology developments.
2	PLO Documentation Production [EQF6]
2.1	Evaluation of AI documentation repository for organization, version control, coordinated document creation, collaborative workflow evidence, and peer-review of individual contributions.
2.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components, graded for completeness, accuracy, and coverage of model specifications, system interfaces, and regulatory reports.
2.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs, assessed for clarity, cohesion, accessibility, and accurate integration across AI system elements.
2.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements, supported by a compliance verification report referencing applicable legal, ethical, and organizational standards.
2.5	Evaluation of customized AI documentation templates and modified project documentation, assessed for alignment with project-specific requirements, new system components, and adaptability to variable AI project contexts.
3	PLO Education and Training Provision [EQF7]
3.1	Assessment of enterprise AI training and literacy strategy document for alignment with business strategy, AI maturity levels, organizational AI capability, and workforce AI literacy needs.
3.2	Evaluation of cross-functional AI training coordination plan and stakeholder alignment evidence, assessed for alignment of resources, objectives, and stakeholder needs across departments.
3.3	Review of AI training impact evaluation report and AI competence metrics dashboard, assessed for use of performance indicators, organizational impact data, AI adoption metrics, and conclusions on programme effectiveness.
3.4	Assessment of AI governance- and ethics-aligned learning plan addressing emerging AI technologies, evaluated for alignment with strategic organizational goals and evolving technological and regulatory developments.
3.5	Evaluation of scalable AI competence development framework and role-based AI capability mapping, assessed for coverage of multiple roles, functions, expertise levels, and long-term organizational learning.

3.6	Review of executive AI training advisory brief supported by AI competence gap analysis, risk analysis, and strategic AI roadmap evidence, assessed for justified training priorities and investment recommendations.
4	PLO Personnel Development [EQF6]
4.1	Assessment of AI competence analysis report, evaluating documented AI skill gaps, trends, and development opportunities using organisational assessment tools and performance metrics.
4.2	Review of AI skills evaluation matrix, graded for relevance of AI skills to organisational objectives, diverse work contexts, current projects, and operational settings.
4.3	Evaluation of role-specific AI learning pathway plan, assessed with a rubric for clarity, feasibility, use of organisational resources, learning platforms, and professional development frameworks.
4.4	Assessment of implemented AI learning program documentation, including evidence that team members apply AI responsibly and effectively in workplace tasks and collaborative projects.
4.5	Review of peer AI coaching portfolio and observation of mentoring sessions, workshops, or team-based exercises demonstrating AI application in decision-making, problem-solving, and team collaboration.
4.6	Assessment of team-level AI insights report, evaluating use of data-driven tools and analytic techniques and recommendations for improving collaboration, decision-making, and problem-solving.
4.7	Grading of applied AI case study or portfolio, assessed for responsible and context-aware use of AI-assisted analytics, automation tools, or knowledge management systems in organisational activities.
5	PLO Information and Knowledge Management [EQF7]
5.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design for complex or cross-unit AI initiatives involving multiple stakeholders.
5.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines covering creation, validation, governance, maintenance, and reuse of AI models, data, and related artifacts.
5.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment, evaluated for integration of organizational, regulatory, ethical, and strategic considerations.
5.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model, assessed for facilitation of collaborative learning across interdisciplinary teams engaged in AI development, deployment, or oversight.
5.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report, evaluated for alignment with organizational objectives and support for innovation, effectiveness, and sustainable use of AI technologies.
6	PLO Needs Identification [EQF6]
6.1	Stakeholder Needs Report – assessed via written report of AI stakeholder needs, evidence from structured interviews, workshops, or observations, and validation summary.

6.2	Requirement Analysis Matrix – assessed via submitted matrix differentiating functional, technical, and business requirements and mapping them to AI solutions using basic requirement-gathering frameworks or tools.
6.3	AI Solution Options Brief – assessed via presentation or report proposing feasible AI or technology solution options linked to validated stakeholder needs and constraints such as cost, technical feasibility, and organizational priorities.
6.4	AI Data Analysis Summary – assessed via submitted dashboard, data visualization, or short report using datasets or simple statistical tools to identify needs and evaluate potential AI solution options.
6.5	AI Ethical & Regulatory Assessment – assessed via written document identifying ethical implications and relevant regulatory constraints in AI application scenarios or technology deployment and showing how these are considered in solution proposals.
7	PLO Relationship Management [EQF6]
7.1	Written stakeholder analysis report, graded on clarity, completeness, and analysis of stakeholder expectations, concerns, ethical issues, and privacy issues using case studies, surveys, or system documentation.
7.2	Presentation or recorded team briefing assessed on clarity, relevance, communication effectiveness, and appropriate use of communication techniques to address AI adoption challenges.
7.3	Peer evaluation and review of collaborative project documentation and contribution logs, assessed for effective peer collaboration, participation in group tasks, and use of digital collaboration tools.
7.4	Submission of coordinated project documentation with stakeholder feedback records, shared repository or feedback-loop evidence, and rubric-based evaluation of stakeholder interaction coordination.
7.5	Evaluation report or reflective log comparing proposed versus actual solutions for AI-related stakeholder issues, assessed on analytical reasoning and use of outcomes, feedback, or implementation results.
7.6	Written stakeholder analysis report, graded on clarity, completeness, and analysis of stakeholder expectations, concerns, ethical issues, and privacy issues using case studies, surveys, or system documentation.

	SUPPORT & GUIDANCE		[3]
Profile title	AI ADVISOR		[EP 3.4]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI advisor. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Maintains a technology watch to inform stakeholders of existing and emerging AI technologies and their potential to add value. Supports the identification of needs and AI solutions for achieving organisation and AI/ IT strategic goals.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.1.	IS and Business Strategy Alignment	e-4
	A.7.	Technology Trend Monitoring	e-3
	A.9	Innovating	e-4
	D.11.	Needs Identification	e-4
	E.3.	Risk Management	e-3
	E.4.	Relationship Management	e-4
	E.5.	Process Improvement	e-4
	E.7.	Business Change Management	e-4
Complexity	The profile has an EQF7 level.		

1. PLO IS and Business Strategy Alignment [EQF7]

The learner has demonstrated ability to...

Analyse complex organisational environments to align information systems and AI capabilities with business strategy, evaluating governance, ethical, regulatory, and risk requirements, and designing integrated IS models and enterprise architectures that enhance organisational performance in dynamic, multidisciplinary contexts.

Unit Learning Outcomes

1.1	Analyse organisational strategies and operating models to identify business needs, priorities, risks, and opportunities for IS and AI enablement, using enterprise case studies or organisational datasets.
1.2	Evaluate the alignment between business strategy and existing IS, data, and AI capabilities, identifying gaps and improvement opportunities by mapping technology portfolios to strategic objectives.

1.3	Assess IS and AI governance frameworks, including ethical, legal, regulatory, and risk considerations, in support of strategic alignment, in compliance with industry standards and organisational policies.
1.4	Design and evaluate integrated IS models and enterprise architectures that support business objectives and strategic decision-making, using modelling tools such as ArchiMate or UML.
1.5	Apply AI and data-driven solutions to improve business processes, performance, and competitive positioning, by implementing predictive analytics, process automation, or recommendation systems.
1.6	Critically evaluate the organisational impact of IS–business alignment initiatives, using appropriate performance and value-creation metrics, such as ROI, KPIs, or balanced scorecards.

2. PLO Technology Trend Monitoring [EQF6]

The learner has demonstrated ability to...

Monitor and assess emerging AI technologies in partially defined contexts by identifying trends, analysing developments, and applying insights to small-scale use cases.

Unit Learning Outcomes

2.1	Identify key concepts, techniques, and emerging areas in AI by tracking technological trends and innovations such as generative AI, reinforcement learning, and computer vision tools.
2.2	Analyse and compare AI technologies and tools using defined criteria such as potential, maturity, and applicability in the context of industry reports, vendor offerings, or research updates.
2.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
2.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.
2.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.
2.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.

3. PLO Innovating [EQF7]

The learner has demonstrated ability to...

Deliver impactful AI-enabled innovations in professional contexts by leading collaborative development, aligning technical and organisational factors, and evaluating real-world effectiveness.

Unit Learning Outcomes

3.1	Coordinate team efforts to design AI-enabled solutions addressing complex professional or societal problems, by aligning roles, expertise, and development activities.
3.2	Integrate multiple technical and organisational factors in developing AI-based solutions, such as system architecture, workflows, and governance constraints.

3.3	Apply AI technologies to implement solutions with practical impact, in real-world organisational or professional environments.
3.4	Evaluate the effectiveness and applicability of AI innovations in real-world professional contexts, using operational, stakeholder, or performance criteria.
3.5	Manage trade-offs between innovation, feasibility, and organisational constraints in AI projects, such as time, resources, and risk.
3.6	Facilitate stakeholder engagement around AI-enabled innovations, by communicating value, limitations, and implementation implications.

4. PLO Needs Identification [EQF7]

The learner has demonstrated ability to...

Leads the end-to-end needs identification process with stakeholders, ensuring AI-driven solution recommendations are strategically aligned with organisational goals, regulatory requirements, and value creation objectives, and ensures the effective implementation, adoption, and iterative enhancement of implemented solutions.

Unit Learning Outcomes

4.1	Lead cross-functional teams in stakeholder engagement by coordinating workshops, co-creation sessions, or advisory meetings to define and validate complex organisational needs.
4.2	Critically assess and ensure that AI-driven solution proposals align with organisational strategy, regulatory requirements, and long-term value creation objectives, using strategic planning frameworks or business model analysis.
4.3	Evaluate and co-create a comprehensive range of AI solution options, including make-or-buy, SaaS, cloud, low-code/no-code, and other emerging technologies, by applying feasibility studies, prototyping, or comparative analysis.
4.4	Ensure the effective implementation, adoption, and iterative enhancement of AI solutions, using human-centred design principles, project management tools, or feedback loops.

5. PLO Risk Management [EQF6]

The learner has demonstrated ability to...

Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities.

Unit Learning Outcomes

5.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
5.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
5.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
5.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.

5.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
5.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.

6. PLO Relationship Management [EQF7]

The learner has demonstrated ability to...

Ensure responsible and inclusive AI decision-making by designing and implementing stakeholder engagement strategies that integrate ethical, cultural, and organisational considerations while facilitating alignment and consensus across multidisciplinary teams.

Unit Learning Outcomes

6.1	Design stakeholder engagement strategies for AI initiatives by applying strategic planning tools or scenario analyses.
6.2	Implement communication and collaboration approaches to facilitate alignment and trust across multidisciplinary teams using workshops, collaborative software, or structured team activities.
6.3	Lead workshops or meetings to mediate conflicts and promote consensus in cross-functional project teams or stakeholder consultations.
6.4	Assess the impact of engagement strategies on stakeholder alignment and responsible AI adoption by analysing feedback, monitoring adoption metrics, or reviewing team performance.
6.5	Adapt engagement strategies to emerging AI-related challenges using iterative design, stakeholder input, or pilot project insights.
6.6	Advocate for ethical and culturally sensitive AI practices by preparing guidelines, training materials, or stakeholder briefings.
6.7	Document and report stakeholder engagement outcomes for use in organisational learning or project audits.

7. PLO Process Improvement [EQF7]

The learner has demonstrated ability to...

Optimise AI development and operational processes by coordinating complex workflows, applying integrated performance metrics, and embedding governance practices that ensure ethical, secure, and high-performing solutions.

Unit Learning Outcomes

7.1	Integrate complex AI performance metrics and governance practices to evaluate existing workflows in multi-team AI projects.
7.2	Coordinate multiple AI development and operational processes across teams or systems by implementing cross-functional workflows.
7.3	Refine and optimise AI workflows using data-driven insights and best practices from deployed AI systems.
7.4	Ensure ethical, compliance, and security considerations are incorporated into process improvements in enterprise AI deployments.

7.5	Monitor and assess the impact of workflow changes on organisational performance and AI solution effectiveness using measurable KPIs.
7.6	Facilitate communication and knowledge transfer between teams to support process improvement through workshops and documentation.
7.7	Identify opportunities for AI process innovation by analysing emerging trends and technologies.

8. PLO Business Change Management [EQF7]

The learner has demonstrated ability to...

Lead AI-driven transformation initiatives by coordinating teams, implementing adaptive change strategies, integrating governance and ethical practices, and monitoring AI performance to optimise adoption and organisational outcomes in operational and business contexts.

Unit Learning Outcomes

8.1	Lead AI transformation initiatives by coordinating team activities and responsibilities in cross-functional or multi-departmental projects.
8.2	Implement adaptive AI adoption strategies while ensuring compliance with governance and ethical standards in real-world organisational processes.
8.3	Monitor AI performance metrics to optimise adoption and operational outcomes using performance dashboards, KPIs, or AI monitoring tools.
8.4	Apply problem-solving methods to overcome challenges in AI implementation in organisational settings by addressing technical, human, or process-related issues.
8.5	Evaluate the impact of AI adoption on team performance and organisational processes using qualitative and quantitative indicators.

Assessments AI ADVISOR [EP 3.4]

1	PLO IS and Business Strategy Alignment [EQF7]
1.1	Written Report, Case Study Analysis, and Data-Driven Mapping assessing analysis of organisational strategies and operating models to identify business needs, priorities, risks, and opportunities for IS and AI enablement using enterprise case studies or organisational datasets.
1.2	Alignment Assessment Report, Portfolio Review, and Gap Analysis Presentation assessing mapped alignment between business strategy and existing IS, data, and AI capabilities, with identified gaps and improvement opportunities linked to strategic objectives.
1.3	Governance Assessment Report and Compliance Checklist Submission assessing IS and AI governance frameworks for ethical, legal, regulatory, and risk considerations in compliance with industry standards and organisational policies.
1.4	IS/Architecture Design Diagrams and Modelling Artefact Review assessing design and evaluation of integrated IS models and enterprise architectures supporting business objectives and strategic decision-making using ArchiMate or UML.
1.5	AI/Data Solution Prototype, Demonstration, and Performance Metrics Report assessing application of AI and data-driven solutions to improve business processes, performance, and competitive positioning.

1.6	Organisational Impact Report, Value-Creation Analysis, and Oral Defence/Presentation assessing critical evaluation of organisational impact using ROI, KPIs, balanced scorecards, or other appropriate performance and value-creation metrics.
2	PLO Technology Trend Monitoring [EQF6]
2.1	Annotated portfolio submission and short written test assessing correct identification of AI concepts, techniques, and emerging areas, including examples such as generative AI, reinforcement learning, and computer vision tools.
2.2	Comparative analysis table with oral explanation or peer review, assessed for use of defined criteria such as potential, maturity, and applicability based on industry reports, vendor offerings, or research updates.
2.3	Trend mapping report and written report evaluation assessing classification of internal and external AI innovation sources, including trend reports, patents, newsfeeds, and academic publications.
2.4	Mini prototype or simulation demonstration with lab report, assessed for correct application of basic methods and tools to explore AI-enabled use cases using trending technologies.
2.5	Ethics and impact briefing assessed with a rubric for description and consideration of ethical, data protection, and organisational issues in emerging technologies and current AI applications.
2.6	Presentation or dashboard, evaluated by peers and instructor, assessing clear presentation and justification of AI trend observations and insights summarising technology developments.
3	PLO Innovating [EQF7]
3.1	Team collaboration report documenting AI solution design efforts, assessed for coordination of roles, expertise, and development activities to address complex professional or societal problems.
3.2	Architecture/integration report for AI solution, assessed for integration of system architecture, workflows, and governance constraints in the AI-based solution.
3.3	Deployed AI solution demonstration or portfolio submission assessing practical implementation of AI technologies and evidence of impact in real-world organizational or professional environments.
3.4	Evaluation report measuring real-world AI solution effectiveness and applicability using operational, stakeholder, or performance criteria.
3.5	Risk/trade-off analysis report for AI innovation projects, assessed for management of trade-offs between innovation, feasibility, time, resources, and risk.
3.6	Stakeholder communication materials (presentations, briefs) for AI innovations, assessed for communication of value, limitations, and implementation implications to stakeholders.
4	PLO Needs Identification [EQF7]
4.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs showing leadership of cross-functional stakeholder engagement and validation of complex organizational needs.
4.2	AI Solution Alignment Report – assessed via written report analysing AI solutions against strategic, regulatory, and value alignment using strategic planning frameworks or business model analysis.
4.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results for make-or-buy, SaaS, cloud, low-code/no-code, and emerging technology options.

4.4	AI Implementation & Enhancement Plan – assessed via documented implementation roadmap with iterative improvement strategy for AI solutions, including adoption, feedback loops, and human-centred design considerations.
5	PLO Risk Management [EQF6]
5.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks.
5.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the AI deployment environment.
5.3	Mitigation plan submission assessed for feasibility, relevance, application to reduce AI-related risks, and alignment with defined project, product, or service boundaries.
5.4	Oral presentation or report evaluated for clarity, communication of AI risk findings, mitigation plans, and stakeholder engagement in project or organisational settings.
5.5	Review of AI system performance logs, annotated with identified emerging risks such as model drift or data anomalies and supporting analysis.
5.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.
6	PLO Relationship Management [EQF7]
6.1	Stakeholder engagement strategy document; assessed with rubric for strategic depth, integration of ethical/cultural factors, application of strategic planning tools or scenario analyses, and completeness.
6.2	Workshop artifacts, collaboration logs, or team alignment reports; evaluated for effectiveness of communication, facilitation, collaboration approach, and team outcomes.
6.3	Workshop or meeting minutes documenting conflict resolution and consensus; evaluated on mediation quality, decision outcomes, and leadership of cross-functional dialogue.
6.4	Impact assessment report; assessed on use of feedback, adoption metrics, team-performance evidence, and data supporting stakeholder alignment and responsible AI adoption.
6.5	Updated engagement plan or pilot project report; assessed on adaptability, responsiveness to emerging AI-related challenges, and use of stakeholder input or pilot project insights.
6.6	Guidelines, training materials, or briefing reports; assessed on clarity, ethical rigor, cultural sensitivity, and advocacy for responsible AI practices.
6.7	Final stakeholder engagement report; assessed for completeness, documentation quality, audit suitability, and relevance for organizational learning.
7	PLO Process Improvement [EQF7]
7.1	Evaluation report assessed for completeness, accuracy, and integration of AI performance metrics and governance practices in workflow evaluation.
7.2	Consolidated workflow documentation or project plan graded on clarity, coordination, integration, and cross-functional process coverage across teams or systems.
7.3	Optimized workflow diagrams or implementation logs evaluated for use of data-driven insights and measurable efficiency improvements in AI workflows.
7.4	Compliance checklist or audit report reviewed for thoroughness and adherence to ethical, compliance, and security standards in enterprise AI process improvements.

7.5	KPI analysis report or dashboards graded on validity of analysis, conclusions, and measurable impact of workflow changes on organizational performance and AI solution effectiveness.
7.6	Knowledge repository, workshop materials, or presentations assessed for clarity, usefulness, dissemination quality, and support for communication and knowledge transfer between teams.
7.7	Innovation proposal evaluated on originality, feasibility, alignment with AI trends, and identification of opportunities for AI process innovation.
8	PL0 Business Change Management [EQF7]
8.1	AI Transformation Leadership Plan and Team Coordination Documentation assessed for leadership of team activities and responsibilities in cross-functional or multi-departmental AI transformation projects.
8.2	Adaptive Adoption Strategy Report and Compliance Checklist assessed for implementation of adaptive AI adoption strategies and compliance with governance and ethical standards in real-world organizational processes.
8.3	AI Performance Metrics Report and KPI Dashboard assessed for monitoring of AI performance metrics and use of dashboards, KPIs, or AI monitoring tools to optimize adoption and operational outcomes.
8.4	Problem-Solving Case Documentation and Analytical Report of Resolved Issues assessed for application of problem-solving methods to technical, human, or process-related AI implementation challenges.
8.5	Impact Evaluation Report, Performance Metrics Analysis, and Comparative Tables assessed for qualitative and quantitative evaluation of AI adoption impact on team performance and organizational processes.

	SUPPORT & GUIDANCE		[3]
Profile title	AI SAFETY SPECIALIST		[EP 3.5]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI safety specialist. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Designs and implements systems, safety measures and tools to detect and prevent abuse, promote user safety, and reduce risks across AI platforms and throughout the development process. Conducts risk assessments to identify potential harms associated with AI systems. Assists in responding to incidents.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.7.	Technology Trend Monitoring	e-3
	A.8.	Sustainability Management	e-3
	B.3.	Testing	e-3
	D.3.	Education and Training Provision	e-3
	E.3.	Risk Management	e-3
	E.8.	Information Security Management	e-3
Complexity	The profile has an EQF6 level.		

1. PLO Technology Trend Monitoring [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Monitor and assess emerging AI technologies in partially defined contexts by identifying trends, analysing developments, and applying insights to small-scale use cases.	
Unit Learning Outcomes	
1.1	Identify key concepts, techniques, and emerging areas in AI by tracking technological trends and innovations such as generative AI, reinforcement learning, and computer vision tools.
1.2	Analyse and compare AI technologies and tools using defined criteria such as potential, maturity, and applicability in the context of industry reports, vendor offerings, or research updates.
1.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
1.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.
1.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.

1.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.
2. PLO Sustainability Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Evaluate and enhance the sustainability performance of AI-based systems in professional contexts by applying appropriate assessment methods, comparing implementation options, and communicating actionable improvements within project teams.	
Unit Learning Outcomes	
2.1	Analyse the environmental, social, and economic performance of AI systems in applied project settings, such as optimising machine-learning workflows for energy efficiency.
2.2	Evaluate alternative AI implementation strategies for their sustainability impact by comparing model, data, or infrastructure choices, and propose feasible improvements.
2.3	Apply sustainability assessment tools and methods to AI projects using established frameworks or metrics, under minimal supervision.
2.4	Report findings and recommendations to team members and stakeholders in professional project documentation or presentations, for improving AI practices.
2.5	Identify common sustainability risks and trade-offs in AI systems in practical development or deployment scenarios, such as data volume, model size, or hardware use.
2.6	Reflect on personal and team responsibilities in applying sustainable AI practices within supervised professional or educational projects.

3. PLO Testing [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Conduct comprehensive testing of AI and ICT systems to assess correctness, robustness, interpretability, and compliance by applying evaluation procedures that produce actionable improvement recommendations in complex scenarios.	
Unit Learning Outcomes	
3.1	Apply evaluation procedures to test AI systems in partially unpredictable scenarios.
3.2	Analyse AI model outputs for correctness, performance, robustness, and interpretability using quantitative metrics and exploratory techniques.
3.3	Evaluate AI outputs for fairness, bias, and compliance with ethical and regulatory standards in practical system deployments.
3.4	Report findings with actionable recommendations for system improvement through structured reports or team presentations.
3.5	Apply multiple AI evaluation metrics and explainability techniques such as SHAP, LIME, or model confidence analysis to assess AI system behaviour.

4. PLO Education and Training Provision [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Design and implement AI training programmes that integrate organisational AI strategy and employee AI literacy, using evaluation tools to monitor effectiveness and adjust content for improving team AI competence.	
Unit Learning Outcomes	
4.1	Design AI training modules that address organisational AI skill gaps and foster employee AI literacy, using role-specific AI use cases and practical learning scenarios.
4.2	Implement AI training programmes by delivering sessions and applying AI tools or simulations to illustrate AI concepts, in workplace-based learning and training environments.
4.3	Monitor and adjust AI learning programmes using feedback and performance data to improve team-level AI competence, by analysing learning analytics and training outcomes.
4.4	Integrate AI ethics and governance principles into training content to ensure responsible AI adoption, such as fairness, transparency, and data protection in applied AI use.
4.5	Support learners during AI training activities by explaining concepts, facilitating discussions, and responding to questions, in guided and instructor-led training settings.
4.6	Apply basic instructional design principles to structure AI learning content and activities, using established training frameworks and learning objectives.
7. PLO Risk Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities	
Unit Learning Outcomes	
7.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
7.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
7.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
7.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
7.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
7.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.

6. PLO Information Security Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Ensure the security and reliability of AI systems by assessing vulnerabilities, applying secure development practices, and implementing mitigation strategies using appropriate tools and collaborative methods.	
Unit Learning Outcomes	
6.1	Analyse AI system components and workflows to identify potential security vulnerabilities in development or operational pipelines.
6.2	Evaluate AI risks related to data, models, deployment, and operation using established risk assessment frameworks and tools.
6.3	Apply secure AI development and operational practices (DevSecMLOps) to mitigate identified risks in practical project scenarios.
6.4	Implement AI monitoring and anomaly detection using software tools or supervised techniques.
6.5	Collaborate effectively in teams to plan and execute AI security measures in applied projects or simulated operational scenarios.

Assessments AI SAFETY SPECIALIST [EP 3.5]	
1	PLO Technology Trend Monitoring [EQF6]
1.1	Annotated portfolio submission and short written test assessing correct identification of AI concepts, techniques, and emerging areas, including examples such as generative AI, reinforcement learning, and computer vision tools.
1.2	Comparative analysis table with oral explanation or peer review, assessed for use of defined criteria such as potential, maturity, and applicability based on industry reports, vendor offerings, or research updates.
1.3	Trend mapping report and written report evaluation assessing classification of internal and external AI innovation sources, including trend reports, patents, newsfeeds, and academic publications.
1.4	Mini prototype or simulation demonstration with lab report, assessed for correct application of basic methods and tools to explore AI-enabled use cases using trending technologies.
1.5	Ethics and impact briefing assessed with a rubric for description and consideration of ethical, data protection, and organisational issues in emerging technologies and current AI applications.
1.6	Presentation or dashboard, evaluated by peers and instructor, assessing clear presentation and justification of AI trend observations and insights summarising technology developments.
2	PLO Sustainability Management [EQF6]
2.1	Sustainability analysis report of an AI system assessed for analysis of environmental, social, and economic performance in an applied project setting, including energy-efficiency considerations where relevant.

2.2	Comparative evaluation matrix with written improvement proposal assessing sustainability impacts of alternative model, data, or infrastructure choices and feasibility of proposed improvements.
2.3	Completed sustainability assessment framework applied to an AI project, assessed for correct use of established sustainability tools, methods, frameworks, or metrics under minimal supervision.
2.4	Project presentation or written project memo assessed for clear reporting of findings and actionable recommendations to team members and stakeholders for improving AI practices.
2.5	Sustainability risk and trade-off identification document assessed for identification of practical AI sustainability risks and trade-offs, including data volume, model size, or hardware use where applicable.
2.6	Structured reflective statement on sustainable AI practice assessed for reflection on personal and team responsibilities within supervised professional or educational projects.
3	PLO Testing [EQF6]
3.1	Review of AI evaluation plan assessing application of evaluation procedures for testing AI systems in partially unpredictable scenarios.
3.2	Assessment of AI analytical report evaluating analysis of AI model outputs for correctness, performance, robustness, and interpretability using quantitative metrics and exploratory techniques.
3.3	Evaluation of AI fairness/compliance report assessing fairness, bias, and compliance with ethical and regulatory standards in practical system deployments.
3.4	Review of AI recommendation report assessing structured findings and actionable recommendations for AI system improvement.
3.5	Inspection of AI metric/explainability outputs assessing application of multiple AI evaluation metrics and explainability techniques such as SHAP, LIME, or model confidence analysis to assess AI system behaviour.
4	PLO Education and Training Provision [EQF6]
4.1	Assessment of AI training module design document and AI use-case mapping for coverage of organizational AI skill gaps, employee AI literacy, role-specific AI use cases, and practical learning scenarios.
4.2	Evaluation of AI training materials and recorded or observed AI training session assessing delivery of training and use of AI tools or simulations to illustrate AI concepts in workplace-based learning environments.
4.3	Review of AI learning feedback summary and revised AI training content assessing use of feedback, performance data, learning analytics, and training outcomes to improve team-level AI competence.
4.4	Assessment of AI ethics and governance training materials and applied AI case examples for integration of fairness, transparency, data protection, and responsible AI adoption principles.
4.5	Evaluation of documented AI learner support evidence and facilitation notes assessing explanation of concepts, facilitation of discussions, and responses to learner questions in guided or instructor-led training settings.

4.6	Review of AI instructional design rationale and alignment with learning objectives, assessed for use of basic instructional design principles, established training frameworks, and coherent learning activities.
5	PLO Risk Management [EQF6]
5.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks.
5.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the AI deployment environment.
5.3	Mitigation plan submission assessed for feasibility, relevance, application to reduce AI-related risks, and alignment with defined project, product, or service boundaries.
5.4	Oral presentation or report evaluated for clarity, communication of AI risk findings, mitigation plans, and stakeholder engagement in project or organisational settings.
5.5	Review of AI system performance logs, annotated with identified emerging risks such as model drift or data anomalies and supporting analysis.
5.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.
6	PLO Information Security Management [EQF7]
6.1	Evaluation of Vulnerability Analysis Report detailing AI components and workflow weaknesses, assessed for identification of potential security vulnerabilities in development or operational pipelines.
6.2	Review of Risk Assessment Matrix, including severity and mitigation measures, using rubric-based assessment of AI risks related to data, models, deployment, and operation.
6.3	Assessment of Secure Development Implementation Plan, including evidence of applied DevSecMLOps practices to mitigate identified risks in practical project scenarios.
6.4	Observation and review of Monitoring Dashboard or Log outputs during lab exercises, assessed for implementation of AI monitoring and anomaly detection using software tools or supervised techniques.
6.5	Assessment of Team Project Security Plan documentation, with peer and instructor evaluation of collaboration, security planning, and execution of AI security measures in applied or simulated operational scenarios.

	SUPPORT & GUIDANCE		[3]
Profile title	RESPONSIBLE AI OFFICER		[EP 3.6]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile responsible AI officer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Establishes, maintains, communicates and promotes AI ethics policies, guidelines, and protocols for AI development, deployment and use within the organisation, in line with corporate governance guardrails. Conducts ethical reviews, evaluates and monitors AI applications and their consequences on different stakeholder groups and on fundamental human rights. Ensures accountability for AI-related decisions and actions from an ethical lens.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.7.	Technology Trend Monitoring	e-3
	A.8.	Sustainability Management	e-3
	B.5.	Documentation Production	e-3
	D.2.	ICT Quality Strategy Development	e-4
	D.3.	Education and Training Provision	e-3
	E.5.	Process Improvement	e-4
Complexity	The profile has an EQF7 level.		

1. PLO Technology Trend Monitoring [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Monitor and assess emerging AI technologies in partially defined contexts by identifying trends, analysing developments, and applying insights to small-scale use cases.	
Unit Learning Outcomes	
1.1	Identify key concepts, techniques, and emerging areas in AI by tracking technological trends and innovations such as generative AI, reinforcement learning, and computer vision tools.
1.2	Analyse and compare AI technologies and tools using defined criteria such as potential, maturity, and applicability in the context of industry reports, vendor offerings, or research updates.
1.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
1.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.

1.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.
1.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.

2. PLO Sustainability Management [EQF6]

The learner has demonstrated ability to...

Evaluate and enhance the sustainability performance of AI-based systems in professional contexts by applying appropriate assessment methods, comparing implementation options, and communicating actionable improvements within project teams.

Unit Learning Outcomes

2.1	Analyse the environmental, social, and economic performance of AI systems in applied project settings, such as optimising machine-learning workflows for energy efficiency.
2.2	Evaluate alternative AI implementation strategies for their sustainability impact by comparing model, data, or infrastructure choices, and propose feasible improvements.
2.3	Apply sustainability assessment tools and methods to AI projects using established frameworks or metrics, under minimal supervision.
2.4	Report findings and recommendations to team members and stakeholders in professional project documentation or presentations, for improving AI practices.
2.5	Identify common sustainability risks and trade-offs in AI systems in practical development or deployment scenarios, such as data volume, model size, or hardware use.
2.6	Reflect on personal and team responsibilities in applying sustainable AI practices within supervised professional or educational projects.

3. PLO Documentation Production [EQF6]

The learner has demonstrated ability to...

Apply document-management practices and develop AI-specific documentation, including technical specifications, compliance records, and transparency reports, independently within broad project frameworks, by integrating information from multiple AI system components and ensuring alignment with regulatory and stakeholder requirements in projects with variable challenges

Unit Learning Outcomes

3.1	Apply document-management and collaboration practices to AI projects independently, using systems that enable coordinated document creation and version control.
3.2	Develop AI-specific technical, compliance, and transparency documentation for multiple system components, such as model specifications, system interfaces, and regulatory reports.
3.3	Integrate information from different AI system elements into cohesive and accessible documentation, by consolidating data from datasets, model outputs, and system logs.
3.4	Ensure that AI documentation meets regulatory, ethical, and stakeholder requirements, in accordance with applicable legal, ethical, and organisational standards.
3.5	Adapt and modify existing templates or documentation structures to suit variable AI project contexts, by aligning documentation with project-specific requirements or new system components.

4. PLO ICT Quality Strategy Development [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Define, evaluate, coordinate, and optimise AI quality strategies by integrating ethical, resilience, and performance considerations across AI systems, using relevant frameworks and monitoring to address complex problems and enhance organisational outcomes.	
Unit Learning Outcomes	
4.1	Define AI quality strategies by applying principles of ethics, performance, and resilience, using frameworks such as ISO/IEC 42001, EU AI Ethics Guidelines, and Explainable AI best practices.
4.2	Evaluate AI system interactions, interdependencies, and quality objectives against organisational goals, using AI performance metrics, KPIs, and benchmarking tools.
4.3	Coordinate cross-functional activities to implement AI quality strategies and ensure alignment with organisational objectives.
4.4	Optimise AI quality strategies by integrating strategic monitoring, feedback loops, and continuous improvement practices.
4.5	Solve strategic AI quality challenges across multiple systems by applying evidence-based decision-making.
4.6	Report and communicate strategic AI quality outcomes, lessons learned, and recommendations for organisational decision-making.
5. PLO Education and Training Provision [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Design and implement AI training programmes that integrate organisational AI strategy and employee AI literacy, using evaluation tools to monitor effectiveness and adjust content for improving team AI competence.	
Unit Learning Outcomes	
5.1	Design AI training modules that address organisational AI skill gaps and foster employee AI literacy, using role-specific AI use cases and practical learning scenarios.
5.2	Implement AI training programmes by delivering sessions and applying AI tools or simulations to illustrate AI concepts, in workplace-based learning and training environments.
5.3	Monitor and adjust AI learning programmes using feedback and performance data to improve team-level AI competence, by analysing learning analytics and training outcomes.
5.4	Integrate AI ethics and governance principles into training content to ensure responsible AI adoption, such as fairness, transparency, and data protection in applied AI use.
5.5	Support learners during AI training activities by explaining concepts, facilitating discussions, and responding to questions, in guided and instructor-led training settings.
5.6	Apply basic instructional design principles to structure AI learning content and activities, using established training frameworks and learning objectives.

6. PLO Process Improvement [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Optimise AI development and operational processes by coordinating complex workflows, applying integrated performance metrics, and embedding governance practices that ensure ethical, secure, and high-performing solutions.	
Unit Learning Outcomes	
6.1	Integrate complex AI performance metrics and governance practices to evaluate existing workflows in multi-team AI projects.
6.2	Coordinate multiple AI development and operational processes across teams or systems by implementing cross-functional workflows.
6.3	Refine and optimise AI workflows using data-driven insights and best practices from deployed AI systems.
6.4	Ensure ethical, compliance, and security considerations are incorporated into process improvements in enterprise AI deployments.
6.5	Monitor and assess the impact of workflow changes on organisational performance and AI solution effectiveness using measurable KPIs.
6.6	Facilitate communication and knowledge transfer between teams to support process improvement through workshops and documentation.
6.7	Identify opportunities for AI process innovation by analysing emerging trends and technologies.

Assessments RESPONSIBLE AI OFFICER [EP 3.6]	
1	PLO Technology Trend Monitoring [EQF6]
1.1	Annotated portfolio submission and short written test assessing correct identification of AI concepts, techniques, and emerging areas, including examples such as generative AI, reinforcement learning, and computer vision tools.
1.2	Comparative analysis table with oral explanation or peer review, assessed for use of defined criteria such as potential, maturity, and applicability based on industry reports, vendor offerings, or research updates.
1.3	Trend mapping report and written report evaluation assessing classification of internal and external AI innovation sources, including trend reports, patents, newsfeeds, and academic publications.
1.4	Mini prototype or simulation demonstration with lab report, assessed for correct application of basic methods and tools to explore AI-enabled use cases using trending technologies.
1.5	Ethics and impact briefing assessed with a rubric for description and consideration of ethical, data protection, and organisational issues in emerging technologies and current AI applications.
1.6	Presentation or dashboard, evaluated by peers and instructor, assessing clear presentation and justification of AI trend observations and insights summarising technology developments.

2	PLO Sustainability Management [EQF6]
2.1	Sustainability analysis report of an AI system assessed for analysis of environmental, social, and economic performance in an applied project setting, including energy-efficiency considerations where relevant.
2.2	Comparative evaluation matrix with written improvement proposal assessing sustainability impacts of alternative model, data, or infrastructure choices and feasibility of proposed improvements.
2.3	Completed sustainability assessment framework applied to an AI project, assessed for correct use of established sustainability tools, methods, frameworks, or metrics under minimal supervision.
2.4	Project presentation or written project memo assessed for clear reporting of findings and actionable recommendations to team members and stakeholders for improving AI practices.
2.5	Sustainability risk and trade-off identification document assessed for identification of practical AI sustainability risks and trade-offs, including data volume, model size, or hardware use where applicable.
2.6	Structured reflective statement on sustainable AI practice assessed for reflection on personal and team responsibilities within supervised professional or educational projects.
3	PLO Documentation Production [EQF6]
3.1	Evaluation of AI documentation repository for organization, version control, coordinated document creation, collaborative workflow evidence, and peer-review of individual contributions.
3.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components, graded for completeness, accuracy, and coverage of model specifications, system interfaces, and regulatory reports.
3.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs, assessed for clarity, cohesion, accessibility, and accurate integration across AI system elements.
3.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements, supported by a compliance verification report referencing applicable legal, ethical, and organizational standards.
3.5	Evaluation of customized AI documentation templates and modified project documentation, assessed for alignment with project-specific requirements, new system components, and adaptability to variable AI project contexts.
4	PLO ICT Quality Strategy Development [EQF7]
4.1	AI strategy document submission, Strategy alignment matrix review, and Risk brief presentation assessed for defining AI quality strategies using ethics, performance, resilience, and relevant AI quality frameworks.
4.2	AI evaluation report analysis, KPI framework submission, and Benchmarking report review assessed for evaluation of AI system interactions, interdependencies, and quality objectives against organizational goals.
4.3	Coordination plan review, Stakeholder map submission, and Executive summary presentation assessed for coordination of cross-functional activities and alignment of AI quality strategy implementation with organizational objectives.

4.4	AI optimization plan submission, Monitoring framework evaluation, and Recommendation report review assessed for integration of strategic monitoring, feedback loops, and continuous improvement practices.
4.5	Problem-solving case study submission, Decision log analysis, and Scenario planning report presentation assessed for evidence-based decisions addressing strategic AI quality challenges across multiple systems.
4.6	AI quality report submission, Executive slides presentation, and Visual dashboard demonstration assessed for communication of AI quality outcomes, lessons learned, and recommendations for organizational decision-making.
5	PLO Education and Training Provision [EQF6]
5.1	Assessment of AI training module design document and AI use-case mapping for coverage of organizational AI skill gaps, employee AI literacy, role-specific AI use cases, and practical learning scenarios.
5.2	Evaluation of AI training materials and recorded or observed AI training session assessing delivery of training and use of AI tools or simulations to illustrate AI concepts in workplace-based learning environments.
5.3	Review of AI learning feedback summary and revised AI training content assessing use of feedback, performance data, learning analytics, and training outcomes to improve team-level AI competence.
5.4	Assessment of AI ethics and governance training materials and applied AI case examples for integration of fairness, transparency, data protection, and responsible AI adoption principles.
5.5	Evaluation of documented AI learner support evidence and facilitation notes assessing explanation of concepts, facilitation of discussions, and responses to learner questions in guided or instructor-led training settings.
5.6	Review of AI instructional design rationale and alignment with learning objectives, assessed for use of basic instructional design principles, established training frameworks, and coherent learning activities.
6	PLO Process Improvement [EQF7]
6.1	Evaluation report assessed for completeness, accuracy, and integration of AI performance metrics and governance practices in workflow evaluation for multi-team AI projects.
6.2	Consolidated workflow documentation or project plan graded on clarity, coordination, integration, and cross-functional process coverage across teams or systems.
6.3	Optimized workflow diagrams or implementation logs evaluated for use of data-driven insights, best practices from deployed AI systems, and measurable efficiency improvements.
6.4	Compliance checklist or audit report reviewed for thoroughness and adherence to ethical, compliance, and security standards in enterprise AI process improvements.
6.5	KPI analysis report or dashboards graded on validity of analysis, conclusions, and measurable impact of workflow changes on organisational performance and AI solution effectiveness.
6.6	Knowledge repository, workshop materials, or presentations assessed for clarity, usefulness, dissemination quality, and support for communication and knowledge transfer between teams.

6.7	Innovation proposal evaluated on originality, feasibility, alignment with AI trends, and identification of opportunities for AI process innovation.

	SUPPORT & GUIDANCE		[3]
Profile title	SUSTAINABLE AI LEAD		[EP 3.7]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile sustainable AI lead. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Minimises the environmental footprint and long-term societal impact of AI by guiding responsible resource use, lifecycle management, and sustainability-aligned decision-making.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.1.	IS and Business Strategy Alignment	e-4
	A.7.	Technology Trend Monitoring	e-3
	A.8.	Sustainability Management	e-4
	D.4.	Purchasing	e-3
	D.10.	Information and Knowledge Management	e-4
	E.4.	Relationship Management	e-3
Complexity	The profile has an EQF7 level.		

1. PLO IS and Business Strategy Alignment [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Analyse complex organisational environments to align information systems and AI capabilities with business strategy, evaluating governance, ethical, regulatory, and risk requirements, and designing integrated IS models and enterprise architectures that enhance organisational performance in dynamic, multidisciplinary contexts.	
Unit Learning Outcomes	
1.1	Analyse organisational strategies and operating models to identify business needs, priorities, risks, and opportunities for IS and AI enablement, using enterprise case studies or organisational datasets.
1.2	Evaluate the alignment between business strategy and existing IS, data, and AI capabilities, identifying gaps and improvement opportunities by mapping technology portfolios to strategic objectives.
1.3	Assess IS and AI governance frameworks, including ethical, legal, regulatory, and risk considerations, in support of strategic alignment, in compliance with industry standards and organisational policies.

1.4	Design and evaluate integrated IS models and enterprise architectures that support business objectives and strategic decision-making, using modelling tools such as ArchiMate or UML.
1.5	Apply AI and data-driven solutions to improve business processes, performance, and competitive positioning, by implementing predictive analytics, process automation, or recommendation systems.
1.6	Critically evaluate the organisational impact of IS–business alignment initiatives, using appropriate performance and value-creation metrics, such as ROI, KPIs, or balanced scorecards.

2. PLO Technology Trend Monitoring [EQF6]

The learner has demonstrated ability to...

Monitor and assess emerging AI technologies in partially defined contexts by identifying trends, analysing developments, and applying insights to small-scale use cases.

Unit Learning Outcomes

2.1	Identify key concepts, techniques, and emerging areas in AI by tracking technological trends and innovations such as generative AI, reinforcement learning, and computer vision tools.
2.2	Analyse and compare AI technologies and tools using defined criteria such as potential, maturity, and applicability in the context of industry reports, vendor offerings, or research updates.
2.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
2.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.
2.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.
2.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.

3. PLO Sustainability Management [EQF7]

The learner has demonstrated ability to...

Design and orchestrate sustainable AI strategies across multiple organisational initiatives by integrating environmental, social, and economic considerations into coordinated decision-making and stakeholder guidance.

Unit Learning Outcomes

3.1	Design AI deployment strategies that optimise environmental, social, and economic outcomes across organisational projects, such as portfolio-level AI planning.
3.2	Coordinate cross-functional teams to implement sustainable AI practices in professional or organisational environments, including technical and non-technical roles.
3.3	Assess the long-term impacts of AI initiatives on organisational sustainability objectives by considering lifecycle, scaling, and governance effects.

3.4	Advise stakeholders on responsible AI practices in strategic decision-making contexts, including energy-efficient and socially equitable AI solutions.
3.5	Compare and prioritise sustainability interventions for AI systems using organisational constraints and strategic goals, to support informed decision-making.
3.6	Translate organisational sustainability policies into AI-related requirements within project or program planning processes.

4. PLO Purchasing [EQF6]

The learner has demonstrated ability to...

Acquire AI solutions that maximise organisational value, performance, and compliance by aligning business needs with supplier capabilities, ethical standards, and regulatory requirements through informed and strategic procurement decisions.

Unit Learning Outcomes

4.1	Analyse organisational AI needs by identifying functional and non-functional requirements, such as performance, explainability, robustness, and retraining obligations.
4.2	Evaluate AI suppliers' capabilities, ethical practices, and risk profiles using multi-criteria assessment methods, such as cost, compliance, sustainability, and governance factors.
4.3	Interpret legal, regulatory, and organisational standards applicable to AI procurement and deployment, such as data protection, bias mitigation, and accountability requirements.
4.4	Design or recommend AI acquisition strategies that balance cost, compliance, sustainability, and business value in organisational decision-making.
4.5	Apply analytical reasoning and ethical judgment when assessing trade-offs between supplier offerings, contract terms, and technical solution characteristics.
4.6	Demonstrate initiative and collaborative behaviour in moderately complex AI procurement tasks, such as cross-functional evaluation or supplier negotiation scenarios.

5. PLO Information and Knowledge Management [EQF7]

The learner has demonstrated ability to...

Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organisational units by aligning AI knowledge management with organisational objectives, governance requirements, and innovation needs.

Unit Learning Outcomes

5.1	Design and evaluate AI knowledge management structures for complex or cross-unit AI initiatives involving multiple stakeholders.
5.2	Advise on the AI knowledge lifecycle, including creation, validation, governance, maintenance, and reuse of AI models, data, and related artifacts.
5.3	Develop and improve governance approaches for AI knowledge and information by integrating organisational, regulatory, ethical, and strategic considerations.
5.4	Facilitate collaborative knowledge sharing and learning across interdisciplinary teams engaged in AI development, deployment, or oversight.

5.5	Align AI knowledge management practices with organisational objectives to support innovation, effectiveness, and sustainable use of AI technologies.

6. PLO Relationship Management [EQF6]

The learner has demonstrated ability to...

Achieve effective stakeholder alignment and support ethical AI adoption by analysing expectations, addressing privacy concerns, and coordinating collaborative solutions using communication techniques, project documentation, and digital platforms.

Unit Learning Outcomes

6.1	Analyse stakeholder expectations and concerns in AI projects, including ethical and privacy issues, using case studies, surveys, or system documentation.
6.2	Apply communication techniques to address AI adoption challenges, such as team discussions, presentations, or messaging platforms.
6.3	Collaborate effectively with peers in AI projects by participating in group tasks and using digital collaboration tools.
6.4	Coordinate stakeholder interactions using project documentation and digital platforms, in contexts such as shared repositories or feedback loops.
6.5	Evaluate the effectiveness of proposed solutions for AI-related stakeholder issues by reviewing outcomes, feedback, or implementation results.
6.6	Suggest improvements to stakeholder engagement strategies using lessons learned from project simulations or peer review exercises.

Assessments SUSTAINABLE AI LEAD [EP 3.7]	
1	PLO IS and Business Strategy Alignment [EQF7]
1.1	Written Report, Case Study Analysis, and Data-Driven Mapping assessing analysis of organisational strategies and operating models to identify business needs, priorities, risks, and opportunities for IS and AI enablement using enterprise case studies or organisational datasets.
1.2	Alignment Assessment Report, Portfolio Review, and Gap Analysis Presentation assessing mapped alignment between business strategy and existing IS, data, and AI capabilities, with identified gaps and improvement opportunities linked to strategic objectives.
1.3	Governance Assessment Report and Compliance Checklist Submission assessing IS and AI governance frameworks for ethical, legal, regulatory, and risk considerations in compliance with industry standards and organisational policies.
1.4	IS/Architecture Design Diagrams and Modelling Artefact Review assessing design and evaluation of integrated IS models and enterprise architectures supporting business objectives and strategic decision-making using ArchiMate or UML.
1.5	AI/Data Solution Prototype, Demonstration, and Performance Metrics Report assessing application of AI and data-driven solutions to improve business processes, performance, and competitive positioning.

1.6	Organisational Impact Report, Value-Creation Analysis, and Oral Defence/Presentation assessing critical evaluation of organisational impact using ROI, KPIs, balanced scorecards, or other appropriate performance and value-creation metrics.
2	PLO Technology Trend Monitoring [EQF6]
2.1	Annotated portfolio submission and short written test assessing correct identification of AI concepts, techniques, and emerging areas, including examples such as generative AI, reinforcement learning, and computer vision tools.
2.2	Comparative analysis table with oral explanation or peer review, assessed for use of defined criteria such as potential, maturity, and applicability based on industry reports, vendor offerings, or research updates.
2.3	Trend mapping report and written report evaluation assessing classification of internal and external AI innovation sources, including trend reports, patents, newsfeeds, and academic publications.
2.4	Mini prototype or simulation demonstration with lab report, assessed for correct application of basic methods and tools to explore AI-enabled use cases using trending technologies.
2.5	Ethics and impact briefing assessed with a rubric for description and consideration of ethical, data protection, and organisational issues in emerging technologies and current AI applications.
2.6	Presentation or dashboard, evaluated by peers and instructor, assessing clear presentation and justification of AI trend observations and insights summarising technology developments.
3	PLO Sustainability Management [EQF7]
3.1	Sustainable AI strategy document assessed for design of AI deployment strategies that optimize environmental, social, and economic outcomes across organizational projects.
3.2	Cross-functional coordination plan with role and process definition, assessed for coordination of technical and non-technical roles to implement sustainable AI practices.
3.3	Long-term AI sustainability impact assessment report assessed for lifecycle, scaling, and governance effects on organizational sustainability objectives.
3.4	Responsible AI advisory brief for stakeholders, assessed for advice on responsible AI practices, energy-efficient solutions, and socially equitable AI solutions in strategic decision-making contexts.
3.5	Sustainability intervention prioritization framework assessed for comparison and prioritization of AI sustainability interventions using organizational constraints and strategic goals.
3.6	Policy-to-AI requirement mapping document assessed for accurate translation of organizational sustainability policies into AI-related project or program requirements.
4	PLO Purchasing [EQF6]
4.1	Assessment of AI requirements specification and AI gap analysis report, using written submission and rubric-based evaluation, assessed for functional and non-functional AI requirements including performance, explainability, robustness, and retraining obligations.
4.2	Assessment of AI supplier evaluation matrix and AI risk assessment, using case study analysis, structured report, and rubric, assessed for supplier capabilities, ethical practices, risk profiles, cost, compliance, sustainability, and governance factors.

4.3	Assessment of AI compliance mapping and AI standards checklist, using written assignment, compliance mapping exercise, and peer review, assessed for interpretation of legal, regulatory, and organisational standards for AI procurement and deployment.
4.4	Assessment of AI procurement recommendation and AI contract framework, using project report, scenario-based evaluation, and rubric, assessed for balancing cost, compliance, sustainability, and business value in AI acquisition strategy.
4.5	Assessment of AI decision rationale and AI ethical impact assessment, using reflective report, structured decision log, and rubric, assessed for analytical reasoning and ethical judgment in supplier, contract, and technical trade-offs.
4.6	Assessment of AI cross-functional consultation outputs and AI integrated procurement dossier, using portfolio submission, presentation, and peer and instructor evaluation, assessed for initiative and collaboration in AI procurement tasks.
5	PLO Information and Knowledge Management [EQF7]
5.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design for complex or cross-unit AI initiatives involving multiple stakeholders.
5.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines covering creation, validation, governance, maintenance, and reuse of AI models, data, and related artifacts.
5.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment, evaluated for integration of organizational, regulatory, ethical, and strategic considerations.
5.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model, assessed for facilitation of collaborative learning across interdisciplinary teams engaged in AI development, deployment, or oversight.
5.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report, evaluated for alignment with organizational objectives and support for innovation, effectiveness, and sustainable use of AI technologies.
6	PLO Relationship Management [EQF6]
6.1	Written stakeholder analysis report, graded on clarity, completeness, and analysis of stakeholder expectations, concerns, ethical issues, and privacy issues using case studies, surveys, or system documentation.
6.2	Presentation or recorded team briefing assessed on clarity, relevance, communication effectiveness, and appropriate use of communication techniques to address AI adoption challenges.
6.3	Peer evaluation and review of collaborative project documentation and contribution logs, assessed for effective peer collaboration, participation in group tasks, and use of digital collaboration tools.
6.4	Submission of coordinated project documentation with stakeholder feedback records, shared repository or feedback-loop evidence, and rubric-based evaluation of stakeholder interaction coordination.
6.5	Evaluation report or reflective log comparing proposed versus actual solutions for AI-related stakeholder issues, assessed on analytical reasoning and use of outcomes, feedback, or implementation results.

6.6	Recommendations report or lessons learned document suggesting improvements to stakeholder engagement strategies, assessed on feasibility, clarity, actionable insights, and use of project simulation or peer review evidence.

	SUPPORT & GUIDANCE		[3]
Profile title	HUMAN-AI INTERACTION LEAD		[EP 3.8]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile Human-AI interaction lead. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Ensures that all human interactors are trained and competent in their roles. Designs and evaluates human-AI interactions that enhance human judgment, support user needs, and ensure AI systems remain understandable, controllable, and beneficial.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.6.	Application Design	e-3
	A.7.	Technology Trend Monitoring	e-3
	A.10.	User Experience	e-4
	B.3.	Testing	e-3
	D.3.	Education and Training Provision	e-3
	D.11.	Needs Identification	e-4
	E.3.	Risk Management	e-3
	E.5.	Process Improvement	e-3
Complexity	The profile has an EQF7 level.		

1. PLO Application Design [EQF6]	
<i>The learner has demonstrated ability to...</i>	
design and implement AI applications for routine or well-defined tasks by selecting suitable models, data structures, and workflows, ensuring proper integration into complex environments and alignment with user needs, performance, and resource considerations	
Unit Learning Outcomes	
1.1	analyse and translate user or project requirements into AI application specifications using structured requirement-gathering methods.
1.2	design AI solutions for routine tasks, including data structures, workflows, and AI model selection in clearly defined project scenarios.
1.3	select suitable AI methods, frameworks, and tools by evaluating project constraints and available resources.
1.4	demonstrate awareness of the interactions between AI applications and complex system environments such as enterprise or multi-component systems to ensure correct integration.

1.5	apply user/customer needs and usability principles in prototype testing or iterative development cycles to ensure the AI solution is functional and user-aligned.
1.6	validate AI models and workflows through iterative testing and feedback using representative datasets or user scenarios, ensuring they meet intended outcomes.

2. PLO Technology Trend Monitoring [EQF6]

The learner has demonstrated ability to...

Monitor and assess emerging AI technologies in partially defined contexts by identifying trends, analysing developments, and applying insights to small-scale use cases.

Unit Learning Outcomes

2.1	Identify key concepts, techniques, and emerging areas in AI by tracking technological trends and innovations such as generative AI, reinforcement learning, and computer vision tools.
2.2	Analyse and compare AI technologies and tools using defined criteria such as potential, maturity, and applicability in the context of industry reports, vendor offerings, or research updates.
2.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
2.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.
2.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.
2.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.

3. PLO User Experience [EQF7]

The learner has demonstrated ability to...

Deliver high-quality human-centred UX for AI-enabled products by coordinating multidisciplinary teams, integrating organisational and regulatory requirements, applying industry standards, and managing ethical and user-related risks.

Unit Learning Outcomes

3.1	Analyse organisational, user, and regulatory requirements in AI product contexts, such as enterprise software or consumer apps.
3.2	Design, evaluate, and justify human-centred UX solutions by working with multidisciplinary teams in AI development projects.
3.3	Apply industry standards and ethical guidelines such as ISO/IEC 25010 or AI ethics frameworks to ensure transparency, usability, and responsible AI interaction.
3.4	Assess and manage UX-related risks in AI deployment contexts, such as autonomous systems or recommendation engines, including loss of user trust or unintended user behaviour.
3.5	Recommend and defend UX design decisions to stakeholders in AI projects, using data from user studies or metrics.
3.6	Support implementation and continuous improvement of AI-enabled UX solutions by integrating feedback from users and regulatory updates.

4. PLO Testing [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Conduct comprehensive testing of AI and ICT systems to assess correctness, robustness, interpretability, and compliance by applying evaluation procedures that produce actionable improvement recommendations in complex scenarios.	
Unit Learning Outcomes	
4.1	Apply evaluation procedures to test AI systems in partially unpredictable scenarios.
4.2	Analyse AI model outputs for correctness, performance, robustness, and interpretability using quantitative metrics and exploratory techniques.
4.3	Evaluate AI outputs for fairness, bias, and compliance with ethical and regulatory standards in practical system deployments.
4.4	Report findings with actionable recommendations for system improvement through structured reports or team presentations.
4.5	Apply multiple AI evaluation metrics and explainability techniques such as SHAP, LIME, or model confidence analysis to assess AI system behaviour.

5. PLO Education and Training Provision [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Design and implement AI training programmes that integrate organisational AI strategy and employee AI literacy, using evaluation tools to monitor effectiveness and adjust content for improving team AI competence.	
Unit Learning Outcomes	
5.1	Design AI training modules that address organisational AI skill gaps and foster employee AI literacy, using role-specific AI use cases and practical learning scenarios.
5.2	Implement AI training programmes by delivering sessions and applying AI tools or simulations to illustrate AI concepts, in workplace-based learning and training environments.
5.3	Monitor and adjust AI learning programmes using feedback and performance data to improve team-level AI competence, by analysing learning analytics and training outcomes.
5.4	Integrate AI ethics and governance principles into training content to ensure responsible AI adoption, such as fairness, transparency, and data protection in applied AI use.
5.5	Support learners during AI training activities by explaining concepts, facilitating discussions, and responding to questions, in guided and instructor-led training settings.
5.6	Apply basic instructional design principles to structure AI learning content and activities, using established training frameworks and learning objectives.

6. PLO Needs Identification [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Leads the end-to-end needs identification process with stakeholders, ensuring AI-driven solution recommendations are strategically aligned with organisational goals, regulatory requirements, and value creation objectives, and ensures the effective implementation, adoption, and iterative enhancement of implemented solutions.	
Unit Learning Outcomes	
6.1	Lead cross-functional teams in stakeholder engagement by coordinating workshops, co-creation sessions, or advisory meetings to define and validate complex organisational needs.
6.2	Critically assess and ensure that AI-driven solution proposals align with organisational strategy, regulatory requirements, and long-term value creation objectives, using strategic planning frameworks or business model analysis.
6.3	Evaluate and co-create a comprehensive range of AI solution options, including make-or-buy, SaaS, cloud, low-code/no-code, and other emerging technologies, by applying feasibility studies, prototyping, or comparative analysis.
6.4	Ensure the effective implementation, adoption, and iterative enhancement of AI solutions, using human-centred design principles, project management tools, or feedback loops.

7. PLO Risk Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities	
Unit Learning Outcomes	
7.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
7.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
7.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
7.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
7.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
7.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.

8. PLO Process Improvement [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Enhance AI process performance by designing and implementing data-driven improvements that integrate multiple AI concepts, address operational risks, uphold ethical standards, and support effective team collaboration.	
Unit Learning Outcomes	
8.1	Design modifications to AI workflows to improve performance and efficiency using practical AI development projects.
8.2	Apply multiple AI process concepts and metrics to identify, analyse, and solve process problems in real-world AI applications.
8.3	Assess operational risks and ethical considerations in AI development and deployment by evaluating AI systems in operational environments.
8.4	Collaborate effectively within a team to implement process improvements in AI project settings.
8.5	Evaluate the outcomes of AI process changes against performance, ethical, and compliance criteria using defined metrics and benchmarks.
8.6	Document AI process modifications and lessons learned for knowledge sharing within the team.

Assessments	HUMAN-AI INTERACTION LEAD	[EP 3.8]
1	PLO Application Design [EQF6]	
1.1	Review of AI requirement specification document and oral questioning on requirement analysis, assessed for accurate translation of user or project requirements into AI application specifications using structured requirement-gathering methods.	
1.2	Evaluation of AI design document and workflow diagrams, supported by design critique sessions, assessed for data structures, workflows, and AI model selection in clearly defined project scenarios.	
1.3	Assessment of AI technology selection report, including justification of AI methods, frameworks, and tools against project constraints and available resources.	
1.4	Analysis of AI integration assessment report, with peer or instructor review, assessed for awareness of interactions between AI applications and enterprise or multi-component system environments.	
1.5	Assessment of AI usability report, including prototype demonstration and user feedback summary, assessed for application of user/customer needs and usability principles in iterative development.	
1.6	Review of AI validation report with test results, automated model evaluation, and instructor feedback, assessed for iterative validation of AI models and workflows using representative datasets or user scenarios.	
2	PLO Technology Trend Monitoring [EQF6]	
2.1	Annotated portfolio submission and short written test assessing correct identification of AI concepts, techniques, and emerging areas, including examples such as generative AI, reinforcement learning, and computer vision tools.	

2.2	Comparative analysis table with oral explanation or peer review, assessed for use of defined criteria such as potential, maturity, and applicability based on industry reports, vendor offerings, or research updates.
2.3	Trend mapping report and written report evaluation assessing classification of internal and external AI innovation sources, including trend reports, patents, newsfeeds, and academic publications.
2.4	Mini prototype or simulation demonstration with lab report, assessed for correct application of basic methods and tools to explore AI-enabled use cases using trending technologies.
2.5	Ethics and impact briefing assessed with a rubric for description and consideration of ethical, data protection, and organisational issues in emerging technologies and current AI applications.
2.6	Presentation or dashboard, evaluated by peers and instructor, assessing clear presentation and justification of AI trend observations and insights summarising technology developments.
3	PLO User Experience [EQF7]
3.1	AI requirements analysis document, submitted for instructor/stakeholder review, assessed for analysis of organisational, user, and regulatory requirements in AI product contexts.
3.2	Multidisciplinary AI UX package, team project deliverables, and portfolio evaluation assessed for design, evaluation, and justification of human-centred UX solutions.
3.3	AI standards compliance report, rubric-based assessment, and audit of artefacts assessing application of industry standards and ethical guidelines to transparency, usability, and responsible AI interaction.
3.4	AI UX risk assessment report, scenario analysis, and case study evaluation assessing UX-related risks, including loss of user trust or unintended user behaviour in AI deployment contexts.
3.5	AI stakeholder recommendation report, presentation to stakeholders, and written justification assessed for evidence-based recommendation and defence of UX design decisions using user studies or metrics.
3.6	AI implementation feedback log, reflective report, and evidence of iterative improvement assessed for integration of user feedback and regulatory updates into AI-enabled UX solutions.
4	PLO Testing [EQF6]
4.1	Review of AI evaluation plan assessing application of evaluation procedures for testing AI systems in partially unpredictable scenarios.
4.2	Assessment of AI analytical report evaluating analysis of AI model outputs for correctness, performance, robustness, and interpretability using quantitative metrics and exploratory techniques.
4.3	Evaluation of AI fairness/compliance report assessing fairness, bias, and compliance with ethical and regulatory standards in practical system deployments.
4.4	Review of AI recommendation report assessing structured findings and actionable recommendations for AI system improvement.
4.5	Inspection of AI metric/explainability outputs assessing application of multiple AI evaluation metrics and explainability techniques such as SHAP, LIME, or model confidence analysis to assess AI system behaviour.

5	PLO Education and Training Provision [EQF6]
5.1	Assessment of AI training module design document and AI use-case mapping for coverage of organizational AI skill gaps, employee AI literacy, role-specific AI use cases, and practical learning scenarios.
5.2	Evaluation of AI training materials and recorded or observed AI training session assessing delivery of training and use of AI tools or simulations to illustrate AI concepts in workplace-based learning environments.
5.3	Review of AI learning feedback summary and revised AI training content assessing use of feedback, performance data, learning analytics, and training outcomes to improve team-level AI competence.
5.4	Assessment of AI ethics and governance training materials and applied AI case examples for integration of fairness, transparency, data protection, and responsible AI adoption principles.
5.5	Evaluation of documented AI learner support evidence and facilitation notes assessing explanation of concepts, facilitation of discussions, and responses to learner questions in guided or instructor-led training settings.
5.6	Review of AI instructional design rationale and alignment with learning objectives, assessed for use of basic instructional design principles, established training frameworks, and coherent learning activities.
6	PLO Needs Identification [EQF7]
6.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs showing leadership of cross-functional stakeholder engagement and validation of complex organizational needs.
6.2	AI Solution Alignment Report – assessed via written report analysing AI solutions against strategic, regulatory, and value alignment using strategic planning frameworks or business model analysis.
6.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results for make-or-buy, SaaS, cloud, low-code/no-code, and emerging technology options.
6.4	AI Implementation & Enhancement Plan – assessed via documented implementation roadmap with iterative improvement strategy for AI solutions, including adoption, feedback loops, and human-centred design considerations.
7	PLO Risk Management [EQF6]
7.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks.
7.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the AI deployment environment.
7.3	Mitigation plan submission assessed for feasibility, relevance, application to reduce AI-related risks, and alignment with defined project, product, or service boundaries.
7.4	Oral presentation or report evaluated for clarity, communication of AI risk findings, mitigation plans, and stakeholder engagement in project or organisational settings.
7.5	Review of AI system performance logs, annotated with identified emerging risks such as model drift or data anomalies and supporting analysis.
7.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.

8	PL0 Process Improvement [EQF6]
8.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of AI workflow modifications and measurable performance or efficiency improvements in practical AI development projects.
8.2	Analysis report submission with metrics calculations; peer review or instructor feedback assessing application of multiple AI process concepts and metrics to identify, analyse, and solve process problems.
8.3	Risk and ethical assessment report evaluated against a checklist, with case study review assessing operational risks and ethical considerations in AI development and deployment.
8.4	Team project documentation assessed via contribution logs and peer evaluation for effective collaboration and implementation of AI process improvements in project settings.
8.5	Comparative performance report graded against defined metrics and benchmarks, with optional oral defence or presentation, assessing performance, ethical, and compliance outcomes of AI process changes.
8.6	Lessons-learned or reflective report reviewed for completeness, clarity, insightfulness, and documentation of AI process modifications for team knowledge sharing.

C.4 Management

	MANAGEMENT		[4]
Profile title	AI TRANSFORMATION LEAD		[EP 4.1]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI transformation lead. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Drives cultural change and builds digital capability to deliver innovative AI-based business models, products, services, and processes.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.1.	IS and Business Strategy Alignment	e-5
	A.3.	Business Plan Development	e-5
	A.5.	Architecture Design	e-4
	A.7.	Technology Trend Monitoring	e-4
	A.8.	Sustainability Management	e-4
	A.9.	Innovating	e-5
	E.7.	Business Change Management	e-5
	E.9.	IS Governance	e-5

Complexity	The profile has an EQF8 level.

1. PLO IS and Business Strategy Alignment [EQF8]	
<i>The learner has demonstrated ability to...</i>	
Critically synthesise organisational strategy and digital systems to create, lead, and evolve innovative IS and AI strategies, anticipating governance, ethical, regulatory, and risk implications, and driving transformative business outcomes in novel, uncertain, and complex contexts.	
Unit Learning Outcomes	
1.1	Critically synthesise business strategy, organisational capabilities, and digital ecosystems to identify opportunities for strategic innovation and transformation, using competitive analysis, digital maturity assessments, or ecosystem mapping.
1.2	Create original IS and AI strategies that shape and enable long-term business strategy and organisational renewal, by integrating emerging technologies and innovative business models.
1.3	Anticipate and evaluate the strategic implications of governance, ethical, regulatory, and risk factors in advanced IS and AI initiatives, in contexts such as cross-border operations or regulated industries.
1.4	Design and lead the development of novel enterprise architectures, IS models, and AI-enabled solutions that deliver sustainable competitive advantage, using iterative design thinking or agile frameworks.
1.5	Demonstrate strategic leadership and autonomy in aligning stakeholders, resources, and multidisciplinary teams around digital-business transformation, by facilitating cross-functional workshops or steering committees.
1.6	Generate and communicate actionable strategic insights that influence executive decision-making and organisational or policy-level outcomes, using dashboards, business intelligence reports, or strategic briefs.

2. PLO Business Plan Development [EQF8]	
<i>The learner has demonstrated ability to...</i>	
Lead the formulation and defence of innovative strategic business plans for AI-driven initiatives by generating evidence-based investment rationales that integrate technological, economic, regulatory, ethical, and societal considerations in high-complexity contexts.	
Unit Learning Outcomes	
2.1	Formulate original and innovative strategic business models or investment rationales for AI-driven initiatives in emerging or high-impact domains.
2.2	Critically evaluate existing and emerging approaches using advanced analytical frameworks, simulations, or experimental AI research.
2.3	Create and validate novel solutions through rigorous evidence, experimentation, or practice-based inquiry in organisational or technical contexts.
2.4	Integrate technological, economic, regulatory, ethical, and societal considerations in strategic decision-making for complex AI deployments.

2.5	Defend strategic choices convincingly against expert critique or alternative scenarios in professional or academic forums.
2.6	Demonstrate leadership in strategic thinking by taking accountability for long-term organisational or societal impact under conditions of uncertainty.
3. PLO Architecture Design [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Lead the development and deployment of complex AI architectures across enterprise systems by coordinating teams, applying advanced design methodologies, and evaluating AI-specific risks, ethics, and compliance in unstructured and multidisciplinary contexts.	
Unit Learning Outcomes	
3.1	Analyse interdependencies among multiple AI systems and enterprise platforms by mapping data flows, service interactions, and integration points in real-world deployments.
3.2	Design integrated AI solutions ensuring scalability, security, and policy compliance using enterprise-grade frameworks and architecture standards.
3.3	Coordinate a team to deploy AI architectures in realistic, open-ended projects by assigning roles, tracking progress, and resolving integration issues in enterprise settings.
3.4	Evaluate AI risks, biases, and ethical implications in multi-factor decision-making using scenario analyses, audits, or simulation tools.
3.5	Document and present AI architecture solutions for diverse stakeholders through reports, visual diagrams, and presentations tailored to technical and non-technical audiences.
3.6	Optimise AI deployment and operational performance by monitoring system metrics, troubleshooting integration issues, and applying iterative improvements in enterprise projects.

4. PLO Technology Trend Monitoring [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Design transferable AI-enabled solutions in complex contexts by critically analysing and evaluating emerging technology trends and organisational opportunities.	
Unit Learning Outcomes	
4.1	Critically analyse emerging AI technologies and trends in domains such as finance, healthcare, or smart systems using market reports, research publications, and pilot studies.
4.2	Evaluate AI adoption opportunities using technical, organisational, ethical, and regulatory criteria by considering the implications of recent trends and innovations.
4.3	Synthesize information from multiple sources to identify AI innovation opportunities using literature, industry analyses, and cross-domain technology insights.
4.4	Design AI-enabled solutions or concepts that are transferable across contexts informed by observed technological trends and emerging best practices.
4.5	Validate and justify design decisions using appropriate evaluation methods and metrics by testing solutions in simulations, prototypes, or benchmarking exercises.
4.6	Communicate and defend AI-related proposals to specialist and non-specialist audiences through presentations, reports, or workshops highlighting trends and rationale.

5. PLO Sustainability Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Design and orchestrate sustainable AI strategies across multiple organisational initiatives by integrating environmental, social, and economic considerations into coordinated decision-making and stakeholder guidance.	
Unit Learning Outcomes	
5.1	Design AI deployment strategies that optimise environmental, social, and economic outcomes across organisational projects, such as portfolio-level AI planning.
5.2	Coordinate cross-functional teams to implement sustainable AI practices in professional or organisational environments, including technical and non-technical roles.
5.3	Assess the long-term impacts of AI initiatives on organisational sustainability objectives by considering lifecycle, scaling, and governance effects.
5.4	Advise stakeholders on responsible AI practices in strategic decision-making contexts, including energy-efficient and socially equitable AI solutions.
5.5	Compare and prioritise sustainability interventions for AI systems using organisational constraints and strategic goals, to support informed decision-making.
5.6	Translate organisational sustainability policies into AI-related requirements within project or program planning processes.

6. PLO Innovating [EQF8]	
<i>The learner has demonstrated ability to...</i>	
Formulate and direct the strategic orientation for AI-driven innovation by envisioning and realising transformative AI applications that generate new organisational capabilities, markets, or societal value, integrating advanced AI approaches and critically evaluating their professional and societal impact	
Unit Learning Outcomes	
6.1	Define and justify strategic directions and priorities for AI-driven innovation in complex organisational or societal contexts.
6.2	Envision and conceptualize transformative AI applications that create new markets, services, organisational capabilities, or societal value.
6.3	Lead and influence multidisciplinary teams and stakeholders in the realization of AI-enabled innovation initiatives at organisational or ecosystem level.
6.4	Select, adapt, and integrate advanced AI methods and architectures to maximize innovation impact, scalability, and sustainability.
6.5	Translate advanced AI capabilities into viable innovation pathways by aligning technical potential with strategic, operational, and business considerations.
6.6	Critically evaluate the outcomes and impacts of AI-driven innovations using qualitative and quantitative approaches.
6.7	Anticipate, assess, and govern ethical, legal, and societal implications of AI-driven innovation, embedding responsible AI principles into strategic decision-making.
6.8	Generate practice-based knowledge and original insights that advance professional practice in AI-driven innovation through rigorous inquiry and critical reflection.
6.9	Reflect on and adapt AI innovation strategies in response to uncertainty, emerging evidence, and evolving technological or societal conditions.

7. PLO Business Change Management [EQF8]	
<i>The learner has demonstrated ability to...</i>	
Lead AI-driven transformation at the highest organisational and ecosystem level by creating innovative strategies, establishing ethical and sustainable practices, and optimising performance, resilience, and value through systemic and forward-looking approaches.	
Unit Learning Outcomes	
7.1	Develop innovative enterprise-wide AI transformation strategies using strategic frameworks and foresight methods.
7.2	Establish ethical, sustainable, and responsible AI adoption practices in organisational policies and decision-making.
7.3	Optimise organisational performance and resilience through AI-driven change by applying AI monitoring, modelling, and process optimisation.
7.4	Guide decision-making across organisational units using systemic and forward-looking approaches with scenario analysis and enterprise-wide planning.
7.5	Integrate AI-driven initiatives across multiple organisational levels ensuring alignment with long-term strategic objectives.
7.6	Assess risks and unintended consequences of AI adoption using organisational risk management tools and ethical guidelines.

8. PLO IS Governance [EQF8]	
<i>The learner has demonstrated ability to...</i>	
Create, justify, and critically evaluate enterprise-level AI governance strategies, by developing novel governance models and decision frameworks that address emerging AI technologies, societal impacts, and regulatory evolution, and that shape responsible, sustainable AI practices across organisations or ecosystems.	
Unit Learning Outcomes	
8.1	Critically evaluate existing AI governance frameworks and strategies, examining their suitability for emerging AI technologies and societal expectations.
8.2	Create advanced AI governance approaches, integrating regulatory, ethical, organisational, and technological considerations.
8.3	Assess long-term implications of AI governance decisions, including systemic risk, trust, and sustainability impacts.
8.4	Formulate recommendations for strategic AI governance improvements, supported by evidence and scenario analysis.
8.5	Justify and defend strategic AI governance positions, articulating well-founded arguments to senior decision-makers or expert audiences.

Assessments AI TRANSFORMATION LEAD [EP 4.1]	
1	PLO IS and Business Strategy Alignment [EQF8]
1.1	Innovation Opportunity Report, SWOT/Gap Analysis, and Presentation to Stakeholders assessed for critical synthesis of business strategy, organisational capabilities, and digital ecosystems to identify strategic innovation and transformation opportunities.
1.2	Original IS/AI Strategy Document, Technology Roadmap, and Executive Briefing Submission assessed for originality, integration of emerging technologies and innovative business models, and contribution to long-term business strategy and organisational renewal.
1.3	Risk/Governance Assessment Report, Scenario/Regulatory Documentation, and Case-Based Evaluation assessing anticipation and evaluation of governance, ethical, regulatory, and risk implications in advanced IS and AI initiatives.
1.4	Novel Enterprise Architecture Design, Prototype/Simulation, and Design Review assessed for leadership in developing enterprise architectures, IS models, and AI-enabled solutions using iterative design thinking or agile frameworks.
1.5	Stakeholder Alignment Plan, Leadership Portfolio, and Workshop Facilitation Assessment evaluating strategic leadership, autonomy, stakeholder/resource alignment, and multidisciplinary team coordination.
1.6	Executive Insight Report, Dashboard/Business Intelligence Report, and Strategic Briefing Presentation assessed for actionable strategic insights, communication quality, and influence on executive decision-making or organisational/policy-level outcomes.
2	PLO Business Plan Development [EQF8]
2.1	Strategic business/investment plan evaluated for originality, innovation, and strategic rationale for AI-driven initiatives in emerging or high-impact domains.
2.2	Critical evaluation report with peer/expert review, assessed for rigor, depth, and use of advanced analytical frameworks, simulations, or experimental AI research.
2.3	Validated solution artifacts assessed for novelty, rigorous evidence, testing, reproducibility, and validation through experimentation or practice-based inquiry.
2.4	Integration report assessed for coherent integration of technological, economic, regulatory, ethical, and societal factors in strategic decision-making for complex AI deployments.
2.5	Defence documentation, oral defence, or written justification evaluated by expert panel for argumentation quality, response to critique, and consideration of alternative scenarios.
2.6	Leadership accountability evidence assessed through documentation of strategic decisions, uncertainty handling, and long-term organizational or societal impact considerations.
3	PLO Architecture Design [EQF7]
3.1	Review of dependency diagrams and Analysis report evaluation assessing mapping of data flows, service interactions, and integration points among multiple AI systems and enterprise platforms.
3.2	Assessment of architecture blueprint, Design document grading, and Prototype/simulation evaluation assessing integrated AI solution design for scalability, security, and policy compliance.
3.3	Evaluation of team deployment plan and Observation of deployment report outcomes assessing team coordination, role assignment, progress tracking, and resolution of integration issues.
3.4	Assessment of risk & bias report and Ethics evaluation report review assessing AI risks, biases, and ethical implications using scenario analyses, audits, or simulation tools.

3.5	Grading of technical documentation and Presentation slides review assessing clarity, completeness, and tailoring of AI architecture communication to technical and non-technical stakeholders.
3.6	Evaluation of performance report and Review of optimized system documentation assessing metric monitoring, troubleshooting of integration issues, and iterative performance improvements.
4	PLO Technology Trend Monitoring [EQF7]
4.1	Trend analysis report and written assignment with rubric assessing critical analysis of emerging AI technologies and trends using market reports, research publications, and pilot studies.
4.2	Opportunity assessment matrix, graded report, or case study analysis assessed for technical, organisational, ethical, and regulatory evaluation of AI adoption opportunities.
4.3	Integrated opportunity brief and written synthesis evaluated by rubric for synthesis of literature, industry analyses, and cross-domain technology insights into AI innovation opportunities.
4.4	Solution design document and project proposal evaluation assessing transferability across contexts and grounding in observed technological trends and emerging best practices.
4.5	Validation report and simulation or pilot data review assessing justification of design decisions using appropriate evaluation methods, metrics, and testing evidence.
4.6	Presentation/report, oral defence, or stakeholder-style review assessed for communication and defence of AI-related proposals to specialist and non-specialist audiences, including trend rationale.
5	PLO Sustainability Management [EQF7]
5.1	Sustainable AI strategy document assessed for design of AI deployment strategies that optimize environmental, social, and economic outcomes across organizational projects.
5.2	Cross-functional coordination plan with role and process definition assessed for coordination of technical and non-technical roles to implement sustainable AI practices.
5.3	Long-term AI sustainability impact assessment report assessed for lifecycle, scaling, and governance effects on organizational sustainability objectives.
5.4	Responsible AI advisory brief for stakeholders assessed for advice on responsible AI practices, energy-efficient solutions, and socially equitable AI solutions in strategic decision-making contexts.
5.5	Sustainability intervention prioritization framework assessed for comparison and prioritization of AI sustainability interventions using organizational constraints and strategic goals.
5.6	Policy-to-AI requirement mapping document assessed for accurate translation of organizational sustainability policies into AI-related project or program requirements.
6	PLO Innovating [EQF8]
6.1	Assessment of an AI strategic priority framework and AI contextual analysis report, supported by a written strategic justification, evaluated for strategic direction, prioritisation, and fit with complex organizational or societal contexts.
6.2	Evaluation of a transformative AI application concept dossier and AI market or ecosystem model, assessed through a vision paper review for potential to create new markets, services, organizational capabilities, or societal value.

6.3	Assessment of an AI innovation governance model and AI stakeholder strategy, supported by documented AI leadership decisions and a reflective leadership narrative, evaluated for leadership and influence across multidisciplinary teams and stakeholders.
6.4	Technical assessment of an advanced AI architecture document and AI method selection justification, including review of an AI prototype or proof-of-concept, evaluated for selection, adaptation, and integration of AI methods and architectures.
6.5	Evaluation of an AI-enabled business or operating model and AI scalability and feasibility analysis, assessed through a written innovation case for alignment of technical potential with strategic, operational, and business considerations.
6.6	Assessment of an AI innovation evaluation framework and AI impact assessment report, supported by evidence-based performance analysis using qualitative and quantitative approaches.
6.7	Evaluation of a responsible AI governance framework and AI ethical, legal, and risk assessment, assessed through a policy or governance review for responsible AI integration into strategic decision-making.
6.8	Examination of a doctoral-level AI practice-based research report and original AI innovation contribution, including defence or viva, assessed for rigorous inquiry, critical reflection, and advancement of professional practice.
6.9	Assessment of an AI reflective strategy portfolio and revised AI innovation strategy, evaluated for critical reflection, adaptive reasoning, and response to uncertainty, emerging evidence, and evolving technological or societal conditions.
7	PLO Business Change Management [EQF8]
7.1	Enterprise-Wide AI Strategy Report and Strategic Plan Documentation assessed for development of innovative AI transformation strategies using strategic frameworks and foresight methods.
7.2	Ethical AI Adoption Guidelines Document and Policy Drafts assessed for establishment of ethical, sustainable, and responsible AI adoption practices in organizational policies and decision-making.
7.3	Organizational Performance Optimization Report, Metrics Dashboard, and Analytical Summary assessed for AI-driven optimization of organizational performance and resilience using monitoring, modelling, and process optimization evidence.
7.4	Decision-Making Guidance Portfolio, Scenario Analyses, or Planning Documents assessed for systemic and forward-looking guidance of decision-making across organizational units.
7.5	AI Integration Alignment Report and Organizational Mapping, if used, assessed for integration of AI-driven initiatives across multiple organizational levels and alignment with long-term strategic objectives.
7.6	Risk and Impact Assessment Report, Risk Matrices, or Ethical Compliance Tables assessed for risks, unintended consequences, use of organizational risk management tools, and application of ethical guidelines.
8	PLO IS Governance [EQF8]
8.1	Critical Governance Evaluation Report assessed for depth of critical analysis, suitability of existing AI governance frameworks, and alignment with emerging AI technologies and societal expectations.

8.2	Advanced Governance Strategy Document graded for creation of advanced AI governance approaches and integration of regulatory, ethical, organizational, and technical considerations.
8.3	Impact Assessment Report assessed for thoroughness, methodology, and evaluation of long-term governance implications, including systemic risk, trust, and sustainability impacts.
8.4	Strategic Recommendation Dossier graded on evidence support, feasibility, clarity, and use of scenario analysis to formulate strategic AI governance improvements.
8.5	Governance Defence Brief evaluated via oral presentation or written defence, assessed for argumentation, justification quality, and suitability for senior decision-makers or expert audiences.

	MANAGEMENT		[4]
Profile title	CHIEF AI OFFICER (CAIO)		[EP4.2]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile Chief AI officer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Ensures the alignment of the AI strategy with the organisation strategy. Provides leadership for the strategy, development and implementation of the organisation's AI applications, to create a sustainable competitive edge.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.1.	IS and Business Strategy Alignment	e-5
	A.3.	Business Plan Development	e-5
	A.7.	Technology Trend Monitoring	e-5
	A.8.	Sustainability Management	e-4
	A.9.	Innovating	e-5
	E.2.	Project and Portfolio Management	e-5
	E.3.	Risk Management	e-4
	E.4.	Relationship Management	e-4
	E.9.	IS Governance	e-5
Complexity	The profile has an EQF8 level.		

1. PLO IS and Business Strategy Alignment [EQF8]	
<i>The learner has demonstrated ability to...</i>	
Critically synthesise organisational strategy and digital systems to create, lead, and evolve innovative IS and AI strategies, anticipating governance, ethical, regulatory, and risk implications, and driving transformative business outcomes in novel, uncertain, and complex contexts.	
Unit Learning Outcomes	
1.1	Critically synthesise business strategy, organisational capabilities, and digital ecosystems to identify opportunities for strategic innovation and transformation, using competitive analysis, digital maturity assessments, or ecosystem mapping.
1.2	Create original IS and AI strategies that shape and enable long-term business strategy and organisational renewal, by integrating emerging technologies and innovative business models.
1.3	Anticipate and evaluate the strategic implications of governance, ethical, regulatory, and risk factors in advanced IS and AI initiatives, in contexts such as cross-border operations or regulated industries.
1.4	Design and lead the development of novel enterprise architectures, IS models, and AI-enabled solutions that deliver sustainable competitive advantage, using iterative design thinking or agile frameworks.
1.5	Demonstrate strategic leadership and autonomy in aligning stakeholders, resources, and multidisciplinary teams around digital-business transformation, by facilitating cross-functional workshops or steering committees.
1.6	Generate and communicate actionable strategic insights that influence executive decision-making and organisational or policy-level outcomes, using dashboards, business intelligence reports, or strategic briefs.

2. PLO Business Plan Development [EQF8]	
<i>The learner has demonstrated ability to...</i>	
Lead the formulation and defence of innovative strategic business plans for AI-driven initiatives by generating evidence-based investment rationales that integrate technological, economic, regulatory, ethical, and societal considerations in high-complexity contexts.	
Unit Learning Outcomes	
2.1	Formulate original and innovative strategic business models or investment rationales for AI-driven initiatives in emerging or high-impact domains.
2.2	Critically evaluate existing and emerging approaches using advanced analytical frameworks, simulations, or experimental AI research.
2.3	Create and validate novel solutions through rigorous evidence, experimentation, or practice-based inquiry in organisational or technical contexts.
2.4	Integrate technological, economic, regulatory, ethical, and societal considerations in strategic decision-making for complex AI deployments.
2.5	Defend strategic choices convincingly against expert critique or alternative scenarios in professional or academic forums.

2.6	Demonstrate leadership in strategic thinking by taking accountability for long-term organisational or societal impact under conditions of uncertainty.
3. PLO Technology Trend Monitoring [EQF8]	
<i>The learner has demonstrated ability to...</i>	
Provide strategic vision and authority to investigate, anticipate, and lead AI-enabled innovations and transformations, shaping long-term organisational and societal impact through informed technology trend monitoring in AI and ICT domains	
Unit Learning Outcomes	
3.1	Critically monitor and evaluate emerging AI and ICT technologies and trends using sector-relevant data and literature to inform strategic research or organisational decisions,
3.2	Formulate and justify original AI-driven strategies, frameworks, or problem definitions by anticipating technological evolution that leverage emerging trends,
3.3	Initiate, govern, and lead AI-enabled transformation initiatives in organisational or societal contexts that deliver measurable impact,
3.4	Integrate ethical, regulatory, technical, and sustainability considerations in AI adoption and trend-informed governance,
3.5	Assess and balance competing approaches, evidence, and risks in AI innovation and technology trend application,
3.6	Communicate, defend, and advocate for AI strategies, innovations, and trend-informed decisions to expert, executive, and stakeholder audiences,
3.7	Reflect on and enhance leadership, governance, and trend monitoring practices by applying lessons from AI-driven organisational or research change,

4. PLO Sustainability Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Design and orchestrate sustainable AI strategies across multiple organisational initiatives by integrating environmental, social, and economic considerations into coordinated decision-making and stakeholder guidance.	
Unit Learning Outcomes	
4.1	Design AI deployment strategies that optimise environmental, social, and economic outcomes across organisational projects, such as portfolio-level AI planning.
4.2	Coordinate cross-functional teams to implement sustainable AI practices in professional or organisational environments, including technical and non-technical roles.
4.3	Assess the long-term impacts of AI initiatives on organisational sustainability objectives by considering lifecycle, scaling, and governance effects.
4.4	Advise stakeholders on responsible AI practices in strategic decision-making contexts, including energy-efficient and socially equitable AI solutions.
4.5	Compare and prioritise sustainability interventions for AI systems using organisational constraints and strategic goals, to support informed decision-making.
4.6	Translate organisational sustainability policies into AI-related requirements within project or program planning processes.

5. PLO Innovating [EQF8]	
<i>The learner has demonstrated ability to...</i>	
Formulate and direct the strategic orientation for AI-driven innovation by envisioning and realising transformative AI applications that generate new organisational capabilities, markets, or societal value, integrating advanced AI approaches and critically evaluating their professional and societal impact	
Unit Learning Outcomes	
5.1	Define and justify strategic directions and priorities for AI-driven innovation in complex organisational or societal contexts.
5.2	Envision and conceptualize transformative AI applications that create new markets, services, organisational capabilities, or societal value.
5.3	Lead and influence multidisciplinary teams and stakeholders in the realization of AI-enabled innovation initiatives at organisational or ecosystem level.
5.4	Select, adapt, and integrate advanced AI methods and architectures to maximize innovation impact, scalability, and sustainability.
5.5	Translate advanced AI capabilities into viable innovation pathways by aligning technical potential with strategic, operational, and business considerations.
5.6	Critically evaluate the outcomes and impacts of AI-driven innovations using qualitative and quantitative approaches.
5.7	Anticipate, assess, and govern ethical, legal, and societal implications of AI-driven innovation, embedding responsible AI principles into strategic decision-making.
5.8	Generate practice-based knowledge and original insights that advance professional practice in AI-driven innovation through rigorous inquiry and critical reflection.
5.9	Reflect on and adapt AI innovation strategies in response to uncertainty, emerging evidence, and evolving technological or societal conditions.

6. PLO Project and Portfolio Management [EQF8]	
<i>The learner has demonstrated ability to...</i>	
Develop and implement strategic AI project and portfolio management strategies by creating organisational programmes, governance practices, and innovation roadmaps, and by advising executives and teams to deliver measurable AI-driven transformation.	
Unit Learning Outcomes	
6.1	Develop strategic AI project and portfolio management strategies aligned with organisational objectives by integrating long-term business goals with AI innovation roadmaps.
6.2	Implement governance and risk mitigation practices to ensure responsible AI deployment using compliance frameworks, audits, and organisational policies.
6.3	Advise executives and teams to achieve measurable AI-driven transformation outcomes through strategic consulting and performance review processes.
6.4	Create innovation roadmaps and frameworks to guide AI initiatives by identifying emerging AI technologies and aligning them with organisational priorities.

6.5	Foster organisational learning, AI capability development, and continuous improvement through mentoring, training programmes, and iterative process evaluation.
7. PLO Risk Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Strengthen organisational AI risk strategies by evaluating multi-dimensional AI system risks and designing governance processes that integrate operational, ethical, legal, and third-party considerations while recommending improvements.	
Unit Learning Outcomes	
7.1	Evaluate AI system risks considering technical, operational, legal, ethical, and third-party dimensions in organisational contexts.
7.2	Design and monitor AI governance processes that address multi-factor AI risks in enterprise or institutional environments.
7.3	Recommend improvements to AI risk strategies to enhance compliance, resilience, and responsible AI adoption in organisational practice.
7.4	Coordinate cross-functional activities to ensure consistent application of AI risk management practices across teams or departments.
7.5	Analyse organisational policies to align AI risk governance processes with strategic objectives and regulatory requirements.

8. PLO Relationship Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Ensure responsible and inclusive AI decision-making by designing and implementing stakeholder engagement strategies that integrate ethical, cultural, and organisational considerations while facilitating alignment and consensus across multidisciplinary teams.	
Unit Learning Outcomes	
8.1	Design stakeholder engagement strategies for AI initiatives by applying strategic planning tools or scenario analyses.
8.2	Implement communication and collaboration approaches to facilitate alignment and trust across multidisciplinary teams using workshops, collaborative software, or structured team activities.
8.3	Lead workshops or meetings to mediate conflicts and promote consensus in cross-functional project teams or stakeholder consultations.
8.4	Assess the impact of engagement strategies on stakeholder alignment and responsible AI adoption by analysing feedback, monitoring adoption metrics, or reviewing team performance.
8.5	Adapt engagement strategies to emerging AI-related challenges using iterative design, stakeholder input, or pilot project insights.
8.6	Advocate for ethical and culturally sensitive AI practices by preparing guidelines, training materials, or stakeholder briefings.
8.7	Document and report stakeholder engagement outcomes for use in organisational learning or project audits.

9. PLO IS Governance [EQF8]	
The learner has demonstrated ability to...	
Create, justify, and critically evaluate enterprise-level AI governance strategies, by developing novel governance models and decision frameworks that address emerging AI technologies, societal impacts, and regulatory evolution, and that shape responsible, sustainable AI practices across organisations or ecosystems.	
Unit Learning Outcomes	
9.1	Critically evaluate existing AI governance frameworks and strategies, examining their suitability for emerging AI technologies and societal expectations.
9.2	Create advanced AI governance approaches, integrating regulatory, ethical, organisational, and technological considerations.
9.3	Assess long-term implications of AI governance decisions, including systemic risk, trust, and sustainability impacts.
9.4	Formulate recommendations for strategic AI governance improvements, supported by evidence and scenario analysis.
9.5	Justify and defend strategic AI governance positions, articulating well-founded arguments to senior decision-makers or expert audiences.

Assessments CHIEF AI OFFICER (CAIO) [EP4.2]	
1	PLO IS and Business Strategy Alignment [EQF8]
1.1	Innovation Opportunity Report, SWOT/Gap Analysis, and Presentation to Stakeholders assessed for critical synthesis of business strategy, organisational capabilities, and digital ecosystems to identify strategic innovation and transformation opportunities.
1.2	Original IS/AI Strategy Document, Technology Roadmap, and Executive Briefing Submission assessed for originality, integration of emerging technologies and innovative business models, and contribution to long-term business strategy and organisational renewal.
1.3	Risk/Governance Assessment Report, Scenario/Regulatory Documentation, and Case-Based Evaluation assessing anticipation and evaluation of governance, ethical, regulatory, and risk implications in advanced IS and AI initiatives.
1.4	Novel Enterprise Architecture Design, Prototype/Simulation, and Design Review assessed for leadership in developing enterprise architectures, IS models, and AI-enabled solutions using iterative design thinking or agile frameworks.
1.5	Stakeholder Alignment Plan, Leadership Portfolio, and Workshop Facilitation Assessment evaluating strategic leadership, autonomy, stakeholder/resource alignment, and multidisciplinary team coordination.
1.6	Executive Insight Report, Dashboard/Business Intelligence Report, and Strategic Briefing Presentation assessed for actionable strategic insights, communication quality, and influence on executive decision-making or organisational/policy-level outcomes.
2	PLO Business Plan Development [EQF8]
2.1	Strategic business/investment plan evaluated for originality, innovation, and strategic investment rationale for AI-driven initiatives in emerging or high-impact domains.

2.2	Critical evaluation report with peer/expert review, assessed for rigor, depth, and use of advanced analytical frameworks, simulations, or experimental AI research.
2.3	Validated solution artifacts assessed for novelty, rigorous evidence, testing, reproducibility, and validation through experimentation or practice-based inquiry.
2.4	Integration report assessed for coherent integration of technological, economic, regulatory, ethical, and societal factors in strategic decision-making for complex AI deployments.
2.5	Defence documentation, oral defence, or written justification evaluated by expert panel for argumentation quality, response to critique, and consideration of alternative scenarios.
2.6	Leadership accountability evidence assessed through documentation of strategic decisions, uncertainty handling, and long-term organizational or societal impact considerations.
3	PLO Technology Trend Monitoring [EQF8]
3.1	Evaluation of AI trend reports, critical review of AI comparative analyses, and annotated AI bibliographies assessed for critical monitoring and evaluation of emerging AI and ICT technologies using sector-relevant data and literature.
3.2	Assessment of AI innovation proposals, review of AI frameworks, and evaluation of AI strategy papers assessing original AI-driven strategies, frameworks, or problem definitions justified by anticipated technological evolution.
3.3	Assessment of AI transformation plans, review of AI governance frameworks, and case study evaluation of AI interventions assessing initiation, governance, leadership, and measurable impact of AI-enabled transformation initiatives.
3.4	Evaluation of AI ethical assessments, review of AI compliance reports, and assessment of AI sustainability matrices assessing integration of ethical, regulatory, technical, and sustainability considerations in AI adoption and governance.
3.5	Assessment of AI evaluation reports, review of AI decision matrices, and evaluation of AI risk management plans assessing balanced consideration of competing approaches, evidence, and risks in AI innovation.
3.6	Assessment of AI executive briefings, review of AI policy reports, and evaluation of AI white papers assessing communication, defence, and advocacy of trend-informed AI strategies for expert, executive, and stakeholder audiences.
3.7	Evaluation of AI leadership reflections, review of AI change case studies, and assessment of AI governance documentation assessing lessons learned and enhancement of leadership, governance, and trend monitoring practices.
4	PLO Sustainability Management [EQF7]
4.1	Sustainable AI strategy document assessed for design of AI deployment strategies that optimize environmental, social, and economic outcomes across organizational projects.
4.2	Cross-functional coordination plan with role and process definition assessed for coordination of technical and non-technical roles to implement sustainable AI practices.
4.3	Long-term AI sustainability impact assessment report assessed for lifecycle, scaling, and governance effects on organizational sustainability objectives.
4.4	Responsible AI advisory brief for stakeholders assessed for advice on responsible AI practices, energy-efficient solutions, and socially equitable AI solutions in strategic decision-making contexts.

4.5	Sustainability intervention prioritization framework assessed for comparison and prioritization of AI sustainability interventions using organizational constraints and strategic goals.
4.6	Policy-to-AI requirement mapping document assessed for accurate translation of organizational sustainability policies into AI-related project or program requirements.
5	PLO Innovating [EQF8]
5.1	Assessment of an AI strategic priority framework and AI contextual analysis report, supported by a written strategic justification, evaluated for strategic direction, prioritisation, and fit with complex organizational or societal contexts.
5.2	Evaluation of a transformative AI application concept dossier and AI market or ecosystem model, assessed through a vision paper review for potential to create new markets, services, organizational capabilities, or societal value.
5.3	Assessment of an AI innovation governance model and AI stakeholder strategy, supported by documented AI leadership decisions and a reflective leadership narrative, evaluated for leadership and influence across multidisciplinary teams and stakeholders.
5.4	Technical assessment of an advanced AI architecture document and AI method selection justification, including review of an AI prototype or proof-of-concept, evaluated for selection, adaptation, and integration of AI methods and architectures.
5.5	Evaluation of an AI-enabled business or operating model and AI scalability and feasibility analysis, assessed through a written innovation case for alignment of technical potential with strategic, operational, and business considerations.
5.6	Assessment of an AI innovation evaluation framework and AI impact assessment report, supported by evidence-based performance analysis using qualitative and quantitative approaches.
5.7	Evaluation of a responsible AI governance framework and AI ethical, legal, and risk assessment, assessed through a policy or governance review for responsible AI integration into strategic decision-making.
5.8	Examination of an AI science- or practice-based research report and original AI innovation contribution, including presentation and defence, assessed for rigorous inquiry, critical reflection, and advancement of professional practice.
5.9	AI Reflective Strategy Portfolio and Revised AI Innovation Strategy, assessed for critical reflection, adaptive reasoning, and evidence-based adjustment of AI innovation strategies in response to uncertainty, emerging evidence, and evolving technological or societal conditions.
6	PLO Project and Portfolio Management [EQF8]
6.1	Strategic management strategy document assessed for alignment with organizational objectives, long-term business goals, AI innovation roadmaps, and innovation potential.
6.2	Governance and risk mitigation documentation evaluated for regulatory compliance, practical applicability, use of compliance frameworks or audits, and support for responsible AI deployment.
6.3	Executive advisory reports assessed via simulation exercises or peer/expert review for strategic guidance, performance review evidence, and contribution to measurable AI-driven transformation outcomes.

6.4	Innovation roadmap package graded for feasibility, clarity, innovation alignment, identification of emerging AI technologies, and alignment with organizational priorities.
6.5	Learning artifacts, including training programs and mentoring logs, assessed for effectiveness, contribution to AI capability development, organizational learning, and continuous improvement through iterative process evaluation.
7	PLO Risk Management [EQF7]
7.1	Comprehensive AI risk evaluation report graded for depth, contextual reasoning, and coverage of technical, operational, legal, ethical, and third-party AI system risks.
7.2	Submission of AI governance framework design evaluated for process completeness, scalability, monitoring approach, and alignment with organisational needs in enterprise or institutional environments.
7.3	Strategic recommendations document assessed for practicality, impact, and contribution to compliance, resilience, and responsible AI adoption in organisational practice.
7.4	Cross-functional coordination report evaluated for documentation of collaborative activities and consistent application of AI risk management practices across teams or departments.
7.5	Policy alignment analysis assessed for clarity, alignment with regulatory requirements, and integration of AI risk governance processes with organisational strategy.
8	PLO Relationship Management [EQF7]
8.1	Stakeholder engagement strategy document assessed with rubric for strategic depth, completeness, integration of ethical/cultural factors, and application of strategic planning tools or scenario analyses.
8.2	Workshop artifacts, collaboration logs, or team alignment reports evaluated for effectiveness of communication, facilitation, collaboration approach, trust-building, and team outcomes.
8.3	Workshop or meeting minutes documenting conflict resolution and consensus, evaluated on mediation quality, leadership of cross-functional dialogue, and decision outcomes.
8.4	Impact assessment report assessed on use of feedback, adoption metrics, team-performance evidence, and data supporting stakeholder alignment and responsible AI adoption.
8.5	Updated engagement plan or pilot project report assessed on adaptability, responsiveness to emerging AI-related challenges, and use of stakeholder input or pilot project insights.
8.6	Guidelines, training materials, or briefing reports assessed on clarity, ethical rigor, cultural sensitivity, and advocacy for ethical and culturally sensitive AI practices.
8.7	Final Stakeholder Engagement Report, assessed for completeness, documentation quality, traceability of engagement outcomes, relevance for organizational learning, and suitability for project audits.
9	PLO IS Governance [EQF8]
9.1	Critical Governance Evaluation Report assessed for depth of critical analysis, suitability of existing AI governance frameworks, and alignment with emerging AI technologies and societal expectations.
9.2	Advanced Governance Strategy Document graded for creation of advanced AI governance approaches and integration of regulatory, ethical, organizational, and technical considerations.
9.3	Impact Assessment Report assessed for thoroughness, methodology, and evaluation of long-term governance implications, including systemic risk, trust, and sustainability impacts.

9.4	Strategic Recommendation Dossier graded on evidence support, feasibility, clarity, and use of scenario analysis to formulate strategic AI governance improvements.
9.5	Governance Defence Brief evaluated via oral presentation or written defence, assessed for argumentation, justification quality, and suitability for senior decision-makers or expert audiences.

	MANAGEMENT		[4]
Profile title	AI TECH LEAD		[EP 4.3]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI tech lead. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Ensures AI systems are technically sound, scalable, and maintainable by setting standards, mentoring teams, and translating requirements into robust AI architectures.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.5.	Architecture Design	e-4
	A.6.	Application Design	e-4
	A.7.	Technology Trend Monitoring	e-4
	B.6.	Systems Engineering	e-4
	D.7.	Data Science and Analytics	e-4
	E.2.	Project and Portfolio Management	e-4
	E.4.	Relationship Management	e-3
	E.5.	Process Improvement	e-3
Complexity	The profile has an EQF7 level.		

3. PLO Architecture Design [EQF7]

The learner has demonstrated ability to...

Lead the development and deployment of complex AI architectures across enterprise systems by coordinating teams, applying advanced design methodologies, and evaluating AI-specific risks, ethics, and compliance in unstructured and multidisciplinary contexts.

Unit Learning Outcomes

3.1	Analyse interdependencies among multiple AI systems and enterprise platforms by mapping data flows, service interactions, and integration points in real-world deployments.
3.2	Design integrated AI solutions ensuring scalability, security, and policy compliance using enterprise-grade frameworks and architecture standards.
3.3	Coordinate a team to deploy AI architectures in realistic, open-ended projects by assigning roles, tracking progress, and resolving integration issues in enterprise settings.
3.4	Evaluate AI risks, biases, and ethical implications in multi-factor decision-making using scenario analyses, audits, or simulation tools.

3.5	Document and present AI architecture solutions for diverse stakeholders through reports, visual diagrams, and presentations tailored to technical and non-technical audiences.
3.6	Optimise AI deployment and operational performance by monitoring system metrics, troubleshooting integration issues, and applying iterative improvements in enterprise projects.

2. PLO Application Design [EQF7]

The learner has demonstrated ability to...

Lead the design and strategic deployment of complex AI applications by architecting scalable, interoperable, and ethically compliant models and systems, guiding stakeholders on performance, trade-offs, and responsible integration across diverse environments.

Unit Learning Outcomes

2.1	Lead the conceptualization and architecture of complex AI applications in multi-stakeholder or cross-domain projects.
2.2	Design scalable and interoperable data structures, workflows, and AI models using advanced modelling and simulation techniques to ensure robustness and ethical compliance.
2.3	Evaluate design trade-offs and provide recommendations to stakeholders on AI methods, performance, cost, and ethical considerations through structured decision-making and scenario analysis.
2.4	Integrate explainability, fairness, privacy, and security principles into AI system design by following responsible AI frameworks and guidelines.
2.5	Oversee the integration of AI solutions into heterogeneous environments such as cloud-based, edge, or multi-platform systems, optimising system performance and resource use.
2.6	Lead iterative development and validation with representative users using feedback loops, benchmarking, or pilot deployments to ensure solution effectiveness, scalability, and alignment with project objectives.

3. PLO Technology Trend Monitoring [EQF7]

The learner has demonstrated ability to...

Design transferable AI-enabled solutions in complex contexts by critically analysing and evaluating emerging technology trends and organisational opportunities.

Unit Learning Outcomes

3.1	Critically analyse emerging AI technologies and trends in domains such as finance, healthcare, or smart systems using market reports, research publications, and pilot studies.
3.2	Evaluate AI adoption opportunities using technical, organisational, ethical, and regulatory criteria by considering the implications of recent trends and innovations.
3.3	Synthesize information from multiple sources to identify AI innovation opportunities using literature, industry analyses, and cross-domain technology insights.
3.4	Design AI-enabled solutions or concepts that are transferable across contexts informed by observed technological trends and emerging best practices.
3.5	Validate and justify design decisions using appropriate evaluation methods and metrics by testing solutions in simulations, prototypes, or benchmarking exercises.

3.6	Communicate and defend AI-related proposals to specialist and non-specialist audiences through presentations, reports, or workshops highlighting trends and rationale.

4. PLO Systems Engineering [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Develop, optimise, and manage AI infrastructure systems for large-scale deployment, coordinating teams and resources to implement solutions that ensure performance, security, sustainability, and ethical AI practices in real-world operational contexts.	
Unit Learning Outcomes	
4.1	Develop and implement AI infrastructure solutions for operational use in organisational contexts, such as automated decision-making systems or AI-driven platforms.
4.2	Optimise AI system workflows and resources by applying performance monitoring, load balancing, and cost-efficiency strategies to achieve reliability and efficiency.
4.3	Coordinate teams and manage resources using leadership, project management, or DevOps practices to ensure successful deployment and integration of AI systems.
4.4	Apply ethical AI practices, security measures, and sustainability principles such as GDPR compliance, energy-efficient model training, and secure cloud practices in operational AI infrastructure.
4.5	Evaluate operational AI systems and propose improvements for efficiency, regulatory compliance, and team effectiveness using metrics, audits, and workflow analysis.
4.6	Train and mentor team members in AI infrastructure best practices, tools, and processes to enhance operational capability and knowledge sharing.
4.7	Monitor and report operational KPIs for AI systems, including uptime, performance, and cost metrics, to inform continuous improvement strategies.
5. PLO Data Science and Analytics [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Apply and manage AI-enabled and data-driven analytics solutions to address complex problems, integrate insights from data science as inputs to AI models, coordinate team activities, evaluate data quality and ethical implications, and generate actionable insights that enhance AI-supported and data-informed decision-making in professional, organisational, or research contexts.	
Unit Learning Outcomes	
5.1	Design AI-augmented analytics workflows and solutions for complex, multi-factor problems in organisational or research contexts.
5.2	Apply advanced analytics, predictive models, and machine learning methods using large-scale or multi-source data to support AI-enabled decision-making.
5.3	Evaluate data integrity, model performance, and ethical implications in AI and analytics initiatives within professional or organisational projects.
5.4	Generate actionable insights and recommendations to improve decision-making and outcomes in business, organisational, or research settings.
5.5	Coordinate team activities to implement AI and data-driven analytics projects efficiently.

5.6	Develop frameworks for performance metrics, risk assessment, and operational evaluation in AI-enabled analytics workflows.
5.7	Document reproducible AI and data science analysis pipelines including scripts, notebooks, and workflow documentation.

6. PLO Project and Portfolio Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Deliver optimised AI project portfolios that create measurable organisational value by integrating interdependencies, resource allocation, risk mitigation, and cross-functional team leadership with responsible AI practices.	
Unit Learning Outcomes	
6.1	Design complex AI projects and multi-project portfolios that align with organisational objectives by integrating business requirements and AI system capabilities.
6.2	Evaluate interdependencies, resource allocations, and AI performance metrics to optimise project outcomes in multi-team AI deployment environments.
6.3	Implement risk mitigation strategies addressing ethical, technical, and regulatory challenges in AI initiatives by applying standards such as GDPR compliance or fairness audits.
6.4	Lead cross-functional teams to ensure responsible AI practices and measurable business value through collaborative project governance and AI ethics guidelines.
6.5	Foster innovation and continuous improvement in AI project management processes by introducing AI-enhanced tools, methods, or workflow optimisations.
7. PLO Relationship Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Achieve effective stakeholder alignment and support ethical AI adoption by analysing expectations, addressing privacy concerns, and coordinating collaborative solutions using communication techniques, project documentation, and digital platforms.	
Unit Learning Outcomes	
7.1	Analyse stakeholder expectations and concerns in AI projects, including ethical and privacy issues, using case studies, surveys, or system documentation.
7.2	Apply communication techniques to address AI adoption challenges, such as team discussions, presentations, or messaging platforms.
7.3	Collaborate effectively with peers in AI projects by participating in group tasks and using digital collaboration tools.
7.4	Coordinate stakeholder interactions using project documentation and digital platforms, in contexts such as shared repositories or feedback loops.
7.5	Evaluate the effectiveness of proposed solutions for AI-related stakeholder issues by reviewing outcomes, feedback, or implementation results.
7.6	Suggest improvements to stakeholder engagement strategies using lessons learned from project simulations or peer review exercises.

8. PLO Process Improvement [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Enhance AI process performance by designing and implementing data-driven improvements that integrate multiple AI concepts, address operational risks, uphold ethical standards, and support effective team collaboration.	
Unit Learning Outcomes	
8.1	Design modifications to AI workflows to improve performance and efficiency using practical AI development projects.
8.2	Apply multiple AI process concepts and metrics to identify, analyse, and solve process problems in real-world AI applications.
8.3	Assess operational risks and ethical considerations in AI development and deployment by evaluating AI systems in operational environments.
8.4	Collaborate effectively within a team to implement process improvements in AI project settings.
8.5	Evaluate the outcomes of AI process changes against performance, ethical, and compliance criteria using defined metrics and benchmarks.
8.6	Document AI process modifications and lessons learned for knowledge sharing within the team.

Assessments AI TECH LEAD [EP 4.3]	
1	PLO Architecture Design [EQF7]
1.1	Review of dependency diagrams and Analysis report evaluation assessing mapping of data flows, service interactions, and integration points among multiple AI systems and enterprise platforms in real-world deployments.
1.2	Assessment of architecture blueprint, Design document grading, and Prototype/simulation evaluation assessing integrated AI solution design for scalability, security, policy compliance, and use of enterprise-grade frameworks or architecture standards.
1.3	Evaluation of team deployment plan and Observation of deployment report outcomes assessing team coordination, role assignment, progress tracking, and resolution of integration issues in enterprise settings.
1.4	Assessment of risk & bias report and Ethics evaluation report review assessing AI risks, biases, and ethical implications using scenario analyses, audits, or simulation tools.
1.5	Grading of technical documentation and Presentation slides review assessing clarity, completeness, and tailoring of AI architecture communication to technical and non-technical stakeholders.
1.6	Evaluation of performance report and Review of optimized system documentation assessing metric monitoring, troubleshooting of integration issues, and iterative improvements to AI deployment and operational performance.
2	PLO Application Design [EQF7]
2.1	Review of AI architecture specification and presentation of system design to stakeholders or instructors, assessed for leadership in conceptualizing and architecting complex AI applications in multi-stakeholder or cross-domain projects.

2.2	Assessment of AI system design artifacts, including pipeline diagrams, models, and workflows, assessed for scalability, interoperability, robustness, ethical compliance, and use of advanced modelling or simulation techniques.
2.3	Evaluation of AI design trade-off report, oral defence, or stakeholder advisory simulation assessing structured recommendations on AI methods, performance, cost, and ethical considerations.
2.4	Review of AI ethical compliance documentation, including compliance checklist and reflection report, assessed for integration of explainability, fairness, privacy, and security principles into AI system design.
2.5	Assessment of AI system integration report and demonstration of deployed AI components, assessed for integration into heterogeneous environments and optimization of system performance and resource use.
2.6	Review of AI evaluation report including benchmarking results, pilot feedback, and iterative improvements, assessed for user-informed validation, solution effectiveness, scalability, and alignment with project objectives.
3	PLO Technology Trend Monitoring [EQF7]
3.1	Trend analysis report and written assignment with rubric assessing critical analysis of emerging AI technologies and trends using market reports, research publications, and pilot studies.
3.2	Opportunity assessment matrix, graded report, or case study analysis assessed for technical, organisational, ethical, and regulatory evaluation of AI adoption opportunities.
3.3	Integrated opportunity brief and written synthesis evaluated by rubric for synthesis of literature, industry analyses, and cross-domain technology insights into AI innovation opportunities.
3.4	Solution design document and project proposal evaluation assessing transferability across contexts and grounding in observed technological trends and emerging best practices.
3.5	Validation report and simulation or pilot data review assessing justification of design decisions using appropriate evaluation methods, metrics, and testing evidence.
3.6	Presentation/report, oral defence, or stakeholder-style review assessed for communication and defence of AI-related proposals to specialist and non-specialist audiences, including trend rationale.
4	PLO Systems Engineering [EQF7]
4.1	Review of deployed AI system and deployment documentation assessed for development and implementation of AI infrastructure solutions for operational use in organizational contexts.
4.2	Assessment of AI monitoring dashboard and optimization report for performance monitoring, load balancing, cost-efficiency strategies, reliability, and efficiency improvements.
4.3	Evaluation of AI team coordination report and meeting logs assessing team coordination, resource management, and use of leadership, project management, or DevOps practices.
4.4	Review of AI compliance report and audit trail assessing ethical AI practices, security measures, sustainability principles, GDPR compliance, energy-efficient model training, and secure cloud practices.
4.5	Assessment of AI KPI report and recommendation report evaluating operational AI systems and proposed improvements for efficiency, regulatory compliance, and team effectiveness.

4.6	Evaluation of AI training materials and mentorship documentation assessing training and mentoring on AI infrastructure best practices, tools, and processes.
4.7	Assessment of AI continuous improvement plan and monitoring dashboard for operational KPI reporting, including uptime, performance, and cost metrics, and their use in continuous improvement.
5	PLO Data Science and Analytics [EQF7]
5.1	Review of AI workflow documentation assessing design of AI-augmented analytics workflows and solutions for complex, multi-factor problems.
5.2	Evaluation of analytical model outputs assessing application of advanced analytics, predictive models, and machine learning methods using large-scale or multi-source data.
5.3	Assessment of data integrity & ethics report evaluating data integrity, model performance, and ethical implications in AI and analytics initiatives.
5.4	Evaluation of insights & recommendations report assessing actionability, evidence base, and relevance for improving decision-making and outcomes.
5.5	Review of team coordination documentation assessing coordination of team activities and efficiency of implementation in AI and data-driven analytics projects.
5.6	Assessment of performance & risk framework for coverage of performance metrics, risk assessment, and operational evaluation in AI-enabled analytics workflows.
5.7	Evaluation of reproducible AI pipelines assessing completeness of scripts, notebooks, workflow documentation, and reproducibility of the analysis process.
6	PLO Project and Portfolio Management [EQF7]
6.1	Portfolio design submission including diagrams and alignment analysis, graded for strategic coherence, AI relevance, integration of business requirements, and alignment with organizational objectives.
6.2	Interdependency/resource evaluation report assessed for accuracy, optimization reasoning, analytical depth, and use of AI performance metrics in multi-team deployment environments.
6.3	Risk mitigation strategy document evaluated against ethical, technical, and regulatory criteria, including application of standards such as GDPR compliance or fairness audits.
6.4	Team leadership evidence package, including meeting minutes and decision logs, assessed by peers and instructor for leadership effectiveness, responsible AI practices, and measurable business value.
6.5	Innovation improvement plan submission assessed for creativity, feasibility, process enhancement impact, and use of AI-enhanced tools, methods, or workflow optimizations.
7	PLO Relationship Management [EQF6]
7.1	Written stakeholder analysis report graded on clarity, completeness, and analysis of stakeholder expectations, concerns, ethical issues, and privacy issues using case studies, surveys, or system documentation.
7.2	Presentation or recorded team briefing assessed on clarity, relevance, communication effectiveness, and appropriate use of communication techniques to address AI adoption challenges.

7.3	Peer evaluation and review of collaborative project documentation and contribution logs, assessed for effective peer collaboration, participation in group tasks, and use of digital collaboration tools.
7.4	Submission of coordinated project documentation with stakeholder feedback records, shared repository or feedback-loop evidence, and rubric-based evaluation of stakeholder interaction coordination.
7.5	Evaluation report or reflective log comparing proposed versus actual solutions for AI-related stakeholder issues, assessed on analytical reasoning and use of outcomes, feedback, or implementation results.
7.6	Recommendations report or lessons learned document suggesting improvements to stakeholder engagement strategies, assessed on feasibility, clarity, actionable insights, and use of project simulation or peer review evidence.
8	PLO Process Improvement [EQF6]
8.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of AI workflow modifications and measurable performance or efficiency improvements in practical AI development projects.
8.2	Analysis report submission with metrics calculations; peer review or instructor feedback assessing application of multiple AI process concepts and metrics to identify, analyse, and solve process problems.
8.3	Risk and ethical assessment report evaluated against a checklist, with case study review assessing operational risks and ethical considerations in AI development and deployment.
8.4	Team project documentation assessed via contribution logs and peer evaluation for effective collaboration and implementation of AI process improvements in project settings.
8.5	Comparative performance report graded against defined metrics and benchmarks, with optional oral defence or presentation, assessing performance, ethical, and compliance outcomes of AI process changes.
8.6	Lessons-learned or reflective report reviewed for completeness, clarity, insightfulness, and documentation of AI process modifications for team knowledge sharing.

	MANAGEMENT		[4]
Profile title	AI MANAGER		[EP 4.4]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI manager. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Builds, leads, and grows a high-performing AI team that delivers impactful solutions, balancing talent development, team productivity, and alignment with business goals.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	D.9.	Personnel Development	e-4
	D.11.	Needs Identification	e-4
	E.2.	Project and Portfolio Management	e-4
	E.3.	Risk Management	e-3
	E.4.	Relationship Management	e-4
Complexity	The profile has an EQF7 level.		

1. PLO Personnel Development [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Develop and institutionalise processes that cultivate AI competence and continuous learning across individuals, teams, and the workforce by evaluating skill needs, designing and implementing strategic learning.	
Unit Learning Outcomes	
1.1	Evaluate organisational AI competence needs considering technical, ethical, and human-AI collaboration aspects using workforce assessments, performance analytics, and organisational surveys.
1.2	Integrate multiple AI-related knowledge domains to develop coherent and strategic learning approaches in alignment with organisational objectives and team requirements.
1.3	Formulate strategic AI competence development plans aligned with organisational objectives and workforce needs by combining workforce skill analysis with business priorities.
1.4	Design advanced AI learning initiatives to address skill gaps at individual, team, and organisational levels using blended learning approaches, professional development frameworks, or experiential learning projects.
1.5	Implement AI learning programmes and mentoring processes to systematically develop competence across the workforce in organisational training, coaching, and collaborative initiatives.

1.6	Establish and sustain a continuous AI learning culture that embeds ethical practices and supports workforce-wide capability development by introducing structured learning processes, communities of practice, and feedback mechanisms.
1.7	Assess the impact of AI learning initiatives on organisational performance and capability development using evaluation metrics, progress dashboards, and organisational performance indicators.
1.8	Design and refine organisational processes that ensure ongoing identification, development, and evaluation of AI competences across all workforce levels in HR and learning & development procedures, organisational policies, or process audits.

2. PLO Needs Identification [EQF7]

The learner has demonstrated ability to...

Leads the end-to-end needs identification process with stakeholders, ensuring AI-driven solution recommendations are strategically aligned with organisational goals, regulatory requirements, and value creation objectives, and ensures the effective implementation, adoption, and iterative enhancement of implemented solutions.

Unit Learning Outcomes

2.1	Lead cross-functional teams in stakeholder engagement by coordinating workshops, co-creation sessions, or advisory meetings to define and validate complex organisational needs.
2.2	Critically assess and ensure that AI-driven solution proposals align with organisational strategy, regulatory requirements, and long-term value creation objectives, using strategic planning frameworks or business model analysis.
2.3	Evaluate and co-create a comprehensive range of AI solution options, including make-or-buy, SaaS, cloud, low-code/no-code, and other emerging technologies, by applying feasibility studies, prototyping, or comparative analysis.
2.4	Ensure the effective implementation, adoption, and iterative enhancement of AI solutions, using human-centred design principles, project management tools, or feedback loops.

3. PLO Project and Portfolio Management [EQF7]

The learner has demonstrated ability to...

Deliver optimised AI project portfolios that create measurable organisational value by integrating interdependencies, resource allocation, risk mitigation, and cross-functional team leadership with responsible AI practices.

Unit Learning Outcomes

3.1	Design complex AI projects and multi-project portfolios that align with organisational objectives by integrating business requirements and AI system capabilities.
3.2	Evaluate interdependencies, resource allocations, and AI performance metrics to optimise project outcomes in multi-team AI deployment environments.
3.3	Implement risk mitigation strategies addressing ethical, technical, and regulatory challenges in AI initiatives by applying standards such as GDPR compliance or fairness audits.
3.4	Lead cross-functional teams to ensure responsible AI practices and measurable business value through collaborative project governance and AI ethics guidelines.
3.5	Foster innovation and continuous improvement in AI project management processes by introducing AI-enhanced tools, methods, or workflow optimisations.

4. PLO Risk Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities	
Unit Learning Outcomes	
4.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
4.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
4.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
4.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
4.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
4.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.
5. PLO Relationship Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Ensure responsible and inclusive AI decision-making by designing and implementing stakeholder engagement strategies that integrate ethical, cultural, and organisational considerations while facilitating alignment and consensus across multidisciplinary teams.	
Unit Learning Outcomes	
5.1	Design stakeholder engagement strategies for AI initiatives by applying strategic planning tools or scenario analyses.
5.2	Implement communication and collaboration approaches to facilitate alignment and trust across multidisciplinary teams using workshops, collaborative software, or structured team activities.
5.3	Lead workshops or meetings to mediate conflicts and promote consensus in cross-functional project teams or stakeholder consultations.
5.4	Assess the impact of engagement strategies on stakeholder alignment and responsible AI adoption by analysing feedback, monitoring adoption metrics, or reviewing team performance.
5.5	Adapt engagement strategies to emerging AI-related challenges using iterative design, stakeholder input, or pilot project insights.
5.6	Advocate for ethical and culturally sensitive AI practices by preparing guidelines, training materials, or stakeholder briefings.
5.7	Document and report stakeholder engagement outcomes for use in organisational learning or project audits.

Assessments AI MANAGER [EP 4.4]	
1	PLO Personnel Development [EQF7]
1.1	Evaluation of organisational AI competence assessment report, assessed for use of workforce assessments, performance analytics, and organisational surveys to analyse technical, ethical, and human–AI collaboration competence needs.
1.2	Review of integrated AI knowledge framework, assessed for coherence, strategic alignment with organisational objectives, and fit with team requirements.
1.3	Grading of strategic AI competence development plan, assessed for alignment with organisational objectives, workforce needs, workforce skill analysis, and business priorities.
1.4	Assessment of advanced AI learning initiative design dossier, assessed for quality, feasibility, and coverage of individual, team, and organisational skill gaps using blended, professional development, or experiential approaches.
1.5	Evaluation of implemented AI programme portfolio, assessed for evidence of training, coaching, mentoring, collaborative initiatives, and workforce-wide AI competence development.
1.6	Review of continuous AI learning culture report, assessed for structured learning processes, communities of practice, feedback mechanisms, ethical embedding, and workforce-wide capability development.
1.7	Assessment of AI learning impact report, assessed for use of evaluation metrics, progress dashboards, and organisational performance indicators to analyse performance improvements and capability development.
1.8	Evaluation of organisational AI competence process documentation, assessed for process design and refinement supporting ongoing identification, development, and evaluation of AI competences across all workforce levels.
2	PLO Needs Identification [EQF7]
2.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs showing leadership of cross-functional stakeholder engagement and validation of complex organizational needs.
2.2	AI Solution Alignment Report – assessed via written report analysing AI solutions against strategic, regulatory, and value alignment using strategic planning frameworks or business model analysis.
2.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results for make-or-buy, SaaS, cloud, low-code/no-code, and emerging technology options.
2.4	AI Implementation & Enhancement Plan – assessed via documented implementation roadmap with iterative improvement strategy for AI solutions, including adoption, feedback loops, and human-centred design considerations.
3	PLO Project and Portfolio Management [EQF7]
3.1	Portfolio design submission including diagrams and alignment analysis, graded for strategic coherence, AI relevance, integration of business requirements, and alignment with organizational objectives.
3.2	Interdependency/resource evaluation report assessed for accuracy, optimization reasoning, analytical depth, and use of AI performance metrics in multi-team deployment environments.

3.3	Risk mitigation strategy document evaluated against ethical, technical, and regulatory criteria, including application of standards such as GDPR compliance or fairness audits.
3.4	Team leadership evidence package, including meeting minutes and decision logs, assessed by peers and instructor for leadership effectiveness, responsible AI practices, and measurable business value.
3.5	Innovation improvement plan submission assessed for creativity, feasibility, process enhancement impact, and use of AI-enhanced tools, methods, or workflow optimizations.
4	PLO Risk Management [EQF6]
4.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks.
4.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the AI deployment environment.
4.3	Mitigation plan submission assessed for feasibility, relevance, application to reduce AI-related risks, and alignment with defined project, product, or service boundaries.
4.4	Oral presentation or report evaluated for clarity, communication of AI risk findings, mitigation plans, and stakeholder engagement in project or organisational settings.
4.5	Review of AI system performance logs, annotated with identified emerging risks such as model drift or data anomalies and supporting analysis.
4.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.
5	PLO Relationship Management [EQF7]
5.1	Stakeholder engagement strategy document assessed with rubric for strategic depth, completeness, integration of ethical/cultural factors, and application of strategic planning tools or scenario analyses.
5.2	Workshop artifacts, collaboration logs, or team alignment reports evaluated for effectiveness of communication, facilitation, collaboration approach, trust-building, and team outcomes.
5.3	Workshop or meeting minutes documenting conflict resolution and consensus, evaluated on mediation quality, leadership of cross-functional dialogue, and decision outcomes.
5.4	Impact assessment report assessed on use of feedback, adoption metrics, team-performance evidence, and data supporting stakeholder alignment and responsible AI adoption.
5.5	Updated engagement plan or pilot project report assessed on adaptability, responsiveness to emerging AI-related challenges, and use of stakeholder input or pilot project insights.
5.6	Guidelines, training materials, or briefing reports assessed on clarity, ethical rigor, cultural sensitivity, and advocacy for ethical and culturally sensitive AI practices.
5.7	Final stakeholder engagement report assessed for completeness, documentation quality, traceability of engagement outcomes, suitability for audits, and relevance for organizational learning.

	MANAGEMENT		[4]
Profile title	AI PRODUCT MANAGER		[EP 4.5]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI product manager. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Defines AI product vision and strategy based on market, customer needs and business goals. Defines product requirements, works closely with stakeholders, data scientists, and engineers, guiding the product development teams, prioritising features and potential releases. Validates that the developed AI solution meets requirements.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.3.	Business Plan Development	e-3
	A.4.	Product/Service Planning	e-4
	A.7.	Technology Trend Monitoring	e-3
	A.9.	Innovating	e-4
	A.10	User Experience	e-3
	D.4.	Purchasing	e-3
	D.11	Needs Identification	e-4
	E.2.	Project and Portfolio Management	e-4
Complexity	The profile has an EQF7 level.		

1. PLO Business Plan Development [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Produce and communicate a feasible and economically justified plan for a data- or AI-driven initiative by analysing alternatives, estimating costs and benefits, and collaborating effectively within a team.	
Unit Learning Outcomes	
1.1	Apply established business planning and cost-benefit methods appropriately to a data- or AI-driven initiative in a commercial or organisational context.
1.2	Analyse alternative approaches and identify basic advantages and limitations using structured evaluation frameworks such as SWOT or scenario analysis.
1.3	Estimate costs, benefits, and expected value by applying standard data sources or publicly available AI datasets.
1.4	Explain feasibility and alignment with stated business objectives in written or oral presentations for stakeholders or team members.

1.5	Communicate the plan effectively using reports, slides, or discussions and demonstrate constructive participation in team work in group projects or collaborative exercises.
2. PLO Product/Service Planning [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Strategically lead the development and management of AI-enabled products or services by critically evaluating complex scenarios, designing adaptive planning frameworks, coordinating multidisciplinary resources, and ensuring governance, compliance, and sustainability in unstructured, novel contexts.	
Unit Learning Outcomes	
2.1	Critically analyse and compare complex product or service scenarios, including AI-enabled solutions, using scenario simulations, multi-factor models, or cross-domain case studies.
2.2	Evaluate and judge AI-related value, risks, governance, and compliance implications by assessing technical performance, organisational processes, and regulatory requirements.
2.3	Design, justify, and adapt integrated planning approaches for AI-enabled products and services, coordinating resources and stakeholders through project frameworks, workshops, and agile methods in novel or unstructured contexts.
2.4	Ensure sustainable portfolio management, change control, AI-specific documentation, and regulatory compliance by implementing governance processes, version tracking, and compliance audits across AI initiatives.
2.5	Integrate emerging AI technologies and methodologies into strategic planning and service design by evaluating innovation potential and applicability in real-world contexts.
2.6	Mentor or guide team members and stakeholders in AI project execution and decision-making, fostering collaborative problem-solving in multidisciplinary environments.

3. PLO Technology Trend Monitoring [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Monitor and assess emerging AI technologies in partially defined contexts by identifying trends, analysing developments, and applying insights to small-scale use cases.	
Unit Learning Outcomes	
3.1	Identify key concepts, techniques, and emerging areas in AI by tracking technological trends and innovations such as generative AI, reinforcement learning, and computer vision tools.
3.2	Analyse and compare AI technologies and tools using defined criteria such as potential, maturity, and applicability in the context of industry reports, vendor offerings, or research updates.
3.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
3.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.
3.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.
3.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.

4. PLO Innovating [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Deliver impactful AI-enabled innovations in professional contexts by leading collaborative development, aligning technical and organisational factors, and evaluating real-world effectiveness.	
Unit Learning Outcomes	
4.1	Coordinate team efforts to design AI-enabled solutions addressing complex professional or societal problems, by aligning roles, expertise, and development activities.
4.2	Integrate multiple technical and organisational factors in developing AI-based solutions, such as system architecture, workflows, and governance constraints.
4.3	Apply AI technologies to implement solutions with practical impact, in real-world organisational or professional environments.
4.4	Evaluate the effectiveness and applicability of AI innovations in real-world professional contexts, using operational, stakeholder, or performance criteria.
4.5	Manage trade-offs between innovation, feasibility, and organisational constraints in AI projects, such as time, resources, and risk.
4.6	Facilitate stakeholder engagement around AI-enabled innovations, by communicating value, limitations, and implementation implications.

5. PLO User Experience [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Analyse, design, and evaluate effective and ethically responsible AI-enabled user experiences by applying UX methods, designing interfaces that communicate AI behaviour, and considering usability, trust, and ethical implications.	
Unit Learning Outcomes	
5.1	Analyse user needs, goals, and behaviour in AI-supported applications, such as recommendation or automation systems.
5.2	Apply and adapt UX and HCI methods using AI design tools and frameworks to design user interactions for AI-enabled products and services.
5.3	Design interface elements such as visual indicators or textual cues that communicate AI behaviour, limitations, or confidence levels to users, and evaluate usability, explainability, and trust using methods like user testing or heuristics.
5.4	Assess ethical implications of AI-driven user experiences by considering issues such as bias, fairness, and transparency.

6. PLO Purchasing [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Acquire AI solutions that maximise organisational value, performance, and compliance by aligning business needs with supplier capabilities, ethical standards, and regulatory requirements through informed and strategic procurement decisions.	

Unit Learning Outcomes	
6.1	Analyse organisational AI needs by identifying functional and non-functional requirements, such as performance, explainability, robustness, and retraining obligations.
6.2	Evaluate AI suppliers' capabilities, ethical practices, and risk profiles using multi-criteria assessment methods, such as cost, compliance, sustainability, and governance factors.
6.3	Interpret legal, regulatory, and organisational standards applicable to AI procurement and deployment, such as data protection, bias mitigation, and accountability requirements.
6.4	Design or recommend AI acquisition strategies that balance cost, compliance, sustainability, and business value in organisational decision-making.
6.5	Apply analytical reasoning and ethical judgment when assessing trade-offs between supplier offerings, contract terms, and technical solution characteristics.
6.6	Demonstrate initiative and collaborative behaviour in moderately complex AI procurement tasks, such as cross-functional evaluation or supplier negotiation scenarios.

7. PLO Needs Identification [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Independently engage with stakeholders to identify and validate needs, translating them into feasible AI and technology solution options, while considering business objectives and organisational priorities.	
Unit Learning Outcomes	
7.1	Actively engages with internal and external stakeholders to elicit and validate their needs, using structured interviews, workshops, or observational techniques.
7.2	Analyse and articulate stakeholder needs, differentiating between functional, technical, and business requirements, by applying basic requirement-gathering frameworks or tools.
7.3	Translate validated stakeholder needs into feasible AI or technology solution options, considering constraints such as cost, technical feasibility, and organisational priorities.
7.4	Apply basic data analysis using datasets, dashboards, or simple statistical tools to support the identification of needs and evaluate potential solution options.
7.5	Recognize and consider ethical implications and relevant regulatory constraints in AI application scenarios or technology deployment when proposing solutions.

8. PLO Project and Portfolio Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Deliver optimised AI project portfolios that create measurable organisational value by integrating interdependencies, resource allocation, risk mitigation, and cross-functional team leadership with responsible AI practices.	
Unit Learning Outcomes	
8.1	Design complex AI projects and multi-project portfolios that align with organisational objectives by integrating business requirements and AI system capabilities.

8.2	Evaluate interdependencies, resource allocations, and AI performance metrics to optimise project outcomes in multi-team AI deployment environments.
8.3	Implement risk mitigation strategies addressing ethical, technical, and regulatory challenges in AI initiatives by applying standards such as GDPR compliance or fairness audits.
8.4	Lead cross-functional teams to ensure responsible AI practices and measurable business value through collaborative project governance and AI ethics guidelines.
8.5	Foster innovation and continuous improvement in AI project management processes by introducing AI-enhanced tools, methods, or workflow optimisations.

Assessments AI PRODUCT MANAGER [EP 4.5]	
1	PLO Business Plan Development [EQF6]
1.1	Evaluation of business plan document and written report review assessing application of established business planning and cost-benefit methods to a data- or AI-driven initiative in a commercial or organizational context.
1.2	Alternatives comparison matrix and case study analysis assessing comparison of alternative approaches, advantages, limitations, and use of structured evaluation frameworks such as SWOT or scenario analysis.
1.3	Cost-benefit analysis report with calculations checked against data, assessed for estimates of costs, benefits, expected value, and use of standard data sources or publicly available AI datasets.
1.4	Feasibility summary with rubric-based evaluation of clarity, feasibility, and alignment with stated business objectives for stakeholders or team members.
1.5	Team contribution evidence, peer evaluation, and observation of group work assessing constructive participation, effective plan communication, and collaboration in group projects or collaborative exercises.
2	PLO Product/Service Planning [EQF7]
2.1	Review of comparative scenario analysis report, scenario-based case study evaluation, and oral defence assessing critical comparison of complex AI-enabled product or service scenarios using simulations, multi-factor models, or cross-domain cases.
2.2	Assessment of evaluation and governance report, rubric-based scoring, and peer/expert review assessing AI-related value, risks, governance, compliance, technical performance, organisational processes, and regulatory requirements.
2.3	Evaluation of integrated planning framework, submission review, and adaptive planning scenario exercises assessing design, justification, and adaptation of planning approaches for AI-enabled products and services.
2.4	Review of portfolio and compliance documentation, audit simulation, and compliance checklist evaluation assessing sustainable portfolio management, change control, AI-specific documentation, and regulatory compliance.
2.5	Assessment of innovation integration report, rubric-based scoring, and case study analysis evaluating integration of emerging AI technologies and methodologies into strategic planning and service design.
2.6	Assessment of mentoring/knowledge transfer record, feedback from mentees, documentation review, and reflective report assessing guidance in AI project execution, decision-making, and collaborative problem-solving.

3	PLO Technology Trend Monitoring [EQF6]
3.1	Annotated portfolio submission and short written test assessing correct identification of AI concepts, techniques, and emerging areas, including examples such as generative AI, reinforcement learning, and computer vision tools.
3.2	Comparative analysis table with oral explanation or peer review, assessed for use of defined criteria such as potential, maturity, and applicability based on industry reports, vendor offerings, or research updates.
3.3	Trend mapping report and written report evaluation assessing classification of internal and external AI innovation sources, including trend reports, patents, newsfeeds, and academic publications.
3.4	Mini prototype or simulation demonstration with lab report, assessed for correct application of basic methods and tools to explore AI-enabled use cases using trending technologies.
3.5	Ethics and impact briefing assessed with a rubric for description and consideration of ethical, data protection, and organisational issues in emerging technologies and current AI applications.
3.6	Presentation or dashboard, evaluated by peers and instructor, assessing clear presentation and justification of AI trend observations and insights summarising technology developments.
4	PLO Innovating [EQF7]
4.1	Team collaboration report documenting AI solution design efforts, assessed for coordination of roles, expertise, and development activities to address complex professional or societal problems.
4.2	Architecture/integration report for AI solution, assessed for integration of system architecture, workflows, and governance constraints in the AI-based solution.
4.3	Deployed AI solution demonstration or portfolio submission assessing practical implementation of AI technologies and evidence of impact in real-world organizational or professional environments.
4.4	Evaluation report measuring real-world AI solution effectiveness and applicability using operational, stakeholder, or performance criteria.
4.5	Risk/trade-off analysis report for AI innovation projects, assessed for management of trade-offs between innovation, feasibility, time, resources, and risk.
4.6	Stakeholder communication materials, including presentations or briefs for AI innovations, assessed for communication of value, limitations, and implementation implications to stakeholders.
5	PLO User Experience [EQF6]
5.1	AI user research report, submission and review, and practical observation of research artefacts assessing analysis of user needs, goals, and behaviour in AI-supported applications.
5.2	AI UX prototype evaluation, practical design assignment, and rubric-based assessment evaluating application and adaptation of UX and HCI methods using AI design tools and frameworks.
5.3	AI interface mock-ups, heuristic evaluation report, and peer/instructor review assessing communication of AI behaviour, limitations, confidence levels, usability, explainability, and trust.
5.4	AI ethics assessment report, written case analysis, and ethical decision reflection assessing ethical implications of AI-driven user experiences, including bias, fairness, and transparency.

6	PLO Purchasing [EQF6]
6.1	Assessment of AI requirements specification and AI gap analysis report, using written submission and rubric-based evaluation, assessed for functional and non-functional AI requirements including performance, explainability, robustness, and retraining obligations.
6.2	Assessment of AI supplier evaluation matrix and AI risk assessment, using case study analysis, structured report, and rubric, assessed for supplier capabilities, ethical practices, risk profiles, cost, compliance, sustainability, and governance factors.
6.3	Assessment of AI compliance mapping and AI standards checklist, using written assignment, compliance mapping exercise, and peer review, assessed for interpretation of legal, regulatory, and organisational standards for AI procurement and deployment.
6.4	Assessment of AI procurement recommendation and AI contract framework, using project report, scenario-based evaluation, and rubric, assessed for balancing cost, compliance, sustainability, and business value in AI acquisition strategy.
6.5	Assessment of AI decision rationale and AI ethical impact assessment, using reflective report, structured decision log, and rubric, assessed for analytical reasoning and ethical judgment in supplier, contract, and technical trade-offs.
6.6	Assessment of AI cross-functional consultation outputs and AI integrated procurement dossier, using portfolio submission, presentation, and peer and instructor evaluation, assessed for initiative and collaboration in AI procurement tasks.
7	PLO Needs Identification [EQF6]
7.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs showing structured stakeholder engagement and validation of AI-related needs.
7.2	AI UX prototype evaluation, practical design assignment, rubric-based assessment
7.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results showing feasible AI or technology options linked to validated stakeholder needs and constraints.
7.4	AI ethics assessment report, written case analysis, ethical decision reflection
7.5	AI Ethical & Regulatory Assessment – assessed via written document identifying ethical implications and relevant regulatory constraints in AI application scenarios or technology deployment, and explaining how these considerations are addressed in proposed AI or technology solutions.
8	PLO Project and Portfolio Management [EQF7]
8.1	Portfolio design submission including diagrams and alignment analysis, graded for strategic coherence, AI relevance, integration of business requirements, and alignment with organizational objectives.
8.2	Interdependency/resource evaluation report assessed for accuracy, optimization reasoning, analytical depth, resource allocation, interdependency analysis, and use of AI performance metrics in multi-team deployment environments.
8.3	Risk mitigation strategy document evaluated against ethical, technical, and regulatory criteria, including application of standards such as GDPR compliance or fairness audits.
8.4	Team leadership evidence package, including meeting minutes and decision logs, assessed by peers and instructor for leadership effectiveness, responsible AI practices, collaborative governance, and measurable business value.
8.5	Innovation improvement plan submission assessed for creativity, feasibility, process enhancement impact, and use of AI-enhanced tools, methods, or workflow optimizations.

	MANAGEMENT		[4]
Profile title	AI OPERATIONS MANAGER		[EP 4.6]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI operations manager. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Implements and maintains (a designated part of an) AI operation ensuring that activities are conducted in accordance with organisational rules, processes and standards. Plans, changes and implements them in accordance with the organisational AI strategy and budget. Manages risks and ensures the effectiveness of the AI operation and infrastructure.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	C.2.	Change Support	e-3
	C.3.	Service Delivery	e-3
	C.4.	Problem Management	e-3
	C.5.	Systems Management	e-3
	D.9.	Personnel Development	e-3
	E.3.	Risk Management	e-3
	E.5.	Process Improvement	e-3
	E.6.	ICT Quality Management	e-3
	E.8.	Information Security Management	e-3
Complexity	The profile has an EQF6 level.		

1. PLO Change Support [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Plan, deploy, and optimise updates to AI models and datasets by independently analysing operational, ethical, and service impacts, monitoring system behaviour, and ensuring compliance with AI governance and service standards.	
Unit Learning Outcomes	
1.1	Analyse the impact of AI-related changes on operational performance, service continuity, and compliance, using metrics, logs, or simulation results.
1.2	Plan deployment and versioning strategies for AI models and datasets to avoid conflicting updates, in multi-team or production environments.

1.3	Evaluate ethical, fairness, and explainability considerations when implementing AI changes, by reviewing decision-making outputs or bias reports.
1.4	Coordinate with multiple teams to implement AI changes in accordance with organisational AI governance and SLAs, using project management practices or communication tools.
1.5	Apply monitoring techniques to detect AI model drift or unexpected outputs after deployment, in live or staged AI environments.
1.6	Recommend corrective actions or improvements based on performance and compliance assessment, by analysing operational logs, performance metrics, or audit results.

2. PLO Service Delivery [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Enhance the reliability, security, and effectiveness of AI-enabled services by analysing performance, availability, data quality, and incidents, and applying monitoring tools and collaborative practices to implement improvements in dynamic operational contexts.	
Unit Learning Outcomes	
2.1	Explain AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.
2.2	Apply AI monitoring tools, dashboards, and logs to assess service availability, model performance, and data quality using real-time operational data.
2.3	Analyse trends in AI service performance, incident patterns, and operational metrics to detect risks or deviations by evaluating historical service records.
2.4	Evaluate AI service effectiveness, security and continuity against defined criteria, suggesting improvements in practical operational scenarios.
2.5	Collaborate with multidisciplinary teams to implement corrective measures that enhance AI service reliability and compliance in organisational or cross-functional contexts.
3. PLO Problem Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Investigate and evaluate ICT and AI incidents, including emerging failures, model drift, or bias, apply corrective and preventive measures, and design monitoring strategies or knowledge management practices to optimise system and AI performance, in situations with varying and partially undefined problems.	
Unit Learning Outcomes	
3.1	Investigate complex ICT and AI incidents, including subtle system failures, AI model drift, and emerging bias patterns, using diagnostic tools and historical performance data.
3.2	Evaluate root causes of incidents and their impact on system and AI performance through structured analysis and impact assessment methods.
3.3	Apply corrective and preventive measures to mitigate incidents in less predictable operational situations.
3.4	Design monitoring strategies or knowledge management practices to track recurring AI failures and support system optimisation.

3.5	Advise or collaborate with team members by sharing findings and recommending improvements in AI system performance and ethical compliance.

4. PLO Systems Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Ensure the reliable, secure, and optimised operation of AI systems in hybrid and cloud environments by managing deployments, monitoring performance, mitigating risks, and continuously improving processes through operational, analytical, and compliance-oriented practices.	
Unit Learning Outcomes	
4.1	Explain and relate AI system architectures, including model serving, data pipelines, and integration with IT services, in hybrid and cloud computing environments.
4.2	Apply operational methods to deploy, configure, and scale AI platforms and inference services, using automation, containerization, and orchestration tools.
4.3	Analyse AI system behaviour by examining performance metrics, logs, and operational indicators, to identify bottlenecks, inefficiencies, and anomalies in AI workflows.
4.4	Resolve AI system operational issues by applying incident management and troubleshooting practices, using structured problem-solving approaches and diagnostic tools.
4.5	Evaluate AI system performance, reliability, and operational risks, including degradation and dependency issues, by assessing service-level metrics and potential failure scenarios.
4.6	Apply security, access control, and compliance requirements to ensure secure and compliant AI operations, in accordance with organisational policies and regulatory frameworks.
4.7	Contribute to improvements of AI operational practices by proposing adjustments based on observed system behaviour, through iterative monitoring and feedback in evolving organisational contexts.
5. PLO Personnel Development [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Advance individual and team AI capabilities to support responsible, effective, and collaborative performance across organisational contexts by analysing skill data, designing tailored learning pathways, and coaching peers in the application of AI for decision-making, problem-solving, and team collaboration.	
Unit Learning Outcomes	
5.1	Analyse AI competence data to identify skill gaps, trends, and development opportunities across individuals and teams using organisational assessment tools and performance metrics.
5.2	Evaluate the relevance of AI skills for organisational objectives and diverse work contexts in current projects and operational settings.
5.3	Design role-specific AI learning pathways and interventions using organisational resources, learning platforms, and professional development frameworks.
5.4	Implement AI learning programmes that enable team members to apply AI responsibly and effectively in workplace tasks and collaborative projects.

5.5	Coach peers to apply AI in decision-making, problem-solving, and team collaboration through mentoring sessions, workshops, or team-based exercises.
5.6	Apply AI insights to enhance team-level collaboration, decision-making, and problem-solving processes by integrating data-driven tools and analytic techniques.
5.7	Demonstrate responsible and context-aware use of AI tools such as AI-assisted analytics, automation tools, or knowledge management systems in organisational activities.

6. PLO Risk Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities	
Unit Learning Outcomes	
6.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
6.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
6.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
6.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
6.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
6.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.
7. PLO Process Improvement [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Enhance AI process performance by designing and implementing data-driven improvements that integrate multiple AI concepts, address operational risks, uphold ethical standards, and support effective team collaboration.	
Unit Learning Outcomes	
7.1	Design modifications to AI workflows to improve performance and efficiency using practical AI development projects.
7.2	Apply multiple AI process concepts and metrics to identify, analyse, and solve process problems in real-world AI applications.
7.3	Assess operational risks and ethical considerations in AI development and deployment by evaluating AI systems in operational environments.
7.4	Collaborate effectively within a team to implement process improvements in AI project settings.
7.5	Evaluate the outcomes of AI process changes against performance, ethical, and compliance criteria using defined metrics and benchmarks.

7.6	Document AI process modifications and lessons learned for knowledge sharing within the team.

8. PLO ICT Quality Management [EQF6]

The learner has demonstrated ability to...

Analyse and apply AI quality management practices by selecting and combining appropriate quality indicators, governance mechanisms, and evaluation methods to assess and improve the performance, reliability, security, and fairness of AI systems, while contributing to team-based quality decisions aligned with business needs.

Unit Learning Outcomes

8.1	Select appropriate AI quality metrics and indicators using recognised AI standards and system documentation.
8.2	Combine governance frameworks and monitoring tools for different types of AI systems in operational contexts.
8.3	Analyse AI performance, reliability, fairness, and security data to identify quality risks and improvement opportunities.
8.4	Apply AI quality improvement measures in team-based development or operational AI projects.
8.5	Document and communicate AI quality findings using structured reports or dashboards for stakeholders.
8.6	Evaluate AI system outcomes against business, ethical, and regulatory requirements in organisational settings.

9. PLO Information Security Management [EQF6]

The learner has demonstrated ability to...

Ensure the security and reliability of AI systems by assessing vulnerabilities, applying secure development practices, and implementing mitigation strategies using appropriate tools and collaborative methods.

Unit Learning Outcomes

9.1	Analyse AI system components and workflows to identify potential security vulnerabilities in development or operational pipelines.
9.2	Evaluate AI risks related to data, models, deployment, and operation using established risk assessment frameworks and tools.
9.3	Apply secure AI development and operational practices (DevSecMLOps) to mitigate identified risks in practical project scenarios.
9.4	Implement AI monitoring and anomaly detection using software tools or supervised techniques.
9.5	Collaborate effectively in teams to plan and execute AI security measures in applied projects or simulated operational scenarios.

Assessments AI OPERATIONS MANAGER [EP 4.6]	
1	PLO Change Support [EQF6]
1.1	Evaluation of AI impact analysis report, assessed for correctness of metrics, operational insights, service-continuity implications, and compliance impact of AI-related changes.
1.2	Review of AI deployment/versioning plan, with focus on feasibility, completeness, conflict mitigation, and suitability for multi-team or production environments.
1.3	Assessment of AI ethical assessment report, evaluating fairness, explainability, bias considerations, and evidence from decision-making outputs or bias reports.
1.4	Review of AI coordination documentation, including evidence of multi-team collaboration, use of project management practices or communication tools, and adherence to governance/SLAs.
1.5	Evaluation of AI post-deployment monitoring report, including applied monitoring techniques, detection of model drift or unexpected outputs, and evidence from live or staged AI environments.
1.6	Assessment of AI corrective action report, focusing on clarity, rationale, practicality, and use of operational logs, performance metrics, or audit results to justify proposed improvements.
2	PLO Service Delivery [EQF6]
2.1	Written AI principles report assessing explanation of AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.
2.2	Submission of AI monitoring dashboard outputs or screenshots assessed for use of monitoring tools, dashboards, and logs to evaluate service availability, model performance, and data quality.
2.3	Analysis report of AI trends and incident patterns assessed for use of historical service records, operational metrics, and detection of risks or deviations.
2.4	AI service evaluation report assessed for evaluation of effectiveness, security, and continuity against defined criteria, with suggested improvements for practical operational scenarios.
2.5	Documented AI corrective action plan or team report assessed for multidisciplinary collaboration, implemented corrective measures, and contribution to AI service reliability and compliance.
3	PLO Problem Management [EQF6]
3.1	Assessment of AI incident investigation report for depth and accuracy of data analysis, including use of diagnostic tools and historical performance data to investigate system failures, model drift, and bias patterns.
3.2	Evaluation of root cause evaluation and impact analysis review, assessed for structured analysis of incident causes and effects on system and AI performance.
3.3	Review of mitigation plan, assessed for effectiveness and appropriateness of corrective and preventive measures in less predictable operational situations.
3.4	Assessment of monitoring/knowledge strategy document for clarity, feasibility, tracking of recurring AI failures, and support for system optimization.
3.5	Review of advisory report assessing quality of recommendations, sharing of findings, and collaboration advice for AI system performance and ethical compliance.

4	PLO Systems Management [EQF6]
4.1	AI system architecture diagram review with oral or written explanation, assessed for model serving, data pipelines, IT service integration, and hybrid or cloud computing context.
4.2	Evaluation of AI deployment/configuration files and automated deployment simulation check, assessed for deployment, configuration, scaling, automation, containerization, and orchestration of AI platforms or inference services.
4.3	AI performance report assessment, data analysis exercises, and case study analysis assessing use of metrics, logs, and operational indicators to identify bottlenecks, inefficiencies, and anomalies.
4.4	AI incident log evaluation, problem-solving case study, and practical troubleshooting demonstration assessing incident management, structured problem-solving, and use of diagnostic tools to resolve AI operational issues.
4.5	AI risk & reliability assessment report review and scenario-based evaluation assessing performance, reliability, degradation, dependency issues, service-level metrics, and failure scenarios.
4.6	AI security & compliance checklist audit and written or practical assessment of compliance procedures, assessed for security, access control, organisational policy alignment, and regulatory compliance.
4.7	AI operational improvement proposal review and presentation of recommended improvements, assessed for use of observed system behaviour, iterative monitoring, feedback, and relevance to evolving organisational contexts.
5	PLO Personnel Development [EQF6]
5.1	Assessment of AI competence analysis report, evaluating documented AI skill gaps, trends, and development opportunities using organisational assessment tools and performance metrics.
5.2	Review of AI skills evaluation matrix, graded for relevance of AI skills to organisational objectives, diverse work contexts, current projects, and operational settings.
5.3	Evaluation of role-specific AI learning pathway plan, assessed with a rubric for clarity, feasibility, use of organisational resources, learning platforms, and professional development frameworks.
5.4	Assessment of implemented AI learning program documentation, including evidence that team members apply AI responsibly and effectively in workplace tasks and collaborative projects.
5.5	Review of peer AI coaching portfolio and observation of mentoring sessions, workshops, or team-based exercises demonstrating AI application in decision-making, problem-solving, and team collaboration.
5.6	Assessment of team-level AI insights report, evaluating use of data-driven tools and analytic techniques and recommendations for improving collaboration, decision-making, and problem-solving.
5.7	Grading of applied AI case study or portfolio, assessed for responsible and context-aware use of AI-assisted analytics, automation tools, or knowledge management systems in organisational activities.

6	PLO Risk Management [EQF6]
6.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks.
6.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the AI deployment environment.
6.3	Mitigation plan submission assessed for feasibility, relevance, application to reduce AI-related risks, and alignment with defined project, product, or service boundaries.
6.4	Oral presentation or report evaluated for clarity, communication of AI risk findings, mitigation plans, and stakeholder engagement in project or organisational settings.
6.5	Review of AI system performance logs, annotated with identified emerging risks such as model drift or data anomalies and supporting analysis.
6.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.
7	PLO Process Improvement [EQF6]
7.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of AI workflow modifications and measurable performance or efficiency improvements in practical AI development projects.
7.2	Analysis report submission with metrics calculations; peer review or instructor feedback assessing application of multiple AI process concepts and metrics to identify, analyse, and solve process problems.
7.3	Risk and ethical assessment report evaluated against a checklist, with case study review assessing operational risks and ethical considerations in AI development and deployment.
7.4	Team project documentation assessed via contribution logs and peer evaluation for effective collaboration and implementation of AI process improvements in project settings.
7.5	Comparative performance report graded against defined metrics and benchmarks, with optional oral defence or presentation, assessing performance, ethical, and compliance outcomes of AI process changes.
7.6	Lessons-learned or reflective report reviewed for completeness, clarity, insightfulness, and documentation of AI process modifications for team knowledge sharing.
8	PLO ICT Quality Management [EQF6]
8.1	Individual assignment evaluating AI quality metrics selection with written justification, assessed for use of recognised AI standards and system documentation.
8.2	Case-based exercise analysing governance and monitoring configurations, assessed for combining governance frameworks and monitoring tools for different types of AI systems in operational contexts.
8.3	Data analysis report on AI performance, fairness, reliability, and security, assessed for identification of quality risks and improvement opportunities.
8.4	Group project with documented implementation of AI quality improvement measures, assessed for application in team-based development or operational AI projects.
8.5	Written report or dashboard presenting AI quality findings, assessed for structure, clarity, stakeholder relevance, and communication of findings.

8.6	Structured evaluation paper or exam question assessing AI system outcomes against business, ethical, and regulatory requirements in organisational settings.
9	PLO Information Security Management [EQF6]
9.1	Evaluation of Vulnerability Analysis Report detailing AI components and workflow weaknesses, assessed for identification of potential security vulnerabilities in development or operational pipelines.
9.2	Review of Risk Assessment Matrix, including severity and mitigation measures, using rubric to assess AI risks related to data, models, deployment, and operation.
9.3	Assessment of Secure Development Implementation Plan, including evidence of applied DevSecMLOps practices to mitigate identified risks in practical project scenarios.
9.4	Observation and review of Monitoring Dashboard or Log outputs during lab exercises, assessed for implementation of AI monitoring and anomaly detection using software tools or supervised techniques.
9.5	Assessment of Team Project Security Plan documentation, with peer and instructor evaluation of collaboration, security planning, and execution of AI security measures in applied or simulated operational scenarios.

	MANAGEMENT		[4]
Profile title	AI PROJECT MANAGER		[EP 4.7]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI project manager. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Successfully delivers AI initiatives on time and within scope. Defines, implements and manages AI projects from conception to final delivery. Responsible for achieving optimal results, conforming to relevant regulations, ethical guidelines, and industry standards for quality, safety and sustainability and complying with defined scope, performance, costs, and schedule. Ensures clear communication between business, technical, and operational stakeholders.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.4.	Product/Service Planning	e-4
	B.5.	Documentation Production	e-3
	D.11.	Needs Identification	e-3
	E.2.	Project and Portfolio Management	e-4
	E.3.	Risk Management	e-3
	E.4.	Relationship Management	e-3

	E.7.	Business Change Management	e-3
Complexity	The profile has an EQF7 level.		

1. PLO Product/Service Planning [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Strategically lead the development and management of AI-enabled products or services by critically evaluating complex scenarios, designing adaptive planning frameworks, coordinating multidisciplinary resources, and ensuring governance, compliance, and sustainability in unstructured, novel contexts.	
Unit Learning Outcomes	
1.1	Critically analyse and compare complex product or service scenarios, including AI-enabled solutions, using scenario simulations, multi-factor models, or cross-domain case studies.
1.2	Evaluate and judge AI-related value, risks, governance, and compliance implications by assessing technical performance, organisational processes, and regulatory requirements.
1.3	Design, justify, and adapt integrated planning approaches for AI-enabled products and services, coordinating resources and stakeholders through project frameworks, workshops, and agile methods in novel or unstructured contexts.
1.4	Ensure sustainable portfolio management, change control, AI-specific documentation, and regulatory compliance by implementing governance processes, version tracking, and compliance audits across AI initiatives.
1.5	Integrate emerging AI technologies and methodologies into strategic planning and service design by evaluating innovation potential and applicability in real-world contexts.
1.6	Mentor or guide team members and stakeholders in AI project execution and decision-making, fostering collaborative problem-solving in multidisciplinary environments.

2. PLO Documentation Production [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Apply document-management practices and develop AI-specific documentation, including technical specifications, compliance records, and transparency reports, independently within broad project frameworks, by integrating information from multiple AI system components and ensuring alignment with regulatory and stakeholder requirements in projects with variable challenges.	
Unit Learning Outcomes	
2.1	Apply document-management and collaboration practices to AI projects independently, using systems that enable coordinated document creation and version control.
2.2	Develop AI-specific technical, compliance, and transparency documentation for multiple system components, such as model specifications, system interfaces, and regulatory reports.
2.3	Integrate information from different AI system elements into cohesive and accessible documentation, by consolidating data from datasets, model outputs, and system logs.
2.4	Ensure that AI documentation meets regulatory, ethical, and stakeholder requirements, in accordance with applicable legal, ethical, and organisational standards.

2.5	Adapt and modify existing templates or documentation structures to suit variable AI project contexts, by aligning documentation with project-specific requirements or new system components.
3. PLO Needs Identification [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Independently engage with stakeholders to identify and validate needs, translating them into feasible AI and technology solution options, while considering business objectives and organisational priorities.	
Unit Learning Outcomes	
3.1	Actively engages with internal and external stakeholders to elicit and validate their needs, using structured interviews, workshops, or observational techniques.
3.2	Analyse and articulate stakeholder needs, differentiating between functional, technical, and business requirements, by applying basic requirement-gathering frameworks or tools.
3.3	Translate validated stakeholder needs into feasible AI or technology solution options, considering constraints such as cost, technical feasibility, and organisational priorities.
3.4	Apply basic data analysis using datasets, dashboards, or simple statistical tools to support the identification of needs and evaluate potential solution options.
3.5	Recognize and consider ethical implications and relevant regulatory constraints in AI application scenarios or technology deployment when proposing solutions.

4. PLO Project and Portfolio Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Deliver optimised AI project portfolios that create measurable organisational value by integrating interdependencies, resource allocation, risk mitigation, and cross-functional team leadership with responsible AI practices.	
Unit Learning Outcomes	
4.1	Design complex AI projects and multi-project portfolios that align with organisational objectives by integrating business requirements and AI system capabilities.
4.2	Evaluate interdependencies, resource allocations, and AI performance metrics to optimise project outcomes in multi-team AI deployment environments.
4.3	Implement risk mitigation strategies addressing ethical, technical, and regulatory challenges in AI initiatives by applying standards such as GDPR compliance or fairness audits.
4.4	Lead cross-functional teams to ensure responsible AI practices and measurable business value through collaborative project governance and AI ethics guidelines.
4.5	Foster innovation and continuous improvement in AI project management processes by introducing AI-enhanced tools, methods, or workflow optimisations.

5. PLO Risk Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities	
Unit Learning Outcomes	
5.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
5.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
5.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
5.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
5.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
5.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.

6. PLO Relationship Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Achieve effective stakeholder alignment and support ethical AI adoption by analysing expectations, addressing privacy concerns, and coordinating collaborative solutions using communication techniques, project documentation, and digital platforms.	
Unit Learning Outcomes	
6.1	Analyse stakeholder expectations and concerns in AI projects, including ethical and privacy issues, using case studies, surveys, or system documentation.
6.2	Apply communication techniques to address AI adoption challenges, such as team discussions, presentations, or messaging platforms.
6.3	Collaborate effectively with peers in AI projects by participating in group tasks and using digital collaboration tools.
6.4	Coordinate stakeholder interactions using project documentation and digital platforms, in contexts such as shared repositories or feedback loops.
6.5	Evaluate the effectiveness of proposed solutions for AI-related stakeholder issues by reviewing outcomes, feedback, or implementation results.
6.6	Suggest improvements to stakeholder engagement strategies using lessons learned from project simulations or peer review exercises.

8. PLO Business Change Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Evaluate AI adoption opportunities and design change strategies for organisational processes and teams by monitoring AI performance metrics, addressing risks such as bias or system errors, and implementing measures to promote stakeholder engagement and effective adoption in real operational settings.	
Unit Learning Outcomes	
7.1	Evaluate AI adoption opportunities and determine potential organisational benefits using case studies or business process analyses.
7.2	Design change strategies for teams and processes that address AI-specific risks such as bias, drift, or cybersecurity in operational settings.
7.3	Implement stakeholder engagement activities to promote AI adoption through workshops, meetings, or training programmes.
7.4	Monitor and interpret AI performance metrics to guide adjustments in adoption strategies using dashboards, reports, or KPIs.
7.5	Identify and document potential challenges and limitations of AI adoption in real-world organisational contexts.

Assessments AI PROJECT MANAGER[EP 4.7]	
1	PLO Product/Service Planning [EQF7]
1.1	Review of comparative scenario analysis report, scenario-based case study evaluation, and oral defence assessing critical comparison of complex AI-enabled product or service scenarios using simulations, multi-factor models, or cross-domain case studies.
1.2	Assessment of evaluation and governance report, rubric-based scoring, and peer/expert review assessing AI-related value, risks, governance, compliance, technical performance, organisational processes, and regulatory requirements.
1.3	Evaluation of integrated planning framework, submission review, and adaptive planning scenario exercises assessing design, justification, and adaptation of AI-enabled product or service planning approaches in novel or unstructured contexts.
1.4	Review of portfolio and compliance documentation, audit simulation, and compliance checklist evaluation assessing sustainable portfolio management, change control, AI-specific documentation, governance processes, version tracking, and regulatory compliance.
1.5	Assessment of innovation integration report, rubric-based scoring, and case study analysis of technology integration assessing innovation potential, applicability, and integration into strategic planning and service design.
1.6	Assessment of mentoring/knowledge transfer record, feedback from mentees, documentation review, and reflective report assessing guidance in AI project execution, decision-making, and collaborative problem-solving.
2	PLO Documentation Production [EQF6]
2.1	Evaluation of AI documentation repository for organization, version control, coordinated document creation, collaborative workflow evidence, and peer-review of individual contributions.

2.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components, graded for completeness, accuracy, and coverage of model specifications, system interfaces, and regulatory reports.
2.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs, assessed for clarity, cohesion, accessibility, and accurate integration across AI system elements.
2.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements, supported by a compliance verification report referencing applicable legal, ethical, and organizational standards.
2.5	Evaluation of customized AI documentation templates and modified project documentation, assessed for alignment with project-specific requirements, new system components, and adaptability to variable AI project contexts.
3	PLO Needs Identification [EQF6]
3.1	Stakeholder Needs Report – assessed via written report of AI stakeholder needs, evidence from structured interviews, workshops, or observations, and validation summary.
3.2	Requirement Analysis Matrix – assessed via submitted matrix differentiating functional, technical, and business requirements and mapping them to AI solutions using basic requirement-gathering frameworks or tools.
3.3	AI Solution Options Brief – assessed via presentation or report proposing feasible AI or technology solution options linked to validated stakeholder needs and constraints such as cost, technical feasibility, and organizational priorities.
3.4	AI Data Analysis Summary – assessed via submitted dashboard, data visualization, or short report using datasets or simple statistical tools to identify needs and evaluate potential AI solution options.
3.5	AI Ethical & Regulatory Assessment – assessed via written document identifying ethical implications and relevant regulatory constraints in AI application scenarios or technology deployment and showing how these are considered in solution proposals.
4	PLO Project and Portfolio Management [EQF7]
4.1	Portfolio design submission including diagrams and alignment analysis, graded for strategic coherence, AI relevance, integration of business requirements, and alignment with organizational objectives.
4.2	Interdependency/resource evaluation report assessed for accuracy, optimization reasoning, analytical depth, resource allocation, interdependency analysis, and use of AI performance metrics in multi-team deployment environments.
4.3	Risk mitigation strategy document evaluated against ethical, technical, and regulatory criteria, including application of standards such as GDPR compliance or fairness audits.
4.4	Team leadership evidence package, including meeting minutes and decision logs, assessed by peers and instructor for leadership effectiveness, responsible AI practices, collaborative governance, and measurable business value.
4.5	Innovation improvement plan submission assessed for creativity, feasibility, process enhancement impact, and use of AI-enhanced tools, methods, or workflow optimizations.
5	PLO Risk Management [EQF6]
5.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks.

5.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the AI deployment environment.
5.3	Mitigation plan submission assessed for feasibility, relevance, application to reduce AI-related risks, and alignment with defined project, product, or service boundaries.
5.4	Oral presentation or report evaluated for clarity, communication of AI risk findings, mitigation plans, and stakeholder engagement in project or organisational settings.
5.5	Review of AI system performance logs, annotated with identified emerging risks such as model drift or data anomalies and supporting analysis.
5.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.
6	PLO Relationship Management [EQF6]
6.1	Written stakeholder analysis report graded on clarity, completeness, and analysis of stakeholder expectations, concerns, ethical issues, and privacy issues using case studies, surveys, or system documentation.
6.2	Presentation or recorded team briefing assessed on clarity, relevance, communication effectiveness, and appropriate use of communication techniques to address AI adoption challenges.
6.3	Peer evaluation and review of collaborative project documentation and contribution logs, assessed for effective peer collaboration, participation in group tasks, and use of digital collaboration tools.
6.4	Submission of coordinated project documentation with stakeholder feedback records, shared repository or feedback-loop evidence, and rubric-based evaluation of stakeholder interaction coordination.
6.5	Evaluation report or reflective log comparing proposed versus actual solutions for AI-related stakeholder issues, assessed on analytical reasoning and use of outcomes, feedback, or implementation results.
6.6	Recommendations report or lessons learned document suggesting improvements to stakeholder engagement strategies, assessed on feasibility, clarity, actionable insights, and use of project simulation or peer review evidence.
7	PLO Business Change Management [EQF6]
7.1	AI Adoption Assessment Report and Case Study Analysis assessing evaluation of AI adoption opportunities, expected organizational benefits, and supporting evidence from case studies or business process analyses.
7.2	Change Strategy Plan Document with Written Justification assessing the design of team and process change strategies that address AI-specific risks such as bias, drift, or cybersecurity in operational settings.
7.3	Stakeholder Engagement Record, Reflection Notes, and Training/Workshop Feedback assessing implementation of stakeholder engagement activities through workshops, meetings, or training programs to promote AI adoption.
7.4	AI Performance Monitoring Dashboard and KPI Reports assessing monitoring and interpretation of AI performance metrics and their use in guiding adjustments to AI adoption strategies.

7.5	Adoption Challenges Log, Summary Table, or Annotated Notes assessing identification and documentation of potential challenges and limitations of AI adoption in real-world organizational contexts.

C.5 Governance

	GOVERNANCE		[5]
Profile title	AI GOVERNANCE OFFICER		[EP 5.1]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI governance officer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Establishes and maintains AI governance structures that promote responsible AI use, guide organisational decision-making, and ensure transparency, accountability, and alignment with overall business goals.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.1.	IS and Business Strategy Alignment	e-4
	A.7.	Technology Trend Monitoring	e-3
	D.1.	Information Security Strategy Development	e-4
	D.2.	ICT Quality Strategy Development	e-4
	D.10.	Information and Knowledge Management	e-4
	E.3.	Risk Management	e-4
	E.4.	Relationship Management	e-4
	E.9.	IS Governance	e-5
Complexity	The profile has an EQF8 level.		

1. PLO IS and Business Strategy Alignment [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Analyse complex organisational environments to align information systems and AI capabilities with business strategy, evaluating governance, ethical, regulatory, and risk requirements, and designing integrated IS models and enterprise architectures that enhance organisational performance in dynamic, multidisciplinary contexts.	
Unit Learning Outcomes	
1.1	Analyse organisational strategies and operating models to identify business needs, priorities, risks, and opportunities for IS and AI enablement, using enterprise case studies or organisational datasets.

1.2	Evaluate the alignment between business strategy and existing IS, data, and AI capabilities, identifying gaps and improvement opportunities by mapping technology portfolios to strategic objectives.
1.3	Assess IS and AI governance frameworks, including ethical, legal, regulatory, and risk considerations, in support of strategic alignment, in compliance with industry standards and organisational policies.
1.4	Design and evaluate integrated IS models and enterprise architectures that support business objectives and strategic decision-making, using modelling tools such as ArchiMate or UML.
1.5	Apply AI and data-driven solutions to improve business processes, performance, and competitive positioning, by implementing predictive analytics, process automation, or recommendation systems.
1.6	Critically evaluate the organisational impact of IS-business alignment initiatives, using appropriate performance and value-creation metrics, such as ROI, KPIs, or balanced scorecards.

2. PLO Technology Trend Monitoring [EQF6]

The learner has demonstrated ability to...

Monitor and assess emerging AI technologies in partially defined contexts by identifying trends, analysing developments, and applying insights to small-scale use cases.

Unit Learning Outcomes

2.1	Identify key concepts, techniques, and emerging areas in AI by tracking technological trends and innovations such as generative AI, reinforcement learning, and computer vision tools.
2.2	Analyse and compare AI technologies and tools using defined criteria such as potential, maturity, and applicability in the context of industry reports, vendor offerings, or research updates.
2.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
2.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.
2.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.
2.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.

3. PLO Information Security Strategy Development [EQF7]

The learner has demonstrated ability to...

Develop and lead AI security strategies across organisational functions and systems by analysing risks, establishing governance frameworks aligned with recognized standards, integrating ethical and regulatory requirements, coordinating multi-disciplinary teams, and ensuring resilient, compliant, and business-aligned AI operations.

Unit Learning Outcomes	
3.1	Analyse AI risks, vulnerabilities, and potential impacts across organisational units, services, and systems, using structured risk assessment frameworks such as NIST AI RMF or threat modelling approaches.
3.2	Develop and implement AI security strategies that align with organisational objectives, ethical principles, and regulatory requirements, by referencing widely adopted standards such as ISO/IEC 27001, ISO/IEC 23894, GDPR, or OWASP AI Security guidelines.
3.3	Establish governance frameworks, roles, responsibilities, policies, and monitoring mechanisms for AI systems at the organisational level, in alignment with corporate compliance and operational structures.
3.4	Guide and coordinate multi-disciplinary teams to implement AI security measures in line with ethical, regulatory, and strategic objectives, by facilitating collaboration across IT, data science, and business units.
3.5	Evaluate the effectiveness of AI security strategies, monitor compliance, and recommend improvements for resilience, trust, and business alignment, using audits, metrics, and performance monitoring systems.
3.6	Integrate strategic security-by-design principles into organisational AI system lifecycles to ensure proactive risk mitigation, by incorporating security checkpoints and governance reviews in design and deployment phases.
3.7	Anticipate emerging AI threats, regulatory changes, and ethical considerations to adapt organisational security strategies proactively, by monitoring industry trends, regulatory updates, and threat intelligence reports.
3.8	Communicate AI security priorities and strategies to stakeholders to foster a culture of security and ethical responsibility across the organisation, using presentations, briefings, and strategic documentation targeted at executives and teams.
4. PLO ICT Quality Strategy Development [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Define, evaluate, coordinate, and optimise AI quality strategies by integrating ethical, resilience, and performance considerations across AI systems, using relevant frameworks and monitoring to address complex problems and enhance organisational outcomes.	
Unit Learning Outcomes	
4.1	Define AI quality strategies by applying principles of ethics, performance, and resilience, using frameworks such as ISO/IEC 42001, EU AI Ethics Guidelines, and Explainable AI best practices.
4.2	Evaluate AI system interactions, interdependencies, and quality objectives against organisational goals, using AI performance metrics, KPIs, and benchmarking tools.
4.3	Coordinate cross-functional activities to implement AI quality strategies and ensure alignment with organisational objectives.
4.4	Optimise AI quality strategies by integrating strategic monitoring, feedback loops, and continuous improvement practices.
4.5	Solve strategic AI quality challenges across multiple systems by applying evidence-based decision-making.

4.6	Report and communicate strategic AI quality outcomes, lessons learned, and recommendations for organisational decision-making.

5. PLO Information and Knowledge Management [EQF7]

The learner has demonstrated ability to...

Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organisational units by aligning AI knowledge management with organisational objectives, governance requirements, and innovation needs.

Unit Learning Outcomes

5.1	Design and evaluate AI knowledge management structures for complex or cross-unit AI initiatives involving multiple stakeholders.
5.2	Advise on the AI knowledge lifecycle, including creation, validation, governance, maintenance, and reuse of AI models, data, and related artifacts.
5.3	Develop and improve governance approaches for AI knowledge and information by integrating organisational, regulatory, ethical, and strategic considerations.
5.4	Facilitate collaborative knowledge sharing and learning across interdisciplinary teams engaged in AI development, deployment, or oversight.
5.5	Align AI knowledge management practices with organisational objectives to support innovation, effectiveness, and sustainable use of AI technologies.

6. PLO Risk Management [EQF7]

The learner has demonstrated ability to...

Strengthen organisational AI risk strategies by evaluating multi-dimensional AI system risks and designing governance processes that integrate operational, ethical, legal, and third-party considerations while recommending improvements.

Unit Learning Outcomes

6.1	Evaluate AI system risks considering technical, operational, legal, ethical, and third-party dimensions in organisational contexts.
6.2	Design and monitor AI governance processes that address multi-factor AI risks in enterprise or institutional environments.
6.3	Recommend improvements to AI risk strategies to enhance compliance, resilience, and responsible AI adoption in organisational practice.
6.4	Coordinate cross-functional activities to ensure consistent application of AI risk management practices across teams or departments.
6.5	Analyse organisational policies to align AI risk governance processes with strategic objectives and regulatory requirements.

7. PLO Relationship Management [EQF7]

The learner has demonstrated ability to...

Ensure responsible and inclusive AI decision-making by designing and implementing stakeholder engagement strategies that integrate ethical, cultural, and organisational considerations while facilitating alignment and consensus across multidisciplinary teams.

Unit Learning Outcomes	
7.1	Design stakeholder engagement strategies for AI initiatives by applying strategic planning tools or scenario analyses.
7.2	Implement communication and collaboration approaches to facilitate alignment and trust across multidisciplinary teams using workshops, collaborative software, or structured team activities.
7.3	Lead workshops or meetings to mediate conflicts and promote consensus in cross-functional project teams or stakeholder consultations.
7.4	Assess the impact of engagement strategies on stakeholder alignment and responsible AI adoption by analysing feedback, monitoring adoption metrics, or reviewing team performance.
7.5	Adapt engagement strategies to emerging AI-related challenges using iterative design, stakeholder input, or pilot project insights.
7.6	Advocate for ethical and culturally sensitive AI practices by preparing guidelines, training materials, or stakeholder briefings.
7.7	Document and report stakeholder engagement outcomes for use in organisational learning or project audits.

8. PLO IS Governance [EQF8]	
<i>The learner has demonstrated ability to...</i>	
Create, justify, and critically evaluate enterprise-level AI governance strategies, by developing novel governance models and decision frameworks that address emerging AI technologies, societal impacts, and regulatory evolution, and that shape responsible, sustainable AI practices across organisations or ecosystems.	
Unit Learning Outcomes	
8.1	Critically evaluate existing AI governance frameworks and strategies, examining their suitability for emerging AI technologies and societal expectations.
8.2	Create advanced AI governance approaches, integrating regulatory, ethical, organisational, and technological considerations.
8.3	Assess long-term implications of AI governance decisions, including systemic risk, trust, and sustainability impacts.
8.4	Formulate recommendations for strategic AI governance improvements, supported by evidence and scenario analysis.
8.5	Justify and defend strategic AI governance positions, articulating well-founded arguments to senior decision-makers or expert audiences.

Assessments AI GOVERNANCE OFFICER [EP 5.1]	
1	PLO IS and Business Strategy Alignment [EQF7]
1.1	Written Report, Case Study Analysis, and Data-Driven Mapping assessing analysis of organisational strategies and operating models to identify business needs, priorities, risks, and opportunities for IS and AI enablement using enterprise case studies or organisational datasets.

1.2	Alignment Assessment Report, Portfolio Review, and Gap Analysis Presentation assessing mapped alignment between business strategy and existing IS, data, and AI capabilities, with identified gaps and improvement opportunities linked to strategic objectives.
1.3	Governance Assessment Report and Compliance Checklist Submission assessing IS and AI governance frameworks for ethical, legal, regulatory, and risk considerations in compliance with industry standards and organisational policies.
1.4	IS/Architecture Design Diagrams and Modelling Artefact Review assessing design and evaluation of integrated IS models and enterprise architectures supporting business objectives and strategic decision-making using ArchiMate or UML.
1.5	AI/Data Solution Prototype, Demonstration, and Performance Metrics Report assessing application of AI and data-driven solutions to improve business processes, performance, and competitive positioning.
1.6	Organisational Impact Report, Value-Creation Analysis, and Oral Defence/Presentation assessing critical evaluation of organisational impact using ROI, KPIs, balanced scorecards, or other appropriate performance and value-creation metrics.
2	PLO Technology Trend Monitoring [EQF6]
2.1	Annotated portfolio submission and short written test assessing correct identification of AI concepts, techniques, and emerging areas, including examples such as generative AI, reinforcement learning, and computer vision tools.
2.2	Comparative analysis table with oral explanation or peer review, assessed for use of defined criteria such as potential, maturity, and applicability based on industry reports, vendor offerings, or research updates.
2.3	Trend mapping report and written report evaluation assessing classification of internal and external AI innovation sources, including trend reports, patents, newsfeeds, and academic publications.
2.4	Mini prototype or simulation demonstration with lab report, assessed for correct application of basic methods and tools to explore AI-enabled use cases using trending technologies.
2.5	Ethics and impact briefing assessed with a rubric for description and consideration of ethical, data protection, and organisational issues in emerging technologies and current AI applications.
2.6	Presentation or dashboard, evaluated by peers and instructor, assessing clear presentation and justification of AI trend observations and insights summarising technology developments.
3	PLO Information Security Strategy Development [EQF7]
3.1	AI Risk Assessment Report, supported by case study analysis and scenario-based risk evaluation, assessing AI risks, vulnerabilities, and potential impacts across organizational units, services, and systems using structured frameworks such as NIST AI RMF or threat modelling approaches.
3.2	AI Security Strategy Document, policy proposal, and peer review of strategy alignment, assessed for development and implementation of AI security strategies aligned with organizational objectives, ethical principles, regulatory requirements, and relevant standards.
3.3	AI Governance Framework Specification, supported by rubric-based evaluation and audit simulation, assessing governance frameworks, roles, responsibilities, policies, and monitoring mechanisms for organizational AI systems.

3.4	AI Implementation Guidance Report, team coordination plan, implementation roadmap presentation, and reflective report assessing guidance and coordination of multi-disciplinary teams implementing AI security measures across IT, data science, and business units.
3.5	AI Strategy Evaluation Report, KPI/metric analysis, and compliance review exercises assessing effectiveness of AI security strategies, compliance monitoring, and recommendations for resilience, trust, and business alignment.
3.6	AI Security-by-Design Plan, lifecycle mapping submission, and strategic design checklist evaluation assessing integration of security-by-design principles, security checkpoints, and governance reviews across AI system lifecycle phases.
3.7	AI Threat & Regulation Foresight Brief, scenario planning exercise, and policy adaptation proposal assessing anticipation of emerging AI threats, regulatory changes, and ethical considerations for proactive strategy adaptation.
3.8	AI Stakeholder Communication Package, including presentations, briefings, and strategic documents, assessed through peer/expert review and a communication effectiveness rubric for clarity, audience fit, and promotion of security and ethical responsibility.
4	PLO ICT Quality Strategy Development [EQF7]
4.1	AI Quality Strategy Document, Strategy Alignment Matrix, and Risk Brief Presentation assessed for defining AI quality strategies that apply ethics, performance, and resilience principles using relevant frameworks such as ISO/IEC 42001, EU AI Ethics Guidelines, and Explainable AI best practices.
4.2	AI evaluation report analysis, KPI framework submission, and Benchmarking report review assessed for evaluation of AI system interactions, interdependencies, and quality objectives against organizational goals using AI performance metrics, KPIs, and benchmarking tools.
4.3	Coordination plan review, Stakeholder map submission, and Executive summary presentation assessed for coordination of cross-functional activities to implement AI quality strategies and ensure alignment with organizational objectives.
4.4	AI optimization plan submission, Monitoring framework evaluation, and Recommendation report review assessed for optimization of AI quality strategies through strategic monitoring, feedback loops, and continuous improvement practices.
4.5	Problem-solving case study submission, Decision log analysis, and Scenario planning report presentation assessed for evidence-based decision-making in solving strategic AI quality challenges across multiple systems.
4.6	AI quality report submission, Executive slides presentation, and Visual dashboard demonstration assessed for clear communication of strategic AI quality outcomes, lessons learned, and recommendations for organizational decision-making.
5	PLO Information and Knowledge Management [EQF7]
5.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design for complex or cross-unit AI initiatives involving multiple stakeholders.
5.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines covering creation, validation, governance, maintenance, and reuse of AI models, data, and related artifacts.
5.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment, evaluated for integration of organizational, regulatory, ethical, and strategic considerations.
5.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model, assessed for facilitation of collaborative learning across interdisciplinary teams engaged in AI development, deployment, or oversight.

5.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report, evaluated for alignment with organizational objectives and support for innovation, effectiveness, and sustainable use of AI technologies.
6	PLO Risk Management [EQF7]
6.1	Comprehensive AI risk evaluation report graded for depth, contextual reasoning, and coverage of technical, operational, legal, ethical, and third-party AI system risks.
6.2	Submission of AI governance framework design evaluated for process completeness, scalability, monitoring approach, and alignment with organisational needs in enterprise or institutional environments.
6.3	Strategic recommendations document assessed for practicality, impact, and contribution to compliance, resilience, and responsible AI adoption in organisational practice.
6.4	Cross-functional coordination report evaluated for documentation of collaborative activities and consistent application of AI risk management practices across teams or departments.
6.5	Policy alignment analysis assessed for clarity, alignment with regulatory requirements, and integration of AI risk governance processes with organisational strategy.
7	PLO Relationship Management [EQF7]
7.1	Stakeholder engagement strategy document assessed with rubric for strategic depth, completeness, integration of ethical/cultural factors, and application of strategic planning tools or scenario analyses.
7.2	Workshop artifacts, collaboration logs, or team alignment reports evaluated for effectiveness of communication, facilitation, collaboration approach, trust-building, and team outcomes.
7.3	Workshop or meeting minutes documenting conflict resolution and consensus, evaluated on mediation quality, leadership of cross-functional dialogue, and decision outcomes.
7.4	Impact assessment report assessed on use of feedback, adoption metrics, team-performance evidence, and data supporting stakeholder alignment and responsible AI adoption.
7.5	Updated engagement plan or pilot project report assessed on adaptability, responsiveness to emerging AI-related challenges, and use of stakeholder input or pilot project insights.
7.6	Guidelines, training materials, or briefing reports assessed on clarity, ethical rigor, cultural sensitivity, and advocacy for ethical and culturally sensitive AI practices.
7.7	Final stakeholder engagement report assessed for completeness, documentation quality, traceability of engagement outcomes, suitability for audits, and relevance for organizational learning.
8	PLO IS Governance [EQF8]
8.1	Critical Governance Evaluation Report assessed for depth of critical analysis, suitability of existing AI governance frameworks, and alignment with emerging AI technologies and societal expectations.
8.2	Advanced Governance Strategy Document graded for creation of advanced AI governance approaches and integration of regulatory, ethical, organizational, and technical considerations.
8.3	Impact Assessment Report assessed for thoroughness, methodology, and evaluation of long-term governance implications, including systemic risk, trust, and sustainability impacts.
8.4	Strategic Recommendation Dossier graded on evidence support, feasibility, clarity, and use of scenario analysis to formulate strategic AI governance improvements.
8.5	Governance Defence Brief evaluated via oral presentation or written defence, assessed for argumentation, justification quality, and suitability for senior decision-makers or expert audiences.

	GOVERNANCE		[5]
Profile title	AI COMPLIANCE OFFICER		[EP 5.2]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI compliance officer. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Ensures AI systems are compliant with all applicable laws and regulations, protecting the organisation from potential legal and financial risks. Commits the organisation to the adherence to relevant laws, regulations, and industry standards governing AI use, so that AI systems are ethical, legal and secure.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.7.	Technology Trend Monitoring	e-3
	B.5.	Documentation Production	e-3
	D.1.	Information Security Strategy Development	e-4
	D.8.	Contract Management	e-3
	E.3.	Risk Management	e-3
	E.5.	Process Improvement	e-3
	E.6.	ICT Quality Management	e-3
	E.8.	Information Security Management	e-4
	E.9.	IS Governance	e-4
Complexity	The profile has an EQF7 level.		

1. PLO Technology Trend Monitoring [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Monitor and assess emerging AI technologies in partially defined contexts by identifying trends, analysing developments, and applying insights to small-scale use cases.	
Unit Learning Outcomes	
1.1	Identify key concepts, techniques, and emerging areas in AI by tracking technological trends and innovations such as generative AI, reinforcement learning, and computer vision tools.
1.2	Analyse and compare AI technologies and tools using defined criteria such as potential, maturity, and applicability in the context of industry reports, vendor offerings, or research updates.

1.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
1.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.
1.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.
1.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.

2. PLO Documentation Production [EQF6]

The learner has demonstrated ability to...

Apply document-management practices and develop AI-specific documentation, including technical specifications, compliance records, and transparency reports, independently within broad project frameworks, by integrating information from multiple AI system components and ensuring alignment with regulatory and stakeholder requirements in projects with variable challenges

Unit Learning Outcomes

2.1	Apply document-management and collaboration practices to AI projects independently, using systems that enable coordinated document creation and version control.
2.2	Develop AI-specific technical, compliance, and transparency documentation for multiple system components, such as model specifications, system interfaces, and regulatory reports.
2.3	Integrate information from different AI system elements into cohesive and accessible documentation, by consolidating data from datasets, model outputs, and system logs.
2.4	Ensure that AI documentation meets regulatory, ethical, and stakeholder requirements, in accordance with applicable legal, ethical, and organisational standards.
2.5	Adapt and modify existing templates or documentation structures to suit variable AI project contexts, by aligning documentation with project-specific requirements or new system components.

3. PLO Information Security Strategy Development [EQF7]

The learner has demonstrated ability to...

Develop and lead AI security strategies across organisational functions and systems by analysing risks, establishing governance frameworks aligned with recognized standards, integrating ethical and regulatory requirements, coordinating multi-disciplinary teams, and ensuring resilient, compliant, and business-aligned AI operations.

Unit Learning Outcomes

3.1	Analyse AI risks, vulnerabilities, and potential impacts across organisational units, services, and systems, using structured risk assessment frameworks such as NIST AI RMF or threat modelling approaches.
3.2	Develop and implement AI security strategies that align with organisational objectives, ethical principles, and regulatory requirements, by referencing widely adopted standards such as ISO/IEC 27001, ISO/IEC 23894, GDPR, or OWASP AI Security guidelines.

3.3	Establish governance frameworks, roles, responsibilities, policies, and monitoring mechanisms for AI systems at the organisational level, in alignment with corporate compliance and operational structures.
3.4	Guide and coordinate multi-disciplinary teams to implement AI security measures in line with ethical, regulatory, and strategic objectives, by facilitating collaboration across IT, data science, and business units.
3.5	Evaluate the effectiveness of AI security strategies, monitor compliance, and recommend improvements for resilience, trust, and business alignment, using audits, metrics, and performance monitoring systems.
3.6	Integrate strategic security-by-design principles into organisational AI system lifecycles to ensure proactive risk mitigation, by incorporating security checkpoints and governance reviews in design and deployment phases.
3.7	Anticipate emerging AI threats, regulatory changes, and ethical considerations to adapt organisational security strategies proactively, by monitoring industry trends, regulatory updates, and threat intelligence reports.
3.8	Communicate AI security priorities and strategies to stakeholders to foster a culture of security and ethical responsibility across the organisation, using presentations, briefings, and strategic documentation targeted at executives and teams.

4. PLO Contract Management [EQF6]

The learner has demonstrated ability to...

Manage the full lifecycle of AI contracts by analysing legal, regulatory, and organisational requirements, designing performance and compliance clauses, and evaluating supplier arrangements using governance frameworks and performance evidence.

Unit Learning Outcomes

4.1	Analyse AI-related contractual requirements concerning data ownership, model training rights, performance standards, liability, and regulatory compliance, using legal and organisational documentation
4.2	Apply legal, organisational, and regulatory requirements to manage AI contracts from negotiation to termination, in end-to-end contract lifecycle processes
4.3	Design contractual clauses and service levels addressing AI performance monitoring, auditability, and compliance obligations, by aligning with governance and operational standards
4.4	Evaluate AI supplier arrangements and contractual risks, using documented governance frameworks, performance metrics, and compliance reports
4.5	Justify contractual decisions and risk mitigation measures in AI projects, by referencing documented evidence and organisational objectives

5. PLO Risk Management [EQF6]

The learner has demonstrated ability to...

Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities

Unit Learning Outcomes	
5.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
5.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
5.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
5.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
5.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
5.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.
6. PLO Process Improvement [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Enhance AI process performance by designing and implementing data-driven improvements that integrate multiple AI concepts, address operational risks, uphold ethical standards, and support effective team collaboration.	
Unit Learning Outcomes	
6.1	Design modifications to AI workflows to improve performance and efficiency using practical AI development projects.
6.2	Apply multiple AI process concepts and metrics to identify, analyse, and solve process problems in real-world AI applications.
6.3	Assess operational risks and ethical considerations in AI development and deployment by evaluating AI systems in operational environments.
6.4	Collaborate effectively within a team to implement process improvements in AI project settings.
6.5	Evaluate the outcomes of AI process changes against performance, ethical, and compliance criteria using defined metrics and benchmarks.
6.6	Document AI process modifications and lessons learned for knowledge sharing within the team.

7. PLO ICT Quality Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Analyse and apply AI quality management practices by selecting and combining appropriate quality indicators, governance mechanisms, and evaluation methods to assess and improve the performance, reliability, security, and fairness of AI systems, while contributing to team-based quality decisions aligned with business needs.	
Unit Learning Outcomes	
7.1	Select appropriate AI quality metrics and indicators using recognised AI standards and system documentation.

7.2	Combine governance frameworks and monitoring tools for different types of AI systems in operational contexts.
7.3	Analyse AI performance, reliability, fairness, and security data to identify quality risks and improvement opportunities.
7.4	Apply AI quality improvement measures in team-based development or operational AI projects.
7.5	Document and communicate AI quality findings using structured reports or dashboards for stakeholders.
7.6	Evaluate AI system outcomes against business, ethical, and regulatory requirements in organisational settings.

8. PLO Information Security Management [EQF7]

The learner has demonstrated ability to...

Secure organisational AI operations by developing and implementing comprehensive strategies, managing multidisciplinary teams, and aligning risk mitigation with regulatory, ethical, and business objectives in real-world contexts

Unit Learning Outcomes

8.1	Develop AI security policies and operational procedures for real-world organisational AI deployments.
8.2	Implement AI risk mitigation plans addressing model manipulation, adversarial attacks, and privacy concerns in live operational systems.
8.3	Manage multidisciplinary teams to execute AI security and compliance initiatives in organisational projects.
8.4	Evaluate AI security operations in live organisational environments using compliance and audit frameworks to ensure regulatory and ethical alignment.
8.5	Apply AI governance frameworks across organisational AI systems to optimise operational resilience and trustworthiness.

9. PLO IS Governance [EQF7]

The learner has demonstrated ability to...

Design, apply, and evaluate AI governance frameworks and lifecycle controls, by integrating regulatory requirements, ethical principles, organisational risk appetite, and business objectives to guide responsible AI deployment, manage AI-specific risks, and support accountable decision-making in organisational and sectoral contexts.

Unit Learning Outcomes

9.1	Design and apply AI governance frameworks to guide real-world AI deployment, aligning governance controls with business objectives and risk appetite.
9.2	Evaluate the effectiveness of AI governance practices, reviewing AI system performance, compliance outcomes, and incident handling.
9.3	Coordinate AI governance activities across stakeholders, including technical, legal, and business roles, to ensure accountable AI use.

9.4	Identify and manage operational and regulatory risks in AI initiatives, implementing mitigations and reporting mechanisms.
9.5	Recommend actionable improvements to AI governance, balancing regulatory obligations, ethical principles, and operational feasibility.

Assessments AI COMPLIANCE OFFICER [EP 5.2]	
1	PLO Technology Trend Monitoring [EQF6]
1.1	Annotated portfolio submission and short written test assessing correct identification of AI concepts, techniques, and emerging areas, including examples such as generative AI, reinforcement learning, and computer vision tools.
1.2	Comparative analysis table with oral explanation or peer review, assessed for use of defined criteria such as potential, maturity, and applicability based on industry reports, vendor offerings, or research updates.
1.3	Trend mapping report and written report evaluation assessing classification of internal and external AI innovation sources, including trend reports, patents, newsfeeds, and academic publications.
1.4	Mini prototype or simulation demonstration with lab report, assessed for correct application of basic methods and tools to explore AI-enabled use cases using trending technologies.
1.5	Ethics and impact briefing assessed with a rubric for description and consideration of ethical, data protection, and organisational issues in emerging technologies and current AI applications.
1.6	Presentation or dashboard, evaluated by peers and instructor, assessing clear presentation and justification of AI trend observations and insights summarising technology developments.
2	PLO Documentation Production [EQF6]
2.1	Evaluation of AI documentation repository for organization, version control, coordinated document creation, collaborative workflow evidence, and peer-review of individual contributions.
2.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components, graded for completeness, accuracy, and coverage of model specifications, system interfaces, and regulatory reports.
2.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs, assessed for clarity, cohesion, accessibility, and accurate integration across AI system elements.
2.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements, supported by a compliance verification report referencing applicable legal, ethical, and organizational standards.
2.5	Evaluation of customized AI documentation templates and modified project documentation, assessed for alignment with project-specific requirements, new system components, and adaptability to variable AI project contexts.
3	PLO Information Security Strategy Development [EQF7]
3.1	AI Risk Assessment Report, supported by case study analysis and scenario-based risk evaluation, assessing AI risks, vulnerabilities, and potential impacts across organizational

	units, services, and systems using structured frameworks such as NIST AI RMF or threat modelling approaches.
3.2	AI Security Strategy Document, policy proposal, and peer review of strategy alignment, assessed for development and implementation of AI security strategies aligned with organizational objectives, ethical principles, regulatory requirements, and relevant standards.
3.3	AI Governance Framework Specification, supported by rubric-based evaluation and audit simulation, assessing governance frameworks, roles, responsibilities, policies, and monitoring mechanisms for organizational AI systems.
3.4	AI Implementation Guidance Report, team coordination plan, implementation roadmap presentation, and reflective report assessing guidance and coordination of multi-disciplinary teams implementing AI security measures across IT, data science, and business units.
3.5	AI Strategy Evaluation Report, KPI/metric analysis, and compliance review exercises assessing effectiveness of AI security strategies, compliance monitoring, and recommendations for resilience, trust, and business alignment.
3.6	AI Security-by-Design Plan, lifecycle mapping submission, and strategic design checklist evaluation assessing integration of security-by-design principles, security checkpoints, and governance reviews across AI system lifecycle phases.
3.7	AI Threat & Regulation Foresight Brief, scenario planning exercise, and policy adaptation proposal assessing anticipation of emerging AI threats, regulatory changes, and ethical considerations for proactive strategy adaptation.
3.8	AI Stakeholder Communication Package, including presentations, briefings, and strategic documents, assessed through peer/expert review and a communication effectiveness rubric for clarity, audience fit, and promotion of security and ethical responsibility.
4	PLO Contract Management [EQF6]
4.1	Assessment of AI contract analysis report, including written analysis of data ownership, model training rights, performance standards, liability, regulatory compliance, and related contractual obligations.
4.2	Evaluation of AI contract lifecycle compliance plan documenting management of AI contracts from negotiation to termination in accordance with legal, organisational, and regulatory requirements.
4.3	Grading of AI contractual clauses and SLAs, including drafted clauses or service level agreements addressing performance monitoring, auditability, compliance obligations, and alignment with governance and operational standards.
4.4	Assessment of AI supplier risk evaluation report using governance frameworks, performance metrics, and compliance reports to evaluate supplier arrangements and contractual risks.
4.5	Evaluation of AI contractual decision dossier documenting justification of contractual decisions and risk mitigation measures with reference to evidence and organisational objectives.
5	PLO Risk Management [EQF6]
5.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks.
5.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the AI deployment environment.

5.3	Mitigation plan submission assessed for feasibility, relevance, application to reduce AI-related risks, and alignment with defined project, product, or service boundaries.
5.4	Oral presentation or report evaluated for clarity, communication of AI risk findings, mitigation plans, and stakeholder engagement in project or organisational settings.
5.5	Review of AI system performance logs, annotated with identified emerging risks such as model drift or data anomalies and supporting analysis.
5.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.
6	PLO Process Improvement [EQF6]
6.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of AI workflow modifications and measurable performance or efficiency improvements in practical AI development projects.
6.2	Analysis report submission with metrics calculations; peer review or instructor feedback assessing application of multiple AI process concepts and metrics to identify, analyse, and solve process problems.
6.3	Risk and ethical assessment report evaluated against a checklist, with case study review assessing operational risks and ethical considerations in AI development and deployment.
6.4	Team project documentation assessed via contribution logs and peer evaluation for effective collaboration and implementation of AI process improvements in project settings.
6.5	Comparative performance report graded against defined metrics and benchmarks, with optional oral defence or presentation, assessing performance, ethical, and compliance outcomes of AI process changes.
6.6	Lessons-learned or reflective report reviewed for completeness, clarity, insightfulness, and documentation of AI process modifications for team knowledge sharing.
7	PLO ICT Quality Management [EQF6]
7.1	Individual assignment evaluating AI quality metrics selection with written justification, assessed for use of recognised AI standards and system documentation.
7.2	Case-based exercise analysing governance and monitoring configurations, assessed for combining governance frameworks and monitoring tools for different types of AI systems in operational contexts.
7.3	Data analysis report on AI performance, fairness, reliability, and security, assessed for identification of quality risks and improvement opportunities.
7.4	Group project with documented implementation of AI quality improvement measures, assessed for application in team-based development or operational AI projects.
7.5	Written report or dashboard presenting AI quality findings, assessed for structure, clarity, stakeholder relevance, and communication of findings.
7.6	Structured evaluation paper or exam question assessing AI system outcomes against business, ethical, and regulatory requirements in organisational settings.
8	PLO Information Security Management [EQF7]
8.1	Review of Organizational Security Policy Document, rubric-based evaluation for completeness, regulatory alignment, and coverage of operational procedures for real-world organizational AI deployments.

8.2	Evaluation of Mitigation Implementation Report, with evidence of implemented controls addressing model manipulation, adversarial attacks, and privacy risks in live operational systems.
8.3	Review of Team Management Log and project records assessing management of multidisciplinary teams in executing AI security and compliance initiatives in organizational projects.
8.4	Assessment of Operational Compliance Report, audit-style evaluation for regulatory and ethical adherence in live organizational AI security operations using compliance and audit frameworks.
8.5	Review of Governance Application Report evidence embedded in policy, mitigation, and compliance documentation, assessed for application of AI governance frameworks to optimize operational resilience and trustworthiness.
9	PL0 IS Governance [EQF7]
9.1	Applied AI Governance Framework submission, assessed for application to real-world AI deployment and alignment of governance controls with business objectives and risk appetite.
9.2	Governance Effectiveness Report evaluated against AI system performance metrics, compliance outcomes, incident handling, and evidence of governance effectiveness.
9.3	Stakeholder Coordination Plan assessed for clarity of technical, legal, and business roles, responsibilities, collaboration mechanisms, and accountability for AI use.
9.4	Risk Mitigation Register graded for completeness, accuracy, identification and management of operational and regulatory risks, suitability of mitigation strategies, and inclusion of reporting mechanisms.
9.5	Improvement Recommendations Report evaluated for practicality, regulatory alignment, ethical soundness, operational feasibility, and actionability of AI governance improvements.

	GOVERNANCE		[5]
Profile title	AI RISK MANAGER		[EP 5.3]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI risk manager. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Ensures the organisation's exposure to AI related risks is effectively identified, measured, managed and mitigated and all activities conducted are in compliance with governing regulations, security standards, and internal policies and procedures to minimise risk.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.7.	Technology Trend Monitoring	e-3
	B.5.	Documentation Production	e-3
	D.1.	Information Security Strategy Development	e-4
	D.10.	Information and Knowledge Management	e-3
	E.3.	Risk Management	e-4
	E.5.	Process Improvement	e-3
	E.6.	ICT Quality Management	e-3
	E.8.	Information Security Management	e-3
Complexity	The profile has an EQF7 level.		

1. PLO Technology Trend Monitoring [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Monitor and assess emerging AI technologies in partially defined contexts by identifying trends, analysing developments, and applying insights to small-scale use cases.	
Unit Learning Outcomes	
1.1	Identify key concepts, techniques, and emerging areas in AI by tracking technological trends and innovations such as generative AI, reinforcement learning, and computer vision tools.
1.2	Analyse and compare AI technologies and tools using defined criteria such as potential, maturity, and applicability in the context of industry reports, vendor offerings, or research updates.
1.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
1.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.

1.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.
1.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.

2. PLO Documentation Production [EQF6]

The learner has demonstrated ability to...

Apply document-management practices and develop AI-specific documentation, including technical specifications, compliance records, and transparency reports, independently within broad project frameworks, by integrating information from multiple AI system components and ensuring alignment with regulatory and stakeholder requirements in projects with variable challenges

Unit Learning Outcomes

2.1	Apply document-management and collaboration practices to AI projects independently, using systems that enable coordinated document creation and version control.
2.2	Develop AI-specific technical, compliance, and transparency documentation for multiple system components, such as model specifications, system interfaces, and regulatory reports.
2.3	Integrate information from different AI system elements into cohesive and accessible documentation, by consolidating data from datasets, model outputs, and system logs.
2.4	Ensure that AI documentation meets regulatory, ethical, and stakeholder requirements, in accordance with applicable legal, ethical, and organisational standards.
2.5	Adapt and modify existing templates or documentation structures to suit variable AI project contexts, by aligning documentation with project-specific requirements or new system components.

3. PLO Information Security Strategy Development [EQF7]

The learner has demonstrated ability to...

Develop and lead AI security strategies across organisational functions and systems by analysing risks, establishing governance frameworks aligned with recognized standards, integrating ethical and regulatory requirements, coordinating multi-disciplinary teams, and ensuring resilient, compliant, and business-aligned AI operations.

Unit Learning Outcomes

3.1	Analyse AI risks, vulnerabilities, and potential impacts across organisational units, services, and systems, using structured risk assessment frameworks such as NIST AI RMF or threat modelling approaches.
3.2	Develop and implement AI security strategies that align with organisational objectives, ethical principles, and regulatory requirements, by referencing widely adopted standards such as ISO/IEC 27001, ISO/IEC 23894, GDPR, or OWASP AI Security guidelines.
3.3	Establish governance frameworks, roles, responsibilities, policies, and monitoring mechanisms for AI systems at the organisational level, in alignment with corporate compliance and operational structures.
3.4	Guide and coordinate multi-disciplinary teams to implement AI security measures in line with ethical, regulatory, and strategic objectives, by facilitating collaboration across IT, data science, and business units.

3.5	Evaluate the effectiveness of AI security strategies, monitor compliance, and recommend improvements for resilience, trust, and business alignment, using audits, metrics, and performance monitoring systems.
3.6	Integrate strategic security-by-design principles into organisational AI system lifecycles to ensure proactive risk mitigation, by incorporating security checkpoints and governance reviews in design and deployment phases.
3.7	Anticipate emerging AI threats, regulatory changes, and ethical considerations to adapt organisational security strategies proactively, by monitoring industry trends, regulatory updates, and threat intelligence reports.
3.8	Communicate AI security priorities and strategies to stakeholders to foster a culture of security and ethical responsibility across the organisation, using presentations, briefings, and strategic documentation targeted at executives and teams.
4. PLO Information and Knowledge Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Manage AI-related knowledge and information by independently identifying AI-related knowledge needs and systematically organising, maintaining, and sharing AI knowledge assets within defined operational contexts.	
Unit Learning Outcomes	
4.1	Identify AI-related knowledge and information assets, such as datasets, models, documentation, and policies, relevant to defined organisational processes.
4.2	Analyse operational processes to determine AI-related information and knowledge requirements in support of AI-enabled tasks or decision-making.
4.3	Apply appropriate methods and tools to organise, document, and maintain AI knowledge and information using structured repositories and standardized documentation practices.
4.4	Ensure the accessibility, quality, and consistency of AI knowledge and information by applying established validation, versioning, and basic governance procedures.
4.5	Share and reuse AI knowledge effectively within teams or projects to support operational efficiency and informed use of AI systems.

5. PLO Risk Management [EQF7]	
<i>The learner has demonstrated ability to...</i>	
Strengthen organisational AI risk strategies by evaluating multi-dimensional AI system risks and designing governance processes that integrate operational, ethical, legal, and third-party considerations while recommending improvements	
Unit Learning Outcomes	
5.1	Evaluate AI system risks considering technical, operational, legal, ethical, and third-party dimensions in organisational contexts.
5.2	Design and monitor AI governance processes that address multi-factor AI risks in enterprise or institutional environments.
5.3	Recommend improvements to AI risk strategies to enhance compliance, resilience, and responsible AI adoption in organisational practice.

5.4	Coordinate cross-functional activities to ensure consistent application of AI risk management practices across teams or departments.
5.5	Analyse organisational policies to align AI risk governance processes with strategic objectives and regulatory requirements.
6. PLO Process Improvement [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Enhance AI process performance by designing and implementing data-driven improvements that integrate multiple AI concepts, address operational risks, uphold ethical standards, and support effective team collaboration.	
Unit Learning Outcomes	
6.1	Design modifications to AI workflows to improve performance and efficiency using practical AI development projects.
6.2	Apply multiple AI process concepts and metrics to identify, analyse, and solve process problems in real-world AI applications.
6.3	Assess operational risks and ethical considerations in AI development and deployment by evaluating AI systems in operational environments.
6.4	Collaborate effectively within a team to implement process improvements in AI project settings.
6.5	Evaluate the outcomes of AI process changes against performance, ethical, and compliance criteria using defined metrics and benchmarks.
6.6	Document AI process modifications and lessons learned for knowledge sharing within the team.

7. PLO ICT Quality Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Analyse and apply AI quality management practices by selecting and combining appropriate quality indicators, governance mechanisms, and evaluation methods to assess and improve the performance, reliability, security, and fairness of AI systems, while contributing to team-based quality decisions aligned with business needs.	
Unit Learning Outcomes	
7.1	Select appropriate AI quality metrics and indicators using recognised AI standards and system documentation.
7.2	Combine governance frameworks and monitoring tools for different types of AI systems in operational contexts.
7.3	Analyse AI performance, reliability, fairness, and security data to identify quality risks and improvement opportunities.
7.4	Apply AI quality improvement measures in team-based development or operational AI projects.
7.5	Document and communicate AI quality findings using structured reports or dashboards for stakeholders.

7.6	Evaluate AI system outcomes against business, ethical, and regulatory requirements in organisational settings.
8. PLO Information Security Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Ensure the security and reliability of AI systems by assessing vulnerabilities, applying secure development practices, and implementing mitigation strategies using appropriate tools and collaborative methods.	
Unit Learning Outcomes	
8.1	Analyse AI system components and workflows to identify potential security vulnerabilities in development or operational pipelines.
8.2	Evaluate AI risks related to data, models, deployment, and operation using established risk assessment frameworks and tools.
8.3	Apply secure AI development and operational practices (DevSecMLOps) to mitigate identified risks in practical project scenarios.
8.4	Implement AI monitoring and anomaly detection using software tools or supervised techniques.
8.5	Collaborate effectively in teams to plan and execute AI security measures in applied projects or simulated operational scenarios.

Assessments AI RISK MANAGER [EP 5.3]	
1	PLO Technology Trend Monitoring [EQF6]
1.1	Annotated portfolio submission and short written test assessing correct identification of AI concepts, techniques, and emerging areas, including examples such as generative AI, reinforcement learning, and computer vision tools.
1.2	Comparative analysis table with oral explanation or peer review, assessed for use of defined criteria such as potential, maturity, and applicability based on industry reports, vendor offerings, or research updates.
1.3	Trend mapping report and written report evaluation assessing classification of internal and external AI innovation sources, including trend reports, patents, newsfeeds, and academic publications.
1.4	Mini prototype or simulation demonstration with lab report, assessed for correct application of basic methods and tools to explore AI-enabled use cases using trending technologies.
1.5	Ethics and impact briefing assessed with a rubric for description and consideration of ethical, data protection, and organisational issues in emerging technologies and current AI applications.
1.6	Presentation or dashboard, evaluated by peers and instructor, assessing clear presentation and justification of AI trend observations and insights summarising technology developments.
2	PLO Documentation Production [EQF6]
2.1	Evaluation of AI documentation repository for organization, version control, coordinated document creation, collaborative workflow evidence, and peer-review of individual contributions.

2.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components, graded for completeness, accuracy, and coverage of model specifications, system interfaces, and regulatory reports.
2.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs, assessed for clarity, cohesion, accessibility, and accurate integration across AI system elements.
2.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements, supported by a compliance verification report referencing applicable legal, ethical, and organizational standards.
2.5	Evaluation of customized AI documentation templates and modified project documentation, assessed for alignment with project-specific requirements, new system components, and adaptability to variable AI project contexts.
3	PLO Information Security Strategy Development [EQF7]
3.1	AI Risk Assessment Report, supported by case study analysis and scenario-based risk evaluation, assessing AI risks, vulnerabilities, and potential impacts across organizational units, services, and systems using structured frameworks such as NIST AI RMF or threat modelling approaches.
3.2	AI Security Strategy Document, policy proposal, and peer review of strategy alignment, assessed for development and implementation of AI security strategies aligned with organizational objectives, ethical principles, regulatory requirements, and relevant standards.
3.3	AI Governance Framework Specification, supported by rubric-based evaluation and audit simulation, assessing governance frameworks, roles, responsibilities, policies, and monitoring mechanisms for organizational AI systems.
3.4	AI Implementation Guidance Report, team coordination plan, implementation roadmap presentation, and reflective report assessing guidance and coordination of multi-disciplinary teams implementing AI security measures across IT, data science, and business units.
3.5	AI Strategy Evaluation Report, KPI/metric analysis, and compliance review exercises assessing effectiveness of AI security strategies, compliance monitoring, and recommendations for resilience, trust, and business alignment.
3.6	AI Security-by-Design Plan, lifecycle mapping submission, and strategic design checklist evaluation assessing integration of security-by-design principles, security checkpoints, and governance reviews across AI system lifecycle phases.
3.7	AI Threat & Regulation Foresight Brief, scenario planning exercise, and policy adaptation proposal assessing anticipation of emerging AI threats, regulatory changes, and ethical considerations for proactive strategy adaptation.
3.8	AI Stakeholder Communication Package, including presentations, briefings, and strategic documents, assessed through peer/expert review and a communication effectiveness rubric for clarity, audience fit, and promotion of security and ethical responsibility.
4	PLO Information and Knowledge Management [EQF6]
4.1	Assessment of an AI knowledge asset inventory and AI asset classification document, assessed for identification and classification of datasets, models, documentation, policies, and other AI-related assets relevant to defined organizational processes.

4.2	Evaluation of a written AI information needs analysis and AI process–knowledge mapping, assessed for analysis of operational processes and identification of AI-related knowledge requirements supporting AI-enabled tasks or decision-making.
4.3	Review of a structured AI knowledge repository with AI documentation templates and version control evidence, assessed for organization, documentation, and maintenance of AI knowledge and information.
4.4	Assessment of an AI knowledge quality checklist and documented AI knowledge governance procedures, assessed for accessibility, quality, consistency, validation, versioning, and basic governance of AI knowledge.
4.5	Evaluation of an AI knowledge sharing package with documented AI knowledge reuse evidence, assessed for effective sharing and reuse within teams or projects to support operational efficiency and informed AI use.
5	PLO Risk Management [EQF7]
5.1	Comprehensive AI risk evaluation report graded for depth, contextual reasoning, and coverage of technical, operational, legal, ethical, and third-party AI system risks.
5.2	Submission of AI governance framework design evaluated for process completeness, scalability, monitoring approach, and alignment with organisational needs in enterprise or institutional environments.
5.3	Strategic recommendations document assessed for practicality, impact, and contribution to compliance, resilience, and responsible AI adoption in organisational practice.
5.4	Cross-functional coordination report evaluated for documentation of collaborative activities and consistent application of AI risk management practices across teams or departments.
5.5	Policy alignment analysis assessed for clarity, alignment with regulatory requirements, and integration of AI risk governance processes with organisational strategy.
6	PLO Process Improvement [EQF6]
6.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of AI workflow modifications and measurable performance or efficiency improvements in practical AI development projects.
6.2	Analysis report submission with metrics calculations; peer review or instructor feedback assessing application of multiple AI process concepts and metrics to identify, analyse, and solve process problems.
6.3	Risk and ethical assessment report evaluated against a checklist, with case study review assessing operational risks and ethical considerations in AI development and deployment.
6.4	Team project documentation assessed via contribution logs and peer evaluation for effective collaboration and implementation of AI process improvements in project settings.
6.5	Comparative performance report graded against defined metrics and benchmarks, with optional oral defence or presentation, assessing performance, ethical, and compliance outcomes of AI process changes.
6.6	Lessons-learned or reflective report reviewed for completeness, clarity, insightfulness, and documentation of AI process modifications for team knowledge sharing.
7	PLO ICT Quality Management [EQF6]
7.1	Individual assignment evaluating AI quality metrics selection with written justification, assessed for use of recognised AI standards and system documentation.

7.2	Case-based exercise analysing governance and monitoring configurations, assessed for combining governance frameworks and monitoring tools for different types of AI systems in operational contexts.
7.3	Data analysis report on AI performance, fairness, reliability, and security, assessed for identification of quality risks and improvement opportunities.
7.4	Group project with documented implementation of AI quality improvement measures, assessed for application in team-based development or operational AI projects.
7.5	Written report or dashboard presenting AI quality findings, assessed for structure, clarity, stakeholder relevance, and communication of findings.
7.6	Structured evaluation paper or exam question assessing AI system outcomes against business, ethical, and regulatory requirements in organisational settings.
8	PLO Information Security Management [EQF6]
8.1	Evaluation of Vulnerability Analysis Report detailing AI components and workflow weaknesses, assessed for identification of potential security vulnerabilities in development or operational pipelines.
8.2	Review of Risk Assessment Matrix, including severity and mitigation measures, using rubric to assess AI risks related to data, models, deployment, and operation.
8.3	Assessment of Secure Development Implementation Plan, including evidence of applied DevSecMLOps practices to mitigate identified risks in practical project scenarios.
8.4	Observation and review of Monitoring Dashboard or Log outputs during lab exercises, assessed for implementation of AI monitoring and anomaly detection using software tools or supervised techniques.
8.5	Assessment of Team Project Security Plan documentation, with peer and instructor evaluation of collaboration, security planning, and execution of AI security measures in applied or simulated operational scenarios.

	GOVERNANCE		[5]
Profile title	AI AUDITOR		[EP 5.4]
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI auditor. The goal of this educational profile is that a learner obtains the relevant learning outcomes so they are capable of fulfilling the mission of the role: <i>Conducts independent reviews to assess the effectiveness of processes and controls and the overall compliance with the organisation's legal and regulatory frameworks and policies. Evaluates, tests and verifies AI-related products, functions, algorithms, models, data streams and policies ensuring compliance with guidelines, standards and regulations.</i> This educational profile only focuses on the relevant technical competences. Other competences related to for example personal and interpersonal skills or to specific fields of application are not included. These need to be added when translating this profile to a curriculum.		
			Level
Competences	A.7.	Technology Trend Monitoring	e-3
	B.2.	Testing	e-2
	B.5.	Documentation Production	e-3
	D.8.	Contract Management	e-3
	E.3.	Risk Management	e-3
Complexity	The profile has an EQF6 level.		

1. PLO Technology Trend Monitoring [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Monitor and assess emerging AI technologies in partially defined contexts by identifying trends, analysing developments, and applying insights to small-scale use cases.	
Unit Learning Outcomes	
1.1	Identify key concepts, techniques, and emerging areas in AI by tracking technological trends and innovations such as generative AI, reinforcement learning, and computer vision tools.
1.2	Analyse and compare AI technologies and tools using defined criteria such as potential, maturity, and applicability in the context of industry reports, vendor offerings, or research updates.
1.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
1.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.
1.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.

1.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.

2. PLO Testing [EQF5]	
<i>The learner has demonstrated ability to...</i>	
Perform structured testing of AI and ICT systems to detect basic errors or biases and ensure ethical compliance by executing guided procedures and clearly documenting results.	
Unit Learning Outcomes	
2.1	Apply predefined test procedures to AI and ICT systems using guided examples and structured exercises.
2.2	Identify basic errors, anomalies, or inconsistencies in AI model outputs in controlled datasets or simulated scenarios.
2.3	Recognize simple biases in AI outputs and flag them for further review by comparing outputs against reference standards or simple fairness checks.
2.4	Document testing activities, results, and observations following established templates and reporting formats.
2.5	Recall relevant ethical and regulatory standards applicable to AI testing in academic or guided professional contexts.
3. PLO Documentation Production [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Apply document-management practices and develop AI-specific documentation, including technical specifications, compliance records, and transparency reports, independently within broad project frameworks, by integrating information from multiple AI system components and ensuring alignment with regulatory and stakeholder requirements in projects with variable challenges	
Unit Learning Outcomes	
3.1	Apply document-management and collaboration practices to AI projects independently, using systems that enable coordinated document creation and version control.
3.2	Develop AI-specific technical, compliance, and transparency documentation for multiple system components, such as model specifications, system interfaces, and regulatory reports.
3.3	Integrate information from different AI system elements into cohesive and accessible documentation, by consolidating data from datasets, model outputs, and system logs.
3.4	Ensure that AI documentation meets regulatory, ethical, and stakeholder requirements, in accordance with applicable legal, ethical, and organisational standards.
3.5	Adapt and modify existing templates or documentation structures to suit variable AI project contexts, by aligning documentation with project-specific requirements or new system components.

4. PLO Contract Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Manage the full lifecycle of AI contracts by analysing legal, regulatory, and organisational requirements, designing performance and compliance clauses, and evaluating supplier arrangements using governance frameworks and performance evidence.	
Unit Learning Outcomes	
4.1	Analyse AI-related contractual requirements concerning data ownership, model training rights, performance standards, liability, and regulatory compliance, using legal and organisational documentation.
4.2	Apply legal, organisational, and regulatory requirements to manage AI contracts from negotiation to termination, in end-to-end contract lifecycle processes.
4.3	Design contractual clauses and service levels addressing AI performance monitoring, auditability, and compliance obligations, by aligning with governance and operational standards.
4.4	Evaluate AI supplier arrangements and contractual risks, using documented governance frameworks, performance metrics, and compliance reports.
4.5	Justify contractual decisions and risk mitigation measures in AI projects, by referencing documented evidence and organisational objectives.

5. PLO Risk Management [EQF6]	
<i>The learner has demonstrated ability to...</i>	
Mitigate AI-related risks in projects or services by analysing potential technical, operational, ethical, and regulatory hazards and applying governance frameworks to propose and implement effective solutions aligned with organisational priorities	
Unit Learning Outcomes	
5.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
5.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
5.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
5.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
5.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
5.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.

Assessments AI AUDITOR [EP 5.4]	
1	PLO Technology Trend Monitoring [EQF6]
1.1	Annotated portfolio submission and short written test assessing correct identification of AI concepts, techniques, and emerging areas, including examples such as generative AI, reinforcement learning, and computer vision tools.
1.2	Comparative analysis table with oral explanation or peer review, assessed for use of defined criteria such as potential, maturity, and applicability based on industry reports, vendor offerings, or research updates.
1.3	Trend mapping report and written report evaluation assessing classification of internal and external AI innovation sources, including trend reports, patents, newsfeeds, and academic publications.
1.4	Mini prototype or simulation demonstration with lab report, assessed for correct application of basic methods and tools to explore AI-enabled use cases using trending technologies.
1.5	Ethics and impact briefing assessed with a rubric for description and consideration of ethical, data protection, and organisational issues in emerging technologies and current AI applications.
1.6	Presentation or dashboard, evaluated by peers and instructor, assessing clear presentation and justification of AI trend observations and insights summarising technology developments.
2	PLO Testing [EQF5]
2.1	Guided AI/ICT test procedure execution assignment, assessed through completed test scripts, structured exercise outputs, and evidence that predefined test steps were followed correctly.
2.2	AI output error and anomaly detection worksheet, assessed using controlled datasets or simulated scenarios for correct identification of basic errors, anomalies, and inconsistencies.
2.3	Basic AI bias and fairness check report, assessed for comparison of AI outputs against reference standards or simple fairness checks and correct flagging of potential bias for further review.
2.4	Structured AI testing log and results report, assessed for complete documentation of test activities, results, observations, and use of established reporting templates.
2.5	Short written test or oral questioning on ethical and regulatory standards for AI testing, assessed for correct recall and basic application to guided AI testing scenarios
3	PLO Documentation Production [EQF6]
3.1	Evaluation of AI documentation repository for organization, version control, coordinated document creation, collaborative workflow evidence, and peer-review of individual contributions.
3.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components, graded for completeness, accuracy, and coverage of model specifications, system interfaces, and regulatory reports.
3.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs, assessed for clarity, cohesion, accessibility, and accurate integration across AI system elements.

3.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements, supported by a compliance verification report referencing applicable legal, ethical, and organizational standards
3.5	Evaluation of customized AI documentation templates and modified project documentation, assessed for alignment with project-specific requirements, new system components, and adaptability to variable AI project contexts.
4	PLO Contract Management [EQF6]
4.1	Assessment of AI contract analysis report, including written analysis of data ownership, model training rights, performance standards, liability, regulatory compliance, and related contractual obligations.
4.2	Evaluation of AI contract lifecycle compliance plan documenting management of AI contracts from negotiation to termination in accordance with legal, organisational, and regulatory requirements.
4.3	Grading of AI contractual clauses and SLAs, including drafted clauses or service level agreements addressing performance monitoring, auditability, compliance obligations, and alignment with governance and operational standards.
4.4	Assessment of AI supplier risk evaluation report using governance frameworks, performance metrics, and compliance reports to evaluate supplier arrangements and contractual risks.
4.5	Evaluation of AI contractual decision dossier documenting justification of contractual decisions and risk mitigation measures with reference to evidence and organisational objectives.
5	PLO Risk Management [EQF6]
5.1	Written AI risk assessment report evaluated against completeness, methodological correctness, and coverage of technical, operational, ethical, and regulatory risks.
5.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, alignment with organisational objectives, and consideration of the AI deployment environment.
5.3	Mitigation plan submission assessed for feasibility, relevance, application to reduce AI-related risks, and alignment with defined project, product, or service boundaries.
5.4	Oral presentation or report evaluated for clarity, communication of AI risk findings, mitigation plans, and stakeholder engagement in project or organisational settings.
5.5	Review of AI system performance logs, annotated with identified emerging risks such as model drift or data anomalies and supporting analysis.
5.6	Updated risk documentation evaluated for incorporation of lessons learned, adherence to organisational standards, and alignment with organisational policies.

Annex D (informative)

Role profile template

This annex describes the template used to structure and present the AI professional role profiles included in this CEN Workshop Agreement. The template is based on the template defined in CWA 16458 [3] for European ICT professional role profiles and it has been adapted to reflect the specific characteristics, responsibilities and competence requirements of the AI field.

There are some sections added to this original template: Transversal aspects (from e-CF), personal and interpersonal skills and an AI level descriptor is added to provide additional context to the competence in relation to AI.

The purpose of the template is to ensure consistency and comparability across all AI role profiles. Each profile is described using the same set of elements, covering the role's purpose, mission, key tasks, deliverables and required competences and skills. This common structure makes it possible to compare roles, identify overlaps and distinctions, and apply the profiles coherently across organisational, educational and policy contexts. At the same time, the template has been extended to accommodate AI-specific dimensions. In particular, it integrates AI descriptors for each competence, transversal aspects and personal and interpersonal skills, recognising that professional practice in AI combines technical expertise with ethical awareness, governance considerations and human-centred capabilities. The general objective of this annex is to support a consistent creation, interpretation and future extension of AI professional role profiles.

	Role profile group			[1]
Profile title	Gives a commonly used name to a profile			[1.0]
Related titles	A list of related titles, that are used as alternative titles or as specifications.			
Summary statement	Indicates the main purpose of the profile. It presents a brief, concise understanding of the new specified role profile and is understandable by a broad range of stakeholders. It consists of a short sentence, providing a statement of the job's main activity. The statement discriminates between other profiles.			
Mission	Describes the rationale of the profile. The purpose is to specify the designated job role defined in the AI profile. It provides the performance context of the job within an organisational structure.			
	Accountable	Responsible	Contributor	
Deliverables	Illuminates the role profiles and explains relevance. A dimension is added following the RACI model. Only the most important deliverables are listed, which helps to illustrate the profile.			
Main tasks	A list of typical tasks to be performed by the profile. A task is an action taken to achieve a result within a broadly defined context. Tasks may be associated with deadlines, resources, goals, specifications and/or expected results; however, this depends upon the context of the task and they may be omitted. The relevant action is always described. A task is defined by a short description using a verb and the objective or goal of the action. Each task contributes in defining a profile.			

e-Competences <i>(from e-CF)</i>	A list of necessary competences (from the e-CF) to carry out the mission, including a proficiency level and the related AI descriptor of that level . A competence is a consequence of the profile's mission and tasks and helps to separate profiles one from another. The e-competences listed here are essential to the role: Without them, the role cannot be fulfilled.	
Transversal aspects <i>(from e-CF)</i>	The e-CF distinguishes 7 cross-cutting transversal aspects that are relevant to all ICT competences and roles, including AI roles. Depending on the specific work context one should be <i>aware of and if applicable, behave proactively in</i> : T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability	
Personal and interpersonal skills	A list of necessary personal and interpersonal skills. Without these skills, the role cannot be fulfilled. The skills are grouped into thinking skills, Self-management skills and Social and communication skills. The skills and their grouping are based on the report of the ESCO/EQF expert group (2021) [25] .	
KPI area	Reflects a long-term point of view of good role performance. They relate to the key deliverables in order to measure them. The KPI areas give an inspiration to enable development of specific KPI's for specific job descriptions. KPI areas are strictly connected to the profile domain and inspire a simple mode to measure them.	

Annex E (informative)

Educational profile template

This annex describes the template used to structure and present the AI educational profiles included in this CEN Workshop Agreement. The template is based on the educational profile model defined in the *Guidelines for developing ICT Professional Curricula* (CEN/TS 17699:2022) [5], and has been adapted to reflect the specific requirements of education and training in the field of artificial intelligence.

The template provides a coherent structure for expressing professional requirements in educational terms. It focuses on learning outcomes, levels of complexity and progression, as well as the relationship between competences and educational content. This approach allows AI professional needs to be translated into curricula, training programmes and assessment schemes without prescribing specific pedagogical methods or institutional arrangements.

This template aims to facilitate consistency and comparability, both within the educational profiles presented in this CWA and in relation to learning programmes, curricula and certification. At the same time, the template leaves room for contextual adaptation, recognising the diversity of educational systems, providers and learning pathways across Europe. Therefore, this annex plays a key enabling role supporting education, training and certification providers in designing and maintaining relevant AI learning programmes, while ensuring a clear and traceable link between educational outcomes and the corresponding professional role profiles.

	Profile group	[1]
Profile title	Name of the educational profile	[EP 1.0]
Description (Goal and Scope)	A short description of the overall focus of the educational profile in terms of results An indication of the knowledge domain; optionally a description of the professional field or specialism	
		Level
Competences	An indication of the relevant e-competences and their proficiency levels	
Complexity	An indication of the level of complexity and autonomy of the profile; for example, in relation to the EQF's Dublin descriptors and/ or other qualification standards	
Deliverables	A short list of the deliverables that learners should master	

1. Programme learning outcome (PLO) title and EQF level	
<i>The learner has demonstrated ability to...</i>	
A description of the PLO	
Unit Learning Outcomes	
1.1	A description of the unit learning outcome
1.2	...
1.3	
...	

Assessment	
Unit Learning Outcome	Assessment method
1.1	A description of the assessment method(s) related to the unit learning outcome
1.2	...
1.3	
...	

Annex F (informative)

Creating AI professional role profiles using European ICT professional role profiles

This annex outlines how the set of European ICT professional role profiles (CWA 16458) [3] was adapted for use in this CWA. Additional sections were introduced to the template to articulate transversal aspects, personal and interpersonal skills, and AI-specific competence context, while preserving structural continuity with the original EU ICT professional role profiles. The mapping table included in this annex makes these relationships explicit and provides transparency on how AI professional role profiles relate to, and extend, the existing European general ICT role profiles.

The general set of ICT professional role profiles offers a structure and provides a generic set of 30 ICT role profiles. One of the main purposes of this CWA is to use this generic set to create more specific AI Role Profiles in context, leading to so-called ‘generations 3’ of the European ICT Professional Profiles⁷. In the User Guide of CWA 16458-2 [4], it is explained how to adapt the different components of the profiles to meet specific needs.

By comparing descriptions, tasks and associated competences of these general ICT role profiles with descriptions of the current various AI functions, 20 of these general ICT role profiles are directly identifiable in the context of AI. Some of these generic roles can be one-on-one translated into their AI counterpart. For example, the generic role of the Developer becomes an AI Developer. Other generic roles can be translated into various specialised AI-related roles. For example, the generic Data Specialist role becomes a Data Analyst and a Data Engineer.

⁷ Other examples of such more specific role profiles frameworks are the Cybersecurity role profiles (Enisa) and Data science role profiles (Edison), as well as several specific role profile frameworks developed in European projects.

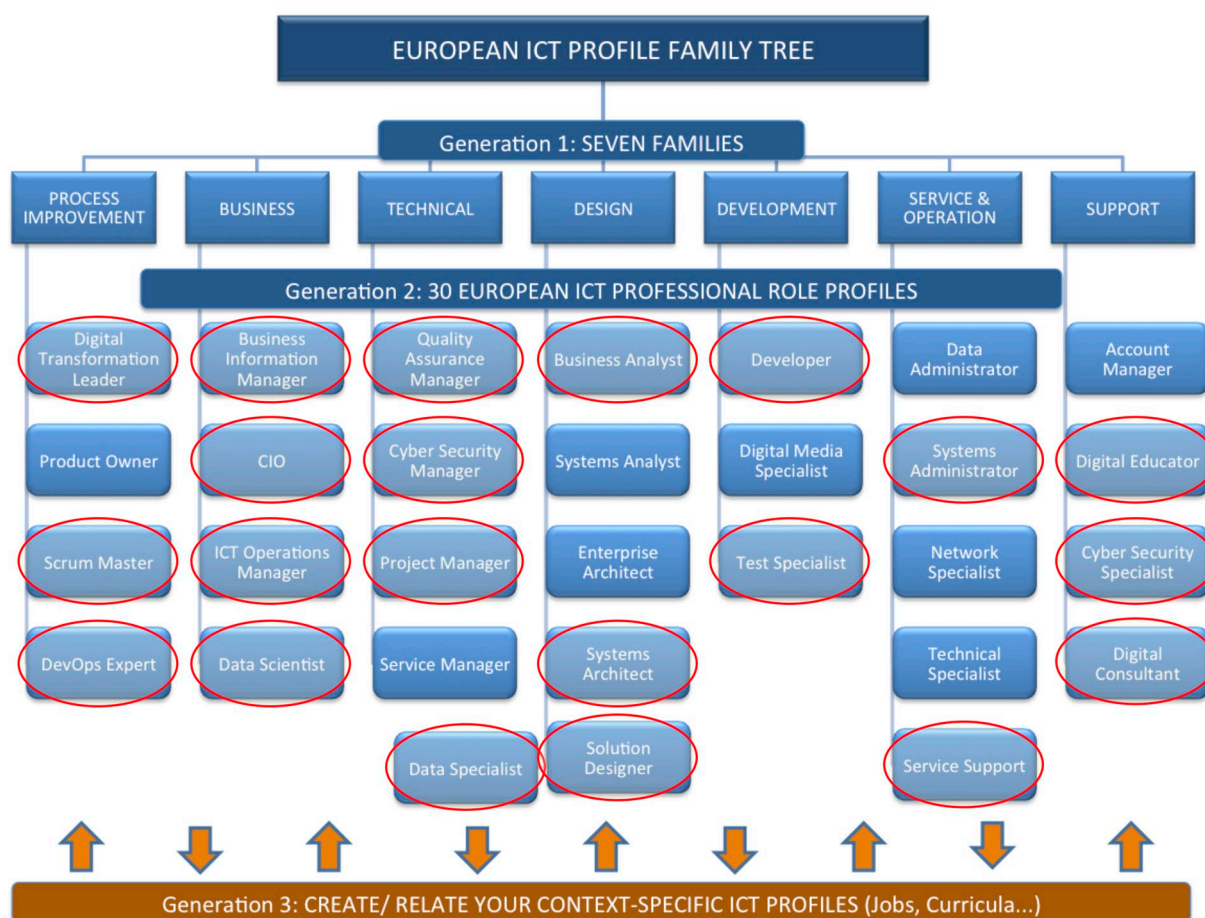


Figure F.1 — Selection of roles from European ICT professional role profiles

SOURCE: CWA 16458 [3]

Given the advancements in the field, some particular AI-related roles do not have a direct counterpart in the generic set of ICT professional role profiles. For example, this is the case for the AI Ethics Officer and the AI Data Trainer.

The table below shows the relation between the general ICT professional role profiles from CWA 16458 [3] and the AI role profiles. The colours of the ICT professional role profiles titles in the left-hand column indicate the relationship between these profiles and the AI job profiles: a title in bold indicates a very close relationship; both profiles are very similar in nature. A title in grey indicates that the job is not a direct equivalent, but is only loosely related to the AI job profile. Titles in plain text indicate that the relationship is not very close, but that there are comparable elements.

Table F.1 — Related titles ICT role profiles and AI role profiles

ICT prof. role profiles (CWA 16458)	A.I. prof. role profiles
DATA PROCESSING & ANALYSIS	
Data Scientist [27]	Data Scientist
Data Specialist [28]	Data Curation Lead

Data Specialist [28]	Data Analyst
Data Specialist [28]	Data Engineer
-	AI Data Trainer
Business Analyst [2]	AI Business Analyst
DEVELOPMENT & OPERATIONS	
Systems Architect [21]	AI Architect
Solution Designer [24]	AI Product Designer
Developer [6]	AI Engineer
Developer [6]	AI Application Developer
-	AI Researcher
Test Specialist [23]	AI Quality & Evaluation Specialist
-	AI Deployment Engineer
DevOps Expert [26]	MLOps Engineer
-	AI Reliability Engineer
-	AI Observability & Monitoring Specialist
-	AI Incident Response & Reporting Lead
Systems Administrator [19]	AI Platform Engineer
SUPPORT & GUIDANCE	
Information Security Specialist [12]	AI Security Specialist
Service Support [17]	AI Service Support Specialist
Information Security Specialist [12]	AI Safety Specialist
Digital Educator [13]	AI Educator
Digital Consultant [9]	AI Advisor
-	AI Safety Specialist
QA Manager [16]	Responsible AI Officer

-	Sustainable AI Lead
-	Human-AI Interaction Lead
MANAGEMENT	
Digital Transformation Leader [25]	AI Transformation Leader
Chief Information Officer (CIO) [4]	Chief AI Officer
-	AI Tech Lead
Business Information Manager [3]	AI Manager
Product Owner [30]	AI Product Manager
ICT Operations Manager [10]	AI Operations Manager
Project Manager [15]	AI Project Manager
GOVERNANCE	
-	AI Governance Officer
-	AI Compliance Officer
Information Security Manager [11]	AI Risk Manager
-	AI Auditor

In the terminology used to describe role types, current practice and the recognisability of terms have been taken into account. Consequently, the following *role types* have primarily been used in the titles of the AI role profiles:

Lead; Provides subject-matter leadership, advocacy, and direction, guiding priorities, decisions, and collaboration across a team or domain (*e.g., Principal, Advocate, Champion*).

Manager; Oversees people, resources, and delivery to ensure teams achieve operational and strategic objectives (*e.g., Director, Head, Supervisor*).

Officer; Holds formal responsibility for governance, compliance, coordination, or administration within a defined function or authority area (*e.g., Coordinator, Administrator, Controller*).

Specialist; Applies deep expertise in a focused discipline to deliver high-quality analysis, advice, or execution (*e.g., Expert*).

Engineer; Designs, builds, implements, and improves technical systems, solutions, or infrastructure through applied engineering practices.

Annex G **(informative)**

Criteria for adding roles

This annex sets out the criteria used to determine which AI professional roles were included in the framework presented in this CEN Workshop Agreement. It makes explicit the considerations that guided decisions on scope, relevance and differentiation, providing transparency on how the role set was constructed.

The criteria reflect a balance between current labour market practice, technological developments and the need for conceptual coherence. They take into account the maturity and distinctiveness of roles, their relevance across sectors, and their contribution to the AI lifecycle, from development and operations to management and governance.

The overall objective of the annex is to support a consistent interpretation of the role framework and to provide a clear reference for future extensions or revisions. It acknowledges that the AI field continues to evolve, and that the set of roles defined in this CWA is not closed, but grounded in a transparent and repeatable decision-making logic.

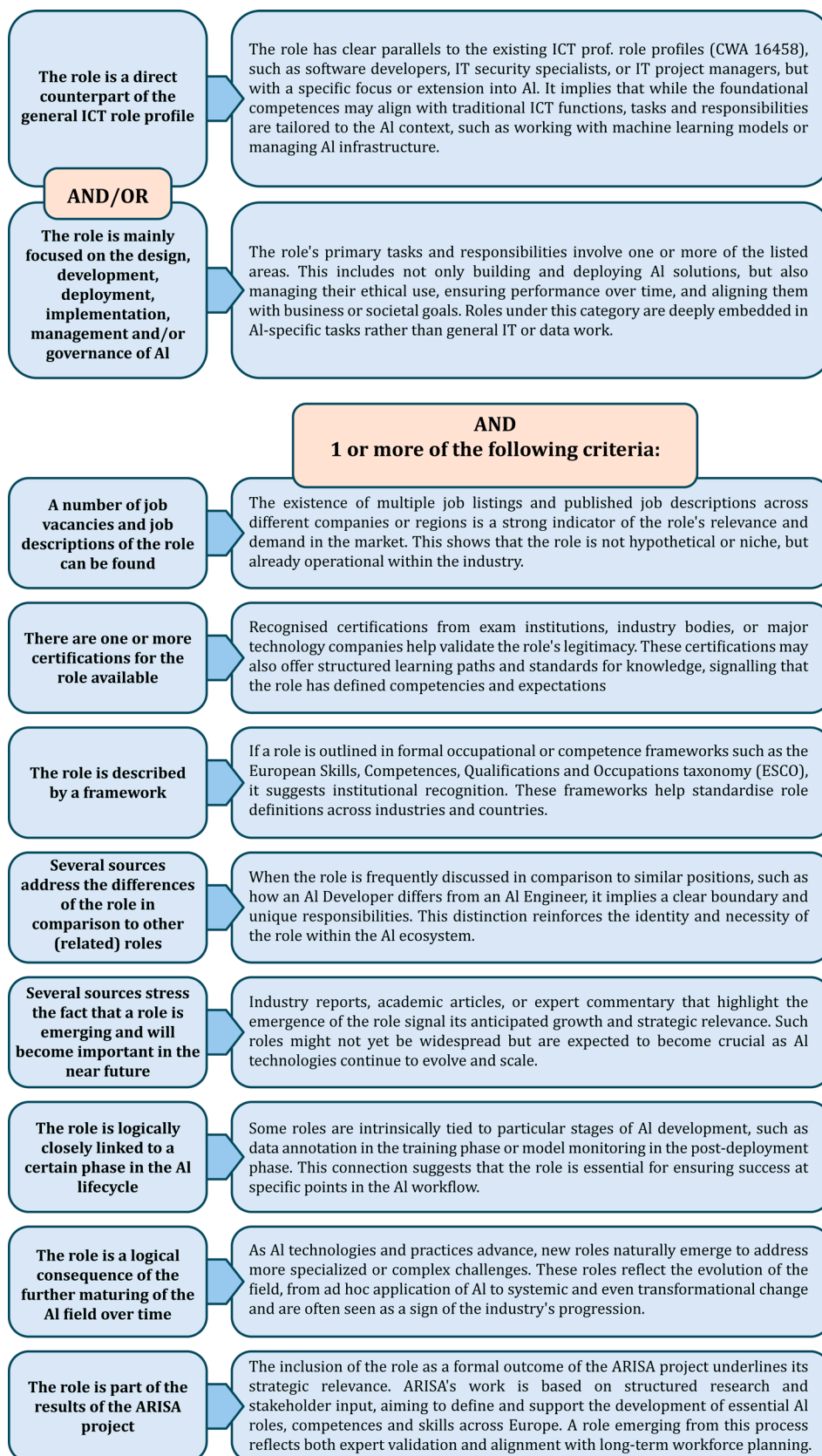


Figure G.1 — Flowchart of criteria for adding roles

Annex H (informative)

AI professional role profiles: related titles

This annex provides an overview of the official AI professional role profile titles used in this CEN Workshop Agreement, together with their related titles that are commonly encountered in practice. These related titles include synonyms, alternative formulations and more specialised variants used across organisations, sectors and labour markets.

The purpose of this annex is not to standardize job titles, but to acknowledge the diversity of terminology in the AI field. Job titles often vary significantly despite referring to similar underlying roles. On the contrary, identical titles may be used to describe different functions depending on context.

The table below supports interpretation and practical application of the role profiles facilitating conceptual relationships and comparability. It is particularly relevant for employers, professionals and education providers seeking to map existing job titles, curricula or qualifications to the role profiles defined in this CWA, without imposing rigid naming conventions.

Table H.1 — AI role profile titles and related titles

A.I. Prof. Role Profiles Titles	Related / Alternative Titles
DATA PROCESSING & ANALYSIS	
Data Scientist	Data Scientist AI, AI Data Scientist, Decision Scientist, Data Science Manager
Data Curation Lead	Lead Data Curator, Data Stewardship Lead, Head of Data Curation, Principal Data Curator, Senior Data Steward, Data Governance Lead, Data Quality Lead, Data Operations Lead, Data Lifecycle Lead, Data Asset Management Lead, Data Integrity Lead, Trusted Data Lead, Data Trust Lead
Data Analyst	Data Analyst AI, AI Data Analyst, AI Analyst, Big Data Analyst, Data Quality Analyst
Data Engineer	Data Engineer AI, AI Data Engineer, Big Data Engineer, Big Data Specialist, ETL Developer, ETL Engineer, Data Pipeline Engineer, Data Integration Engineer, Cloud Data Engineer, Streaming Data Engineer, Real-Time Data Engineer
AI Data Trainer	Training Data Specialist, AI Trainer, AI Model Trainer, Machine Learning Data Trainer, Conversational AI Trainer, Generative AI Trainer, Data Annotation Specialist, Data Annotator, Data Labelling Specialist, Training Data Annotator, Data Tagging Specialist
AI Business Analyst	Business Analyst AI, AI Business Systems Analyst, AI Business Intelligence Analyst, AI Technical Business Analyst, AI Translator, Analytics Translator, Business-AI Translator, Data & Analytics Translator, Decision Engineer, AI Strategy Analyst, AI Solutions Analyst, AI Transformation Analyst, AI Functional Analyst, AI Systems Analyst, AI Value Analyst

DEVELOPMENT & OPERATIONS	
AI Architect	AI Solutions Architect, Enterprise AI Architect, AI Infrastructure Engineer, AI Systems Architect, AI Infrastructure Architect, Machine Learning Architect, Generative AI Architect, Agentic AI System Architect, AI Application Architect, AI Software Architect, AI Cloud Architect
AI Product Designer	AI Experience Designer, AI UX Designer, AI UX/Product Designer, Intelligent Product Designer, ML UX Designer, AI Interaction Designer, AI Systems Designer, Human-Centred AI Designer, Explainable AI Designer, XAI Designer, Responsible AI UX Designer, Conversational AI Designer, AI Service Designer, AI Design Lead, AI Design Specialist, Generative AI Designer, Human-AI Interaction Designer, Machine Learning UX Designer, Intelligent Systems Designer
AI Engineer	AI Systems Engineer, AI Orchestration Engineer, AI Optimisation Engineer, AI Algorithm Engineer, Intelligent Systems Engineer, ML Engineer, ML Expert, DL Engineer, DL Expert, Neural Network Engineer, Computer Vision Engineer, Computer Vision Expert, NLP Engineer, NLP Expert, LLM Engineer, Generative AI Engineer, Conversational AI Engineer, Prompt Engineer, Agentic AI Engineer, AI Agent Engineer, Quantum AI Engineer, Quantum ML Engineer
AI Application Developer	AI Developer, AI Software Developer, AI Systems Developer, Intelligent Systems Developer, Business Intelligence Developer, AI Programmer, AI Practitioner, LLM Developer, AI Chatbot Developer, AI Agent Developer, Agentic AI Developer, Quantum AI Developer
AI Researcher	AI Research Scientist, ML Researcher, AI/ML/DL/LLM Scientist, AI Research Engineer, Algorithmic Research Engineer, Applied Research Scientist, Generative AI Research Scientist, AI Safety Research Scientist, Responsible AI Researcher, AI Ethics Research Scientist, Trustworthy AI Researcher
AI Quality & Evaluation Specialist	AI Test Specialist, AI Tester, AI Testing Professional, AI Software Tester, Software AI/ML Tester, AI QA Tester, Tester AI Application Development, AI Test Engineer, AI Prompt Tester, AI Evaluator, Evaluator of AI Models, AI/ML Content Evaluator, AI Prompt Evaluator, AI Writing Evaluator, LLM Evaluator, AI Reviewer, AI Rater, AI Quality Rater, AI Data Rater, AI Quality Engineer, AI Quality Specialist, AI QA Specialist
AI Deployment Engineer	AI Implementation Engineer, AI Systems Engineer, AI Production Engineer, AI Integration Engineer, Model Deployment Engineer, ML Deployment Engineer, Applied AI Engineer
MLOps Engineer	AIOps Engineer, AIOps Specialist, AIOps Professional, AI Operations Specialist, MLOps Engineer, MLOps Specialist, MLOps Professional, ML Operations Specialist, LLMOps Engineer, AI/ML Workflow Engineer
AI Reliability Engineer	ML Reliability Engineer, AI Ops Reliability Engineer, AI Robustness Engineer, AI Systems Reliability Engineer, AI Assurance Engineer, Trustworthy AI Engineer, Autonomous Systems Reliability Engineer
AI Observability & Monitoring Specialist	AI Monitoring Engineer, AI Observability Engineer, AI Performance & Monitoring Engineer, AI/ML Monitoring Specialist, ML Systems Monitoring Engineer

AI Incident Response & Reporting Lead	AI Incident Response Manager, AI Incident Lead, AI Systems Incident Manager, AI Safety Incident Coordinator, AI Operations Response Lead, AI Monitoring & Response Lead, Head of AI Incident Response & Reporting, AI Oversight & Incident Manager, AI Incident & Assurance Lead
AI Platform Engineer	AI Infrastructure Engineer, AI Systems Administrator, AI Admin, AI SysAdmin, ML Administrator, ML Admin
SUPPORT & GUIDANCE	
AI Security Specialist	AI Security Engineer, AI Security Professional, AI Security Operations Centred Expert, ML Security Specialist, ML Security Engineer
AI Service Support Specialist	AI Support Specialist, AI Customer Support Specialist, AI Services Support Specialist, AI Operations Support Specialist, AI Platform Support Specialist, AI Application Support Specialist, AI Client Support Specialist, AI Customer Success Specialist, AI Service Delivery Specialist
AI Educator	AI Lecturer, AI Teacher, AI Trainer, Trainer in AI, AI Curriculum Developer, AI Learning Development Manager, AI Training & Competence Specialist, AI Literacy & Training Specialist.
AI Advisor	AI Consultant, AI Specialist, AI Adoption Specialist, AI Adoption Advisor, AI Strategy Advisor, AI Business Advisor, AI Solutions Advisor, AI Solutions Consultant, AI Capability Advisor, AI Use Case Advisor, AI Portfolio Advisor, AI Value Advisor, AI Transformation Advisor, AI Innovation Advisor, AI Strategic Planning Advisor, AI Legal Advisor, AI Ethics Consultant
AI Safety Specialist	AI Safety Expert, Safety Expert for AI Systems, AI Safety Engineer, AI Trust and Safety Engineer, ML Safety Engineer, AI Platform Safety Engineer, User Safety & Integrity Engineer, AI/ML Abuse Prevention Engineer, AI Content Safety Engineer
Responsible AI Officer	AI Ethics Officer, AI Ethicist, Responsible AI Specialist/ Lead/ Director, Manager/ Director Responsible AI, AI Ethics Specialist/ Manager/ Director/ Lead
Sustainable AI Lead	Head of Sustainable AI, AI Sustainability Director, Director of Sustainable AI, AI Sustainability Lead, Sustainability & AI Integration Lead, Climate-Conscious AI Lead, Green AI Lead, Green AI Program Lead, AI for Sustainability Lead, ESG & AI Strategy Lead, Sustainable AI Technology Strategy Lead, AI Impact & Sustainability Lead
Human-AI Interaction Lead	Head of Human-AI Interaction, Director of Human-AI Experience, Human-AI Strategy Lead, Human-Centred AI Lead, Head of AI Interaction, Director of Human-Centred AI
MANAGEMENT	
AI Transformation Lead	AI Transformation Officer/ Director, AI Adoption Lead, AI Innovation Leader, AI Change Management Lead, AI Workforce Transformation Lead, AI Integration Lead, AI Acceleration Lead
Chief AI Officer	AI Strategist, AI Strategy Manager, Chief AI Strategy Officer, Chief Intelligence Officer, AI Lead, AI Director, Director of AI, Director of Intelligent Systems, Head of AI
AI Tech Lead	AI Technical Lead, Lead AI Engineer, AI Lead, AI Engineering Lead, ML Tech Lead, ML Engineering Lead, Principal AI Engineer, Staff AI Engineer, Head of AI Engineering, Director of AI Engineering, AI Platform Lead, AI Infrastructure Lead

AI Manager	Manager of AI, AI Program Manager, AI Portfolio Manager, AI Team Manager, AI General Manager
AI Product Manager	AI Product Owner, AI Product Lead, Head of AI Product, ML Product Manager, ML Product Owner, Intelligent Systems Product Manager, Intelligent Products Lead, AI Solutions Manager, AI Business Product Manager
AI Operations Manager	AI Ops Manager, Manager AI Operations, AI Operations Lead/ Director, AI Systems Operations Manager, ML Ops Manager, AI Infrastructure Operations Manager, Model Operations Manager, AI Data Operations Manager
AI Project Manager	Project Manager AI, AI Project Lead, ML Project Manager, MLOps Project Manager, Applied AI Project Manager, AI Implementation Manager, AI Delivery Manager.
GOVERNANCE	
AI Governance Officer	Head of AI Governance, Director of AI Governance, AI Governance Lead, Responsible AI Governance Lead, AI Governance Specialist, AI Policy Lead, Enterprise AI Governance Manager, AI Officer, AI Policy Specialist, AI Policy Lead
AI Compliance Officer	Compliance Officer AI, AI Regulatory Compliance Officer, AI Compliance Manager, AI Compliance Director, Responsible AI Compliance Lead, AI Legal & Compliance Officer, AI Policy Compliance Manager, AI Regulatory Affairs Manager, AI Trust and Privacy Compliance Officer, AI Vendor/Third-Party/Supplier Compliance Manager, AI Regulatory Representative, AI Authorised Representative, EU Representative
AI Risk Manager	AI Risk Officer, AI Risk & Controls Manager, AI Model Risk Manager, AI Operational Risk Lead, Risk Management Specialist in AI, Responsible AI Risk Manager
AI Auditor	AI and ML Auditor, AI Audit Manager, AI Assurance Lead, AI Systems Auditor, Responsible AI Auditor, Technology & AI Audit Lead, Model Audit Specialist, Internal AI Auditor, Algorithm Auditor, AI Audit Specialist, Algorithm Audit Specialist, Compliance Auditor, Regulatory Assurance Specialist

Annex I (informative)

AI professional role profiles and e-CF competences

This annex presents a structured mapping between the AI professional role profiles defined in this CEN Workshop Agreement and the competences of the European e-Competence Framework (e-CF) (EN 16234-1:2019)[1]. The table provides a consolidated view of how AI-specific roles relate to these established ICT competences, including indicative proficiency levels. A brief explanation of this framework in relation to this document can be found in [Annex Q](#), section 1.

It is important to note that, of course, every practical situation is different and that reality can be unpredictable; so that this relationship is not always a one-to-one correspondence, but in practice this approach has proven to work very well in bridging the gap between the workplace and the learning sphere.

The mapping builds in part on the competence associations already defined for comparable roles in the European ICT professional role profiles (CWA 16458)[3]. These were reviewed and, where necessary, adapted to reflect the current situation, specific responsibilities and AI-related context.

The table below supports a consistent approach and facilitates practical use in different areas. It also provides a common reference point for comparing AI roles with broader ICT roles, while acknowledging the distinct and evolving nature of AI-related competences.

Table I.1 — Matrix AI professional role profiles and e-CF competences

	Data Scientist	Data Curation Lead	Data Analyst	Data Engineer	AI Data Trainer	AI Business Analyst	AI Architect	AI Product Designer	AI Engineer	AI Application Developer	AI Researcher	AI Quality & Evaluation Specialist	AI Deployment Engineer	MLOps Engineer	AI Reliability Engineer	AI Observability & Monitoring	AI Incident Response & Platform Engineer	AI Security Specialist	AI Service Support Specialist	AI Educator	AI Advisor	AI Safety Specialist	Responsible AI Officer	Sustainable AI Lead	Human-AI Interaction Lead	AI Transformation Lead	Chief AI Officer	AI Tech Lead	AI Manager	AI Product Manager	AI Operations Manager	AI Project Manager	AI Governance Officer	AI Compliance Officer	AI Risk Manager	AI Auditor		
A.1. IS & Business Strat. Alignment						4	4															4		4			5	5		4				4				
A.2. Service Level Management																																						
A.3. Business Plan Development				3		3																					5	5		3								
A.4. Product/Service Planning		3						3																			4				4							
A.5. Architecture Design				3			4						3						3							4	4											
A.6. Application Design								3	3	3																	4											
A.7. Technology Trend Monitoring	4						4	3		5									4	3	3	3	3	3	3		4	5	4	3			3	3	3	3		
A.8. Sustainability Management							3				3															4	4											
A.9. Innovating	4							3			5											4	4				5	5			4							
A.10. User Experience			3				4																		4					3								
B.1. Application Development									3	3			3																									
B.2. Component Integration				3			4	3	3			3	3																									
B.3. Testing	4					2			3	2		4	2		3	3						3													2			
B.4. Solution Deployment									3				3	3																								
B.5. Documentation Production				2		2			3	3	3		3	2			3					3												3	3	3	3	
B.6. Systems Engineering					3		4						3														4											
C.1. User Support																			2																			
C.2. Change Support												3	3						2													3						
C.3. Service Delivery												3	3		3	3	3		2												3							
C.4. Problem Management								3								3	4		3	2												3			3			
C.5. Systems Management													3	3	3		3														3							
D.1. Inform. Sec. Strat. Development																			4														4	4	4			
D.2. ICT Qual. Strat. Development		4										4																						4				
D.3. Education and Training Provision																			3	4				3														
D.4. Purchasing																																						
D.5. Sales Development																																						
D.6. Digital Marketing																																						
D.7. Data Science and Analytics	4	4	3	2	2	4		3		5	2				3												4											
D.8. Contract Management																																						
D.9. Personnel Development																															4		3			3		
D.10. Inform. and Knowledge Mgt.	4		4	4		4					4					3								4										4		3		
D.11. Needs Identification	4		3		3	4	3		4										3	4				4				4	4		3							
E.1. Forecast Development	4																											5	4	4	4		4					
E.2. Project and Portfolio Mgt.																												4	3	3	3	3		4	3	4	3	
E.3. Risk Management	2	3	2	2			3			3					3				3									4	3	4		3						
E.4. Relationship Management								3																														
E.5. Process Improvement		3													3																							
E.6. ICT Quality Management		4		4							3					3																						
E.7. Business Change Mgt.																																						
E.8. Information Sec. Mgt.						4											4	2									5				3							
E.9. IS Governance							4																				5	5		4								

Table I.2 — e-CF proficiency levels and EQF levels

The numbers in the table refer to the e-CF proficiency levels of a competence and can be compared to EQF levels:

<i>e-CF prof. level</i>	<i>EQF</i>		
e-1	3		able to apply knowledge and skills to solve straight forward problems; implements instructions
e-2	4/5	Post sec./tert. VET; Ass. degree	operates with capability and independence in specified boundaries; applies and adapts
e-3	6	Bachelor	respected for innovative methods and use of initiative; consults; planning, making decisions, supervises, building teams
e-4	7	Master	extensive scope of responsibility; provides executive leadership
e-5	8	Post-master, doctorate	overall accountability and responsibility; determines strategy

Annex J (informative)

e-CF competences and AI level descriptors

This annex presents an overview of the e-CF competences and their related AI level descriptors.

The levels are consistent with the proficiency levels as used in e-CF; ranging from e-1 to e-5. A more detailed explanation and description of these levels can be found in Table R1 of Section 1 in [Annex Q](#) “Relationship with other standards”. The levels also correspond to EQF levels [\[20\]](#). The relation between e-CF and EQF levels is clarified in Table R.5, [Annex Q](#).

The descriptors are formulated in such a way that *AI is the object of the action* described by the descriptor, rather than being viewed from the perspective that AI is the tool used in that action. This does not exclude the possibility that AI may be used as a tool in the actions described. However, the focus of this CWA is not on the professional use of AI. This would likely require a complementary or different approach, something which is currently being discussed and analysed, for example, in [CEN/TC428](#) and [ISO/IEC JTC1/SC7/WG20](#) [\[32\]](#) [\[33\]](#).

The table below is organised according to the five e-CF competence areas (Plan, Build, Run, Enable, and Manage). For each e-CF competence, relevant levels are identified and accompanied by an AI level descriptor.

Table J.1 — e-CF competences and their AI level descriptors

PLAN (A)			
	e-Competence	Level	AI Level descriptor
A.1.	IS and Business Strategy Alignment	e-4	Aligns IS and AI strategy with business strategy, integrating AI capabilities into enterprise architecture while managing risk, sourcing, and governance.
		e-5	Leads enterprise-wide IS and AI strategy; anticipates long-term business needs and drives innovation.
A.2.	Service Level Management	e-3	Defines and monitors SLAs for AI services with moderate autonomy. Negotiates AI performance targets with stakeholders, considering business needs and technical capacity. Tracks AI-specific indicators such as drift, cost, throughput, and availability. Ensures that AI monitoring pipelines generate actionable alerts for SLA violation.
		e-4	Independently establishes and enforces SLAs for complex AI services across multiple teams or domains. Evaluates and adjusts AI performance targets based on operational data and stakeholder feedback. Integrates AI-specific requirements into contracts and vendor agreements. Implements continuous improvement processes for AI service reliability and efficiency.
A.3.		e-3	Independently designs and justifies business plans for AI-enabled initiatives, evaluating alternative approaches,

	Business Plan Development		quantifying AI-specific costs and benefits, managing risks, and communicating value to stakeholders.
		e-4	Leads and governs the development of complex AI business plans, defining evaluation frameworks, integrating regulatory and ethical considerations, guiding others, and managing stakeholder expectations on AI value and risk.
		e-5	Shapes organisational strategy for AI investment through business planning, setting enterprise-level principles, prioritisation criteria, and governance models that align AI initiatives with long-term business objectives.
A.4.	Product / Service Planning	e-3	Plans and manages product or service activities, including AI-enabled elements, ensuring alignment with business objectives, delivery constraints and regulatory requirements.
		e-4	Leads and optimises product or service planning for AI-enabled solutions. Ensures effectiveness, compliance and sustainability across the lifecycle, balancing value, risk and resource constraints.
A.5.	Architecture Design	e-3	Independently implements and adapts AI-enabled architectural solutions. Ensures alignment with enterprise architecture and policies. Identifies minor risks and recommends improvements.
		e-4	Leads the design of complex AI-enabled enterprise architectures. Ensures AI solutions are scalable, secure, interoperable, and ethically aligned. Provides guidance to teams on AI integration.
A.6.	Application Design	e-3	Designs AI applications and data structures independently for routine or well-defined tasks. Selects suitable AI methods and technologies to meet project requirements, balancing cost, performance, and quality.
		e-4	Leads the design of complex AI applications and system architectures. Integrates AI models into larger systems, ensuring scalability, interoperability, and ethical compliance. Advises stakeholders on AI design trade-offs and performance optimisation.
A.7.	Technology Trend Monitoring	e-3	Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.
		e-4	Provides leadership in the monitoring, evaluation and exploitation of ICT and AI technological developments. Advises on AI innovation strategies and ensures alignment with organisational objectives.
		e-5	Provides strategic vision and authority for ICT and AI innovation. Initiates and governs transformational AI initiatives and shapes long-term AI adoption strategies.
A.8.	Sustainability Management	e-3	Applies established methods to monitor and improve the sustainability performance of AI systems and projects.

		e-4	Leads initiatives to assess, advise, and implement sustainable AI practices across projects and organisational units
A.9.	Innovating	e-3	Independently develops and adapts AI-based solutions to address defined business, societal, or research needs. Combines AI with other technological advances to enhance products, services, or processes creatively.
		e-4	Leads innovation projects that exploit AI to create novel solutions or new business/research opportunities. Advises teams or stakeholders on the strategic use of AI to drive value, efficiency, or societal benefit.
		e-5	Defines the strategic direction for AI-driven innovation across the organisation or research domain. Envisions transformative AI applications that create new markets, services, or societal impact.
A.10.	User Experience	e-2	Applies established user experience design principles and methods to AI-enabled digital products and services under guidance. Contributes to the design of usable and understandable AI interactions by following defined standards, patterns, and ethical guidelines.
		e-3	Selects, adapts, and applies user experience design approaches for AI-enabled systems to meet user, business, and ethical requirements. Ensures that AI interactions are understandable, usable, and aligned with user expectations.
		e-4	Leads the definition and governance of user experience design strategies for AI-enabled products and services. Ensures consistency, trustworthiness, and responsible use of AI across user journeys and platforms.
BUILD (B)			
B.1.	Application Development	e-3	Develops AI-enhanced applications according to specifications, integrating AI/ML models into software solutions. Applies established AI platforms and frameworks to achieve functional requirements.
		e-4	Leads the design and development of AI-enhanced applications, optimising performance, cost, and quality. Selects appropriate AI/ML models, platforms, and algorithms to meet business needs. Guides others in AI integration and validation.
B.2.	Component Integration	e-3	Independently integrates AI components into systems, ensuring interoperability, performance and security. Selects appropriate integration approaches and contributes to AI system design.
		e-4	Leads and coordinates AI component integration activities. Ensures consistency, quality and compliance of AI-enabled system architectures across projects or services.
B.3.	Testing	e-2	Supports testing of ICT and AI-based systems. Executes predefined test procedures and records results. Applies basic

			AI evaluation methods and assists in documenting model behaviour.
		e-3	Independently conducts systematic testing of ICT and AI systems. Evaluates AI models for correctness, robustness, fairness, and compliance with standards. Provides preliminary reports and recommendations for improvements.
		e-4	Leads testing activities for complex ICT and AI systems. Integrates AI model evaluation with broader system testing. Ensures adherence to regulatory, ethical, and internal standards. Advises teams on mitigation of AI risks and improvement of system robustness.
B.4.	Solution Deployment	e-3	Implements AI solutions reliably in production, integrating models with systems and workflows. Monitors performance and executes predefined updates or retraining as required.
B.5.	Documentation Production	e-2	Produces simple AI-related documents following established templates and guidelines.
		e-3	Independently produces and maintains AI documentation that integrates technical and compliance requirements.
B.6.	ICT Systems Engineering	e-3	Independently engineers AI infrastructure components and integrates AI systems into existing IT environments. Applies standard methods to ensure performance, security, and compliance, and contributes to AI system design.
		e-4	Leads the design and optimisation of complex AI infrastructure. Anticipates AI system behaviour, implements advanced integration solutions, and ensures high performance, security, and ethical compliance. Provides guidance to others.
RUN (C)			
C.1.	User Support	e-2	Provides user support for standard AI-enabled systems and services under supervision. Addresses routine user requests related to AI functionalities and follows established procedures to resolve or escalate incidents.
C.2.	Change Support	e-2	Applies defined change management procedures to ICT and AI solutions under guidance. Supports implementation of approved AI changes and monitors their operational impact.
		e-3	Plans and executes AI-related changes. Evaluates impact and coordinates changes to minimise service disruption and risk.
C.3.	Service Delivery	e-2	Provides service delivery support for AI-enabled services under guidance. Ensures AI services operate according to defined procedures, service levels and security requirements. Identifies and escalates AI-related incidents and performance deviations.
		e-3	Ensures reliable and secure delivery of AI-enabled services. Takes responsibility for operational performance, monitoring and incident management of AI components. Proactively addresses service risks to maintain agreed service levels.
		e-4	Leads service delivery for AI-enabled systems. Ensures continuity, resilience and trustworthiness of AI services across

			the organisation. Aligns AI service delivery with business objectives, security policies and governance requirements.
C.4.	Problem Management	e-2	Supports resolution of ICT and AI incidents under guidance. Helps collect data on AI system errors and monitors alerts.
		e-3	Independently diagnoses and resolves routine ICT and AI incidents. Applies established procedures to prevent recurrence.
		e-4	Leads problem management across ICT and AI systems. Proactively prevents incidents and optimises system and AI model performance.
C.5.	Systems Management	e-3	Manages and maintains IT and AI systems independently, ensuring reliable and secure operation. Resolves operational issues and contributes to continuous improvement of AI-enabled services.
ENABLE (D)			
D.1.	Information Security Strategy Development	e-4	Develops and integrates AI security strategy across projects or business units. Aligns AI security objectives with organisational goals, manages AI risks proactively, and ensures ethical AI deployment.
D.2.	ICT Quality Strategy Development	e-4	Defines, evolves, and integrates AI quality objectives across projects and value streams. Guides teams to ensure trustworthy and resilient AI systems.
D.3.	Education and Training Provision	e-3	Implements AI training programs and integrates AI learning into development plans.
		e-4	Defines and manages AI training programs that enhance organisational AI capability.
D.4.	Purchasing	e-3	Applies standard procurement processes to acquire AI products and services that meet organisational requirements.
D.5.	Sales Development	-	<i>Not applicable in this CWA</i>
D.6.	Digital Marketing	-	<i>Not applicable in this CWA</i>
D.7.	Data Science and Analytics	e-2	Applies basic data collection, cleaning, and analysis techniques to support AI-driven projects under supervision.
		e-3	Independently conducts data analysis and analytics tasks to support AI model development and AI-enhanced decision-making.
		e-4	Leads data science and analytics initiatives that enable AI solutions, optimizing AI-supported processes and organisational decision-making.
		e-5	Defines and drives organisational strategy for AI-enabled data analytics, shaping AI adoption and governance.

D.8.	Contract Management	e-2	Supports the management of AI-related contracts under supervision, ensuring compliance with basic organisational processes, ethical AI principles, and regulatory requirements.
		e-3	Independently manages AI contract activities, ensuring clarity on data ownership, model training and performance standards, liability, and regulatory compliance while monitoring supplier delivery and escalating risks as needed.
D.9.	Personnel Development	e-3	Independently identifies AI skill gaps, contributes to AI-focused learning initiatives, and applies AI competences in role-specific contexts.
		e-4	Integrates AI competence development into team/organisation processes, guides others in AI adoption, and evaluates learning impact.
D.10.	Information and Knowledge Management	e-3	Independently manages AI knowledge and information within defined processes. Analyses business processes to identify AI information needs. Applies tools and techniques to organise, access, and share AI knowledge effectively.
		e-4	Designs and improves AI knowledge management processes and structures across multiple teams or business units. Advises on AI knowledge lifecycle, governance, and strategic use. Promotes collaborative knowledge sharing and innovation.
		e-5	Leads organisational AI knowledge strategy, ensuring alignment with enterprise objectives, regulatory requirements, and innovation goals. Shapes AI knowledge policies, oversees lifecycle governance, and drives AI-enabled value creation.
D.11.	Needs Identification	e-3	Independently engages stakeholders to identify and validate needs, translating them into AI solution requirements.
		e-4	Leads the identification and articulation of AI-related needs, ensuring alignment with business strategy, regulatory compliance, and ethical principles.
MANAGE (E)			
E.1.	Forecast Development	e-4	Provides expert guidance on AI forecasting, influencing strategic decision-making. Evaluates multiple AI adoption scenarios and recommends actions across organisational functions.
E.2.	Project and Portfolio Management	e-3	Manages small AI projects or well-defined components of larger portfolios, applying standard project management practices with some autonomy.
		e-4	Leads complex AI projects or portfolios, integrating multiple AI initiatives to deliver strategic business value.
		e-5	Drives strategic AI project and portfolio management across the organisation, shaping innovation, governance, and AI capability development.
E.3.		e-2	Applies defined risk management practices to AI systems, supporting the identification, documentation, and monitoring of

	Risk Management		AI-related risks within established governance and regulatory frameworks.
		e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related risks are systematically assessed, treated, and communicated in alignment with organisational risk appetite.
		e-4	Ensures the effectiveness and consistency of AI risk management across the organisation by defining AI risk controls, governance mechanisms, and assurance processes aligned with enterprise risk frameworks.
		e-5	Initiates and influences strategic AI risk management practices, shaping organisational risk posture for AI and aligning innovation, governance, and compliance objectives at enterprise and ecosystem levels.
E.4.	Relationship Management	e-3	Independently maintains and nurtures relationships with stakeholders involved in AI projects. Coordinates routine AI-related tasks and facilitates communication across teams.
		e-4	Guides and coordinates stakeholders across multiple functions or teams in AI initiatives, fostering alignment and trust. Proactively manages expectations, addresses concerns, and resolves conflicts.
E.5.	Process Improvement	e-3	Independently performs and monitors AI development and operational processes. Contributes to AI process evaluation, improvement suggestions, and risk awareness.
		e-4	Leads the design, implementation, and continuous improvement of AI processes. Ensures alignment with organisational objectives, ethical standards, and compliance.
E.6.	ICT Quality Management	e-3	Ensures the quality of AI systems within a defined scope by applying and adapting quality governance practices. Defines and monitors AI quality indicators, evaluates AI outcomes, and identifies improvement actions. Contributes to risk-based decisions related to AI performance, reliability, and compliance.
		e-4	Leads AI quality management activities across projects or services. Establishes AI quality governance, policies, and assurance practices aligned with business and AI strategy. Evaluates AI quality outcomes, drives corrective actions, and ensures adherence to ethical, regulatory, and organisational standards.
E.7.	Business Change Management	e-3	Manages small-scale AI transformation initiatives and defines business requirements for AI adoption. Monitors AI adoption metrics, identifies deviations, and conducts risk assessments addressing bias, model drift, and cybersecurity. Communicates AI benefits and limitations to stakeholders.
		e-4	Leads AI-driven transformation programs, designing change strategies covering structural, cultural, and stakeholder factors. Evaluates outcomes using AI metrics, integrates governance,

			ethics, and compliance, and promotes AI literacy and organisational readiness.
		e-5	Shapes enterprise-wide AI transformation strategy and embeds AI-driven change in long-term planning. Guides executive decisions, sets standards for ethical and sustainable AI adoption, and influences industry-wide practices.
E.8.	Information Security Management	e-2	Applies defined AI security policies, procedures, and controls to AI systems and components under guidance. Contributes to the secure operation of AI-enabled services by following established governance, risk management, and incident response processes related to AI.
		e-3	Enables the effective security management of AI systems by implementing and adapting AI-specific security measures. Ensures that AI risks are identified, assessed, and mitigated within projects and operational environments, working with stakeholders to support secure and compliant AI use.
		e-4	Ensures the security, resilience, and governance of AI systems across organisational domains. Defines AI security strategies, governance frameworks, and risk management approaches aligned with business and AI strategies. Advises stakeholders on AI-related security, compliance, and trustworthiness requirements.
E.9.	Information Systems Governance	e-4	Leads the definition, implementation, and evolution of AI governance frameworks, ensuring consistent control of AI systems across the organisation. Integrates AI governance into enterprise risk management, compliance, and strategic decision-making.
		e-5	Shapes and ensures enterprise-wide AI governance strategy, aligning AI capabilities with long-term business objectives, societal expectations, and regulatory evolution. Exercises authority over AI governance direction and influences external stakeholders and ecosystems.

Annex K (informative)

AI skill areas descriptions

This annex provides concise descriptions of the AI skill areas that are the AI-specific elements included in the broader e-CF competences. It establishes a shared understanding of the scope and meaning of each skill area, serving as a common vocabulary for interpreting both the AI professional role profiles and the associated educational profiles.

The identification of AI skill areas is grounded in the findings of the ARISA project and has been further complemented and refined through comparison with several widely recognised skills frameworks. These include the *Lightcast Global AI Skills Outlook (2025)* [21], the *SFIA Framework for AI-related skills* [22], the Bertelsmann University & LinkedIn *AI Upskilling Framework (2024)* [23], and the Alan Turing Institute's *AI Skills for Business Competency Framework (2023)* [24]. The skill areas selection was finalised and validated by an extensive mapping to the ESCO classification [26], using NLP methods, text embeddings, and similarity analysis [30][31]. This combination of sources ensures that the skill areas reflect both empirical labour market evidence and expert consensus.

The descriptions included in the table below are intentionally brief and abstracted from specific technologies or tools. This fact allows the skill areas to remain relevant across sectors and over time, while supporting consistent interpretation, mapping and application in role profiling, curriculum design and skills assessment, among other relevant applications.

Table K. 1 — AI skill areas and their descriptions

Technical & Engineering [T]	
Data Analytics	Analyse structured and unstructured data to generate insights, identify patterns, and support decision-making.
Data Modelling	Design logical and physical data models that structure, relate, and optimise data for analytics and AI use.
Data Engineering	Build, integrate, and maintain data pipelines and architectures that reliably ingest, transform, and serve data.
Data Quality & Governance	Define, enforce, and monitor standards to ensure data accuracy, consistency, lineage, and stewardship.
Data Privacy Engineering	Design and implement technical controls that protect personal and sensitive data across AI systems.
Synthetic Data Generation	Create artificial data that preserves statistical properties of real data while reducing privacy and bias risks.
Machine Learning	Develop, train, and deploy algorithms that learn from data to make predictions or decisions.
Deep Learning	Design and optimise multi-layer neural networks for complex pattern recognition and representation learning tasks.
Natural Language Processing	Enable systems to understand, generate, and interact using human language.
Generative AI	Design and deploy models that generate new content such as text, images, code, or synthetic data.

Computer Vision	Enable machines to interpret, analyse, and generate insights from images and video data.
AI Platforms & Frameworks	Select, configure, and manage platforms and libraries that support AI development and deployment.
AI Infrastructure	Provision and optimise compute, storage, and networking resources for scalable AI workloads (cloud, GPUs, accelerators).
AI Tooling & Ecosystem	Evaluate and integrate tools that support AI development, deployment, monitoring, and collaboration.
AI System Architecture & Enterprise Integration	Design end-to-end AI system architectures that integrate with enterprise systems via APIs and services.
AI Automation	Apply AI capabilities to automate workflows and decision processes to improve efficiency, quality, and scalability of operations.
AI Solution Architecture	Design end-to-end AI solutions by translating business requirements into scalable, secure, and integrated system architectures.
MLOps & AI Lifecycle Management	Automate, manage, and govern the end-to-end lifecycle of AI models from development to retirement.
Model Evaluation & Validation	Measure model performance, robustness, fairness, and reliability against defined objectives and risks.
Testing AI-based systems	Design and execute tests to verify functionality, reliability, and safety of AI-enabled systems.
AI Performance Monitoring	Continuously track model behaviour and system performance in production to detect drift or degradation.
Model Optimisation & Efficiency	Improve model accuracy, latency, cost, and energy efficiency through tuning and optimisation techniques
Explainability & Interpretability (XAI)	Provide insights into how AI models produce outputs to support trust, oversight, and accountability.
AI Security	Protect AI systems, data, and models from threats such as attacks, misuse, or model theft.
Safe, Responsible & Sustainable AI	Embed safety, ethical, environmental, and societal considerations into AI system design and operation.
Human-Model Interaction Design	Design interfaces, workflows, and prompts that enable effective collaboration between humans and AI systems.
Prompt Engineering	Design prompts that enable effective collaboration between humans and AI systems.
Business & Managerial [M]	
AI Strategy	Define how AI supports organisational goals, competitive advantage, and long-term value creation.
AI Market & Technology Intelligence	Monitor and assess AI market trends, technologies, competitors, and emerging innovations.

AI Business Application & Impact	Identify, evaluate, select, and prioritise AI use cases and solutions that deliver measurable business and societal value, taking into account their potential impact and aspects such as feasibility, trustworthiness, accessibility, organisational readiness, scalability and sustainability.
AI Value Measurement & ROI	Quantify and track the financial and non-financial benefits generated by AI initiatives.
AI Economics & Cost Management	Manage the costs, trade-offs, and economic sustainability of AI development and operations.
AI Product Management	Lead the lifecycle of AI-enabled products from ideation through delivery and continuous improvement.
Project & Program Management of AI Initiatives	Plan, execute, and govern AI initiatives across teams, timelines, and dependencies.
Operating Model Design for AI	Define roles, processes, and structures that enable scalable and responsible AI delivery.
Vendor & Partner Management for AI	Select, manage, and govern external AI vendors, platforms, and partnerships.
Change Management for AI	Prepare and support people, processes, and culture for effective AI adoption.
AI Adoption & Enablement	Drive awareness, skills, and operational readiness to embed AI into everyday business processes.
Governance, Risk & Policy [G]	
AI Governance	Establish oversight structures, policies, and decision rights for AI development and use.
Model Risk Management (MRM)	Identify, assess, and control risks associated with AI model design, deployment, and use.
Third-Party & Supply Chain AI Risk	Evaluate and manage AI risks introduced by external vendors and dependencies.
AI Ethics	Apply ethical principles to guide responsible AI design, deployment, and use.
AI Risk, Assurance & Audit	Assess and provide assurance that AI systems operate safely, reliably, and as intended.
AI Incident Management & Response	Detect, manage, and remediate AI-related failures, harms, or breaches.
AI Policy & Regulation	Interpret and apply laws, standards, and policies governing AI development and use.
AI Compliance & Regulatory Readiness	Ensure AI systems meet regulatory requirements and are prepared for regulatory scrutiny.
Regulatory Reporting & Documentation	Produce and maintain documentation and reports required for AI transparency and compliance.

Annex L
(informative)

e-CF competences and AI skill areas

This annex presents a structured mapping between the e-CF competences and their related key AI skill areas. The purpose of this mapping is to illustrate how established ICT competences align with emerging AI capabilities. By linking e-CF competences to relevant AI skill areas, the annex provides a structured view of how professionals can integrate AI into strategic planning, operational models, and business innovation. Overall, this structure enables organisations to better interpret the relationship between traditional ICT competences and emerging AI skills, supporting capability development, strategic alignment, and informed decision-making in AI adoption.

The mapping table is organised according to the five e-CF competence areas (Plan, Build, Run, Enable, and Manage). For each e-CF competence, relevant AI skill areas are identified and accompanied by a clear rationale that explains the basis of the mapping. These rationales highlight how and why specific AI capabilities support or extend each competence. Consider that actual skill requirements may vary depending on organisational context, sector, and maturity of AI adoption.

Table L.1 — e-CF competences and AI skill areas

PLAN (A)			
	e-CF Competence	Relevant AI Skill Areas	Mapping Rationale
A.1.	IS & Business Strategy Alignment	AI Strategy, Operating Model Design for AI, AI Business Applications & Impact, AI Governance, AI Ethics, AI Economics & Cost Management	Aligns AI capabilities with long-term business strategy, sourcing, risk posture, and enterprise architecture decisions.
A.2.	Service Level Management	AI Performance Monitoring, Model Optimisation & Efficiency, MLOps & AI Lifecycle Management	Supports definition and monitoring of AI-specific SLAs (latency, availability, drift, cost).
A.3.	Business Plan Development	AI Value Measurement & ROI, AI Business Applications & Impact, AI Economics & Cost Management, Third-Party & Supply Chain AI Risk	Enables cost-benefit analysis and investment justification of AI initiatives.
A.4.	Product/Service Planning	AI Product Management, AI Adoption & Enablement, Human-Centred AI & UX, MLOps & AI Lifecycle Management, AI Compliance & Regulatory Readiness	Supports lifecycle planning of AI-enabled products and services, including compliance and delivery constraints.
A.5.	Architecture Design	AI System Architecture & Enterprise Integration, AI Solution Architecture, AI Infrastructure, AI Security, Data Engineering	Designs scalable, secure AI architectures aligned with enterprise systems and policies.

A.6.	Application Design	Machine Learning, Deep Learning, NLP, Computer Vision, Data Modelling, Explainability & Interpretability, Human-Model Interaction Design, Prompt Engineering, Human-Centred AI & UX	Translates requirements into AI-enabled application designs and data structures.
A.7.	Technology Trend Monitoring	AI Market & Technology Intelligence, Generative AI, AI Tooling & Ecosystem, AI Platforms & Frameworks	Identifies emerging AI technologies and evaluates adoption opportunities.
A.8.	Sustainability Management	Safe, Responsible & Sustainable AI, Model Optimisation & Efficiency, AI Compliance & Regulatory Readiness	Assesses environmental, social and economic sustainability impacts of AI systems.
A.9.	Innovating	Generative AI, Machine Learning, Deep Learning, Synthetic Data Generation, AI Adoption & Enablement	Enables novel solutions, products and services leveraging AI advances.
A.10	User Experience	Human-Centred AI & UX, Human-Model Interaction Design, Explainability & Interpretability	Ensures AI systems are usable, trustworthy and aligned with human needs.
BUILD (B)			
B.1.	Application Development	Machine Learning, Deep Learning, NLP, Computer Vision, Generative AI, AI Platforms & Frameworks, Data Privacy Engineering	Implements AI models and integrates them into applications.
B.2.	Component Integration	AI System Architecture & Enterprise Integration, AI Tooling & Ecosystem	Integrates AI components with existing systems while maintaining interoperability.
B.3.	Testing	Testing AI-Based Systems, Model Evaluation & Validation, Explainability & Interpretability	Verifies correctness, robustness, bias and compliance of AI systems.
B.4.	Solution Deployment	MLOps & AI Lifecycle Management, AI Infrastructure, AI Security	Deploys AI solutions reliably into production environments.
B.5.	Documentation Production	Regulatory Reporting & Documentation, Explainability & Interpretability	Produces technical, compliance and transparency documentation for AI systems.
B.6.	ICT Systems Engineering	AI Infrastructure, AI Platforms & Frameworks, AI System Architecture & Enterprise Integration, AI Security, Data Engineering	Engineers the infrastructure required to operate AI systems at scale.
RUN (C)			
C.1.	User Support	AI Adoption & Enablement	Supports users interacting with AI systems and resolves operational issues.

C.2.	Change Support	Change Management for AI, MLOps & AI Lifecycle Management, AI Performance Monitoring, AI Adoption & Enablement	Manages model updates, retraining, and controlled change in production AI systems.
C.3.	Service Delivery	AI Performance Monitoring, Model Optimisation & Efficiency, AI Infrastructure	Ensures stable, performant and secure AI service delivery.
C.4.	Problem Management	Model Evaluation & Validation, AI Incident Management & Response	Diagnoses and resolves AI failures, bias incidents or performance degradation.
C.5.	Systems Management	AI Infrastructure, AI Security, AI Performance Monitoring	Operates and secures AI-enabled systems and platforms.
ENABLE (D)			
D.1.	Information Security Strategy	AI Security, Data Privacy Engineering, Safe, Responsible & Sustainable AI, AI Compliance & Regulatory Readiness	Defines protection strategies for AI models, data and pipelines.
D.2.	ICT Quality Strategy	AI Policy & Regulation, AI Risk, Assurance & Audit	Establishes quality objectives and standards for AI systems.
D.3.	Education & Training Provision	AI Adoption & Enablement, AI Ethics	Builds organisational AI capability and literacy.
D.4.	Purchasing	Vendor & Partner Management for AI, AI Platforms & Frameworks, AI Tooling & Ecosystem	Evaluates and procures AI tools, platforms and services.
D.5.	Sales Development	AI Business Applications & Impact, Generative AI	Supports AI-enabled offerings and value propositions.
D.6.	Digital Marketing	Data Analytics, Machine Learning, Data Privacy Engineering	Enables data-driven marketing while respecting privacy constraints.
D.7.	Data Science & Analytics	Data Analytics, Machine Learning, Deep Learning, Data Engineering, AI Ethics	Extracts value from data for AI model development and AI-enhanced decision-making.
D.8.	Contract Management	Third-Party & Supply Chain AI Risk, AI Compliance & Regulatory Readiness	Manages contractual and compliance risks related to AI vendors.
D.9.	Personnel Development	AI Adoption & Enablement	Develops AI-related competences across teams.
D.10.	Information & Knowledge Management	Data Governance & Quality, AI Compliance & Regulatory Readiness, AI Ethics	Structures and manages data and information related to AI.
D.11.	Needs Identification	AI Business Applications & Impact, AI Value Measurement & ROI, Human-Centred AI & UX	Translates stakeholder needs into AI solution requirements.

MANAGE (E)			
E.1.	Forecast Development	AI Market & Technology Intelligence, Data Analytics, Machine Learning	Performs AI-related forecasting activities
E.2.	Project & Portfolio Management	Project & Program Management for AI, AI Product Management	Manages AI initiatives across portfolios and dependencies.
E.3.	Risk Management	AI Risk, Assurance & Audit, Model Risk Management, Third-Party & Supply Chain AI Risk	Identifies and mitigates AI-specific operational, ethical and regulatory risks.
E.4.	Relationship Management	AI Adoption & Enablement, Vendor & Partner Management for AI	Coordinates stakeholders around AI initiatives.
E.5.	Process Improvement	Operating Model Design for AI, MLOps & AI Lifecycle Management, AI Performance Monitoring, AI Automation	Improves AI development and operational processes.
E.6.	ICT Quality Management	Data Quality & Governance, Model Evaluation & Validation, Testing AI-Based Systems	Ensures continuous quality improvement of AI systems.
E.7.	Business Change Management	Change Management for AI, AI Adoption & Enablement, AI Business Applications & Impact, Project & Program Management of AI Initiatives, AI Policy & Regulation	Manages organisational AI transformation.
E.8.	Information Security Management	AI Security, AI Incident Management & Response	Operates and improves AI security controls and response capabilities.

[illegible]

Annex M

(informative)

AI role profiles and personal skills

This annex provides an overview of the relationship between the AI professional role profiles defined in this CEN Workshop Agreement and the personal skills considered relevant for their effective performance. The table highlights those individual capabilities that support judgement, autonomy, adaptability and responsible behaviour in professional AI practice.

The mapping is based on expert input and reflects how personal skills typically manifest across different AI roles. It does not imply exclusivity or rigid requirements, but rather indicates areas of particular relevance, recognising that personal skill profiles may vary depending on context, seniority and organisational setting.

This annex stresses the fact that professional competence in AI extends beyond technical knowledge and formal skills. Personal skills play a critical role in navigating complexity, uncertainty and ethical considerations, and are therefore an integral part of a mature and trustworthy AI workforce.

The list of personal skills, as well as their grouping, is aligned with the work of the ESCO/EQF expert group (2021), *Towards a structured and consistent terminology on transversal skills and competences*, developed by the European Commission and Cedefop [\[25\]](#).

Table M.1 — Matrix AI role profiles and personal skills

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Annex N
(informative)

AI role profiles and interpersonal skills

This annex presents a structured mapping between the AI professional role profiles defined in this CEN Workshop Agreement and the interpersonal skills that support effective collaboration, communication and stakeholder engagement. The table highlights how different roles rely on specific social and communicative capabilities to function effectively within multidisciplinary and often cross-organisational environments.

The mapping is based on expert input and reflects observed practice in the AI field. It indicates areas where interpersonal skills are particularly relevant, while acknowledging that such skills are, to varying degrees, important across all professional roles and contexts.

The list of interpersonal skills, as well as their grouping, is aligned with the work of the ESCO/EQF expert group (2021), *Towards a structured and consistent terminology on transversal skills and competences*, developed by the European Commission and Cedefop [\[25\]](#).

Table N.1 — Matrix AI role profiles and interpersonal skills

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Annex O (informative)

Comparing lay users, professional users and AI professionals

This annex clarifies the distinction between lay users, professional users and AI professionals by comparing how these groups interact with, depend on and assume responsibility for AI systems. While these categories are conceptually distinct, their boundaries may appear blurred in practice, particularly as AI tools become more accessible and increasingly embedded in everyday work processes.

In the context of the ongoing professionalisation of ICT, and specifically of the AI field, it is essential that these distinctions are well understood. The level of responsibility, autonomy and accountability associated with AI-related activities differs significantly between using AI-enabled tools, applying AI within a professional domain, and being professionally responsible for the design, deployment, operation or governance of AI systems. The below comparative table highlights these differences across dimensions such as expertise, responsibilities, interaction with AI systems and expected knowledge.

Table O.1 — Comparison between lay users, professional users and AI professionals

	Lay users	Professional users	AI professionals
Role	General public interacting with AI systems	Domain experts using AI in their professional work	Specialists responsible for planning, designing, building, operating, managing, or governing AI
AI expertise	Low	Moderate – domain-specific AI literacy	High – technical and ethical AI competence
Examples	Social media users, job applicants, online shoppers	Doctors, teachers, lawyers using AI tools in practice	Data scientists, ML engineers, AI ethicists, AI policy advisors
Interaction with AI	Use AI-enabled services or products	Use AI to inform or support professional decisions	Develop, train, deploy, maintain, or oversee AI systems
Responsibilities	Use responsibly, understand basic implications	Interpret AI outputs, ensure ethical use in context	Ensure technical quality, fairness, accountability, and compliance
Required knowledge	Basic understanding of AI presence and limitations	Awareness of system capabilities, risks, and ethical concerns	Deep knowledge of AI theory, design principles, and societal impacts
Credentialing	None	May have domain-specific training in AI tools	Formal education, certification, or accreditation in AI-related fields

Annex P
(informative)

AI literacy and AI professionalism differences

This annex clarifies the distinction between AI literacy and AI professionalism, two concepts that are closely related, although fundamentally different in scope, depth and responsibility. As AI systems become increasingly pervasive in society and the workplace, AI literacy is gaining importance for a wide range of individuals. At the same time, this growing emphasis makes it essential to clearly articulate what differentiates general awareness and informed use of AI from professional responsibility for AI systems.

The annex contrasts AI literacy and AI professionalism across key dimensions such as depth of knowledge, typical activities, levels of accountability and expected outcomes. It highlights that AI literacy focuses on understanding, critical awareness and responsible interaction with AI, while AI professionalism is characterised by specialised expertise, formal responsibility and accountability for the design, deployment, operation or governance of AI systems. This aligns with the broader comparison that can be drawn between digital literacy and ICT professionalism.

The table below supports a shared understanding among educators, employers, policymakers and practitioners.

Table P.1 — Key differences between AI literacy and AI professionalism

	AI literacy	AI professionalism
Depth of knowledge	Foundational, general	Advanced, specialised
Target audience	All individuals in society	Trained professionals in AI-related fields
Primary goal	Informed awareness and responsible engagement	Competent, ethical development and governance of AI systems
Skills involved	Understanding, interpreting, questioning, engaging and creating with AI	Designing, building, deploying, managing, and governing AI systems
Credentialing	Often informal (e.g., training, public education)	Formal (e.g., degrees, certifications, professional standards)

Annex Q (informative)

Application example: AI Health Specialist role profile

Q.1 General

The adoption of AI across sectors has led to the emergence of professional roles combining technological competences with domain-specific knowledge. This development is associated with a growing demand for professionals capable of operating in environments characterised by high levels of complexity, impact and regulation, such as healthcare. This Annex contributes to that development by defining a sector-specific role profile in the healthcare domain, the “AI Health Specialist”, supporting comparability, transparency and alignment with labour market needs. This role reflects the evolution of AI-related roles towards increased interdisciplinarity, integration of domain expertise and consideration of ethical, legal and societal aspects, particularly in domains characterised by higher levels of risk and regulation. At the same time, it provides an example of a sector specific application of the CWA.

Q.2 Basic principles

The Annex applies a skills-integration perspective to the characterisation of professional roles, distinguishing between so-called I-shaped professionals, Pi-shaped professionals and M-shaped professionals. I-shaped professionals focus deeply on a single domain, developing specialised expertise that allows them to solve complex problems within a narrow field. Pi-shaped professionals broaden this profile by combining strong domain knowledge with ICT or digital competences, enabling them to bridge technical and subject-specific perspectives. M-shaped professionals go a step further by integrating domain expertise with both ICT and AI skills, making them highly versatile and capable of working across multiple advanced technological and disciplinary areas. In both Pi- and M-shaped professional profiles, the horizontal part in the letters Pi and M represents a set of transversal, interdisciplinary competences that enable collaboration, knowledge integration, and communication across domains that complement the deeper vertical expertise, represented by the vertical parts. Within the context of this CWA, AI professionals are considered ICT professionals specialised in AI. When combined with sector-specific expertise, such profiles constitute M-shaped professionals.

Within this context, the AI Health Specialist professional role profile is positioned at the intersection of:

- AI technologies and methods;
- ICT infrastructures and data environments; and
- healthcare practices, workflows and regulatory conditions.

Conceptual and methodological approach

The development of this Annex follows the principles and structure applied in this CWA, including:

- the use of role profiles as structured descriptions of tasks, competences and deliverables;
- alignment with the European e-Competence Framework (e-CF) for competence definition and proficiency levels;
- the linkage between role profiles and educational profiles, ensuring consistency between labour market requirements and learning outcomes.

The methodological approach adopted for defining the AI Health Specialist includes:

a) Comparative role analysis

Existing ICT-oriented roles in healthcare are analysed to identify digital competences without AI components. This enables the distinction between Pi-shaped profiles and profiles integrating AI-related competences.

b) Role derivation from existing AI profiles

The role is derived from established AI professional profiles, including advisory and integration-oriented roles, ensuring structural consistency with the CWA framework.

c) Sector-specific contextualisation

Tasks, competences and deliverables are specified to reflect healthcare-specific characteristics, including clinical workflows, data environments and regulatory requirements.

d) Integration of trustworthy AI considerations

The role incorporates considerations related to safety, explainability, bias, accountability and compliance, reflecting the relevance of trustworthy AI in healthcare applications.

e) Expert validation

The role is validated through several experts from the healthcare sector.

Q.3 AI Health Specialist role profile

	SUPPORT & GUIDANCE		[3]
Profile title	AI Health Specialist		
Related titles	AI Healthcare Advisor, AI Healthcare Consultant, AI Clinical Specialist, Clinical AI Integration Specialist		
Summary statement	Provides expert guidance, coordination and implementation support for the safe, effective and ethically compliant deployment of AI systems in healthcare, ensuring alignment with clinical practice, healthcare environments, regulatory frameworks and organisational objectives. Acts as an interface between AI developers, healthcare professionals and organisational stakeholders.		
Mission	Maintains a technology watch to inform stakeholders of existing and emerging AI technologies and their potential to add value in the health sector. Enables the responsible integration of AI technologies into defined healthcare value chains (e.g. clinical pathways, service delivery, system performance, or patient outcomes), improving operational efficiency and decision-making, while ensuring compliance with legal, ethical and safety requirements.		
Deliverables	Accountable	Responsible	Contributor
	• AI healthcare use-case definition • Clinical AI integration plan	• Impact assessment • AI validation report	• AI adoption strategy • AI project plan • Information security risk assessment • Legal, ethical and safety compliance

				• Data governance framework • Regulatory compliance documentation • Training and awareness materials
Main tasks	• Identify healthcare needs suitable for AI solutions • Translate healthcare system requirements into AI specifications • Support selection, validation and deployment of AI systems • Ensure integration into clinical workflows and decision processes • Assess risks related to bias, explainability, safety and data quality • Collaborate with clinicians, managers, regulators, and patients in the design and deployment of AI-enabled healthcare systems • Monitor AI system performance and outcomes • Ensure compliance with applicable regulations and ethical standards • Assess and support integration of AI systems within healthcare physical environments, including smart infrastructures and IoT-enabled facilities • Understand health system financing, sustainability, and constraints affecting AI-enabled healthcare systems • Support change management in healthcare systems and AI adoption within the organisation • Promote AI literacy and responsible use among healthcare professionals • Develop training and awareness materials regarding AI-enabled healthcare systems for different stakeholders			
			Level	Descriptor
e-Competences (from e-CF)	A.1.	IS and Business Strategy Alignment	e-4	Aligns AI health initiatives with healthcare strategy and regulatory requirements, integrating AI capabilities while managing risk, sourcing, and governance.
	A.7.	Technology Trend Monitoring	e-3	Independently monitors AI developments in healthcare and evaluates applicability and innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within the health domain.
	A.9	Innovating	e-4	Drives innovation in AI-enabled healthcare solutions. Advises teams or stakeholders on the strategic use of AI to drive value, efficiency, or societal benefit.
	D.11.	Needs Identification	e-4	Leads the identification and articulation of clinical and organisational needs for AI, ensuring alignment with healthcare strategy, regulatory compliance, and ethical principles.
	E.3.	Risk Management	e-3	Enables and coordinates AI risk management activities across AI lifecycle phases, ensuring that AI-related clinical, ethical and regulatory risks are systematically assessed, treated, and

				communicated in alignment with organisational risk appetite.
	E.4.	Relationship Management	e-4	Guides and coordinates stakeholders across multiple functions or teams in AI initiatives, fostering alignment and trust. Proactively manages expectations, addresses concerns, and resolves conflicts.
	E.5.	Process Improvement	e-4	Leads the design, implementation, and continuous improvement healthcare processes through AI integration. Ensures alignment with organisational objectives, ethical standards, and compliance.
	E.7.	Business Change Management	e-4	Leads AI-driven transformation initiatives and programs, designing change strategies covering structural, cultural, and stakeholder factors. Evaluates outcomes using AI metrics, integrates governance, ethics, and compliance, and promotes AI literacy and organisational readiness.
Transversal aspects (from e-CF)	<i>Be aware of and if applicable, behave proactively in:</i> T1 Accessibility, T2 Ethics, T3 ICT Legal Issues, T4 Privacy, T5 Security, T6 Sustainability, T7 Usability			
Personal and interpersonal skills	<i>Thinking skills</i> • Think analytically • Think critically • Think holistically • Identify problems • Solve problems • Think creatively • Think innovatively		<i>Self-management skills</i> • Focus on quality • Meet commitments • Show initiative • Forms judgements • Cope with uncertainty • Manage frustration	<i>Social and communication skills</i> • Communicate • Report • Exert customer orientedness • Coach, mentor, advise others • Collaborate with others • Build and maintain networks • Exert business orientation • Exert organisation sensitivity • Exert political sensitivity • Hold a vision

			• Exert ethical behaviour • Respect confidentiality
KPI area	Clinical relevance of proposals regarding AI solutions to organisation needs		

Annex R (informative)

Relation to other standards and frameworks

This annex highlights the relationship between this document and other standards and frameworks. Relevant in this context are sources that focus on roles, skills and proficiency levels, both at a more general ICT level and specifically in relation to AI. In addition, there are a large number of standards in the field of AI that describe the processes, methods, techniques and tools with which AI professionals and in some cases a broader group of stakeholders, are involved. There has been a sharp increase in the number of standards focusing on AI. A selection of these has been included and the relation to this document explained.

The following standards and frameworks are addressed in this Annex.

Table R.1 — Related standards and frameworks

	Standards and frameworks	Description
1.	EN 16234-1:2019 , <i>e-Competence Framework (e-CF) - A common European Framework for ICT Professionals in all sectors - Part 1: Framework</i>	Provides a tool to support mutual understanding and provide transparency of language through the articulation of competences required and deployed by Information and Communication Technology (ICT) professionals.
2.	CWA 16458-1: 2018 , <i>European ICT professionals role profiles - Part 1: 30 ICT profiles</i> and CWA 16458-2: 2018 , <i>European ICT professionals role profiles - Part 2: User guides</i>	Provides a generic set of typical roles performed by ICT Professionals in any organisation, covering the full ICT business process, incorporating the competences of the European e-Competence Framework (e-CF, EN 16234-1) as a main component of profile descriptions. The user guides in part 2 provides practical information on the flexible application of the framework and its translation to different contexts.
3.	CEN/TS 17699:2022 , <i>Guidelines for developing ICT Professional Curricula as scoped by EN16234-1 (e-CF)</i>	Provides guidance on the design, redesign, development and maintenance of a curriculum or learning programme to achieve alignment or compliance with the EN 16234-1:2019 (e-CF). A methodology, deploying the application of educational profiles is provided as a step-by-step approach for verifying programme content alignment with EN 16234-1 articulated competences.
4.	Skills Framework for the Information Age (SFIA) - <i>A framework for AI skills</i>	Provides a framework for defining the skills and competencies needed to deliver, manage and protect digital capabilities — including in critical areas such as AI, data science and cybersecurity. It contains a dedicated section describing professional skills for working with AI without prescribing specific technologies.

	Standards and frameworks	Description
5.	Digital Competence Framework - DigComp 3.0	Describes knowledge, skills and attitudes that are needed to be digitally competent for daily life, participation in society, working and learning, and can be used with both children and adults. The framework is technology-neutral and is designed to be tailored and adapted for a variety of purposes in education, training and employment contexts.
6.	European Skills, Competences, Qualifications and Occupations (ESCO)	Provides a European multilingual classification of Skills, Competences and Occupations that works as a dictionary, describing, identifying and classifying professional occupations and skills relevant for the EU labour market and education and training.
7.	European Qualifications Framework (EQF)	Provides a common reference framework that allows qualifications from different countries to be compared easily. This is achieved by supporting the use of learning outcomes for each qualification, in order to make them more transparent and easier to understand. In this way, the EQF supports the cross-border mobility of learners and workers, and promotes lifelong learning and professional development across Europe.
	AI-related roles frameworks	
8.	prEN 18274:2025 <i>Competence requirements for professional AI ethicists</i> (unpublished draft version)	Establishes competence requirements for professional AI ethicists and defines the necessary knowledge, skills, and attitudes that AI ethicists must demonstrate to effectively address ethical and societal concerns throughout the AI system life cycle.
9.	NIST AI 600-1 - <i>Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile</i> (2023)	Provides a cross-sectoral profile of and companion resource for the AI Risk Management Framework (AI RMF 1.0) for Generative AI.
10.	NIST IR 8596 - <i>Cybersecurity Framework Profile for Artificial Intelligence (Cyber AI Profile)</i> (Initial preliminary draft, Dec 2025)	Provides guidelines for managing cybersecurity risk related to AI systems as well as identifying opportunities for using AI to enhance cybersecurity capabilities.
11.	EDISON Data Science Framework (EDSF) (2017)	Defines the Data Science profession, developed to guide educators and trainers, employers and managers, and Data Scientists themselves by breaking down the complexity of the skills and competences need to define Data Science as a professional practice.
	AI Literacy	
12.	AI literacy frameworks	There are many AI Literacy frameworks available, from various sources. Their aims and target groups differ. Overall, they provide reference frameworks on a core set of AI competences.

	Standards and frameworks	Description
	ISO standards	
13.	Related ISO standards and standardisation initiatives	

R.1 EN 16234-1:2019, e-Competence Framework (e-CF) - A common European Framework for ICT Professionals in all sectors

[EN 16234-1:2019 e-Competence Framework](#) (“e-CF”) is the European standard for ICT-professionals developed and maintained under responsibility of [CEN/TC 428](#). This is one of the Technical Committees of the European Committee for Standardization, responsible for all aspects of standardization related to maturing the ICT Profession in all sectors, public and private.

The e-CF defines a structured set of 41 ICT professional competences, which are grouped into five areas: Plan, Build, Run, Enable, and Manage. The competence descriptions clarify the capabilities expected from ICT professionals, in neutral, vendor-independent terms. Each competence has a short description with specifications for several proficiency levels and is further illustrated with knowledge and skills examples. The proficiency levels are aligned with the European Qualifications Framework (EQF). This alignment supports a common understanding of the required depth of expertise, responsibility, and autonomy for each competence level.

The framework also describes 7 cross-cutting aspects that are complementary components in each ICT professional work context, and are considered applicable and relevant to each competence and to each ICT professional. The following transversal aspects are distinguished: accessibility, ethics, ICT legal issues, privacy, security, sustainability, and usability.

Dimension 1 5 e-CF areas	Dimension 2 41 e-Competences identified	Dimension 3 5 e-Competence proficiency levels				
		e-1	e-2	e-3	e-4	e-5
A. PLAN	A.1. Information Systems and Business Strategy Alignment					
	A.2. Service Level Management					
	A.3. Business Plan Development					
	A.4. Product/Service Planning					
	A.5. Architecture Design					
	A.6. Application Design					
	A.7. Technology Trend Monitoring					
	A.8. Sustainability Management					
	A.9. Innovating					
	A.10. User Experience					
B. BUILD	B.1. Application Development					
	B.2. Component Integration					
	B.3. Testing					
	B.4. Solution Deployment					
	B.5. Documentation Production					
	B.6. ICT Systems Engineering					
C. RUN	C.1. User Support					
	C.2. Change Support					
	C.3. Service Delivery					
	C.4. Problem Management					
	C.5. Systems Management					
D. ENABLE	D.1. Information Security Strategy Development					
	D.2. ICT Quality Strategy Development					
	D.3. Education and Training Provision					
	D.4. Purchasing					
	D.5. Sales Development					
	D.6. Digital Marketing					
	D.7. Data Science and Analytics					
	D.8. Contract Management					
	D.9. Personnel Development					
	D.10. Information and Knowledge Management					
	D.11. Needs Identification					
E. MANAGE	E.1. Forecast Development					
	E.2. Project and Portfolio Management					
	E.3. Risk Management					
	E.4. Relationship Management					
	E.5. Process Improvement					
	E.6. ICT Quality Management					
	E.7. Business Change Management					
	E.8. Information Security Management					
	E.9. Information Systems Governance					

Figure R.1 — Competences of the e-Competence Framework (EN 16234-1)

Table R.2 — Proficiency levels of the e-Competence Framework(EN 16234-1:2019 [\[1\]](#))

Levels	e-CF level descriptor	Influence	Complexity	Autonomy	Behaviour
e-5	Overall accountability and responsibility; recognised inside and outside the organisation for innovative solutions and for shaping the future using outstanding leading edge thinking and knowledge.	Determines strategy	Unpredictable – unstructured	Demonstrates substantial leadership and independence in contexts which are novel requiring the solving of issues that involve many interacting factors	Conceive, transform, innovate, find creative solutions by application of a wide range of technical and/or management principles
e-4	Extensive scope of responsibilities deploying specialised integration capability in complex environments; full responsibility for strategic development of staff working in unfamiliar and unpredictable situations.	Provides executive leadership		Demonstrates leadership and innovation in unfamiliar, complex and unpredictable environments. Addresses issues involving many interacting factors	
e-3	Respected for innovative methods and use of initiative in specific technical or business areas; providing leadership and taking responsibility for team performances and development in unpredictable environments.	Consults	Structured – unpredictable	Works independently to resolve interactive problems and addresses complex issues. Has a positive effect on team performance	Plan, make decisions, supervise, build teams, form people, review performances, find creative solutions by application of specific technical or business knowledge/skills
e-2	Operates with capability and independence in specified boundaries and may supervise others in this environment; conceptual and abstract model building using creative thinking; uses theoretical knowledge and practical skills to solve complex problems within a predictable and sometimes unpredictable context.	Applies and adapts		Works under general guidance in environment where unpredictable change occurs. Independently resolves interactive issues which arise from project activities	Design, manage, survey, monitor, evaluate, improve, find non-standard solutions. Schedule, organise, integrate, find standard solutions, interact, communicate, work in team
e-1	Able to apply knowledge and skills to solve straight forward problems; responsible for own actions; operating in a stable environment.	Implements instructions		Demonstrates limited independence where contexts are generally stable with few variable factors.	Apply, adapt, develop, deploy, maintain, repair, find basic, simple solutions

Relationship with EN 16234-1:2019 e-Competence Framework (e-CF)

The standardized way to describe generic ICT competences and their levels served as a structural foundation for the design of the AI professional role framework. This AI professional role framework builds on this structure by mapping AI roles to the existing e-CF competences and proficiency levels.

While focusing on the AI-related specific elements, this document builds on the more generic competences that are well-articulated in the e-CF. AI professionals are a specialised group of ICT professionals, possessing AI specific knowledge and skills that are embedded in the related general ICT competences. Each AI professional possesses several generic ICT competences. The document incorporates 39 of the 41 competences; leaving out D.5. Sales Development and D.6. Digital Marketing. The AI related knowledge and skills sets were used to formulate AI descriptors of the proficiency levels of each competence.

Also, the proficiency levels as defined and applied in the e-CF, which are linked to the European Qualifications Framework (EQF), provided a way to describe different levels of expertise in AI role profiles and different levels of complexity in the educational profiles. This alignment allowed all the AI profiles to be described consistently in terms of knowledge depth, autonomy, and responsibility.

The use of the general competences from the e-CF in the AI professional role profiles connects the roles to those general ICT practices and embeds the AI specialisation logically into the broader field of ICT.

R.2 CWA 16458: 2018, European ICT professionals role profiles - Part 1: 30 ICT profiles and Part 2: User guides

[CWA 16458: 2018 European ICT Professional Role Profiles - Part 1: 30 ICT profiles](#) is a document that presents a framework of 30 generic role profiles carried out by ICT professionals across organisations, covering the entire ICT business process. The role profiles play an important role in improving transparency and enabling alignment within the European ICT skills landscape. By integrating the competences defined in the EN 16234-1 European e-Competence Framework (e-CF) as a central element of their descriptions, the 30 role profiles outline a broad set of typical functions. Complementary to the e-CF, the European ICT Professional Role Profiles help establish a common European reference language for identifying, planning, and managing ICT professional requirements over the long term. In doing so, they also support the continued development and professionalisation of the ICT field.

These role profiles are designed as a flexible resource for ICT career development and role definition rather than a strict standard. They serve as a foundational reference and source of inspiration from an organisational perspective, enabling the adaptable creation of more context-specific profiles in various domains, such as job role definitions or curriculum design. By incorporating e-CF competences into the role-building process, the European ICT Professional Role Profiles provide both a practical tool and an entry point for individuals and organisations applying the e-CF EN 16234-1 framework.

[CWA 16458: 2018 European ICT Professional Role Profiles - Part 2 User guides](#) provides guidance on how to create more specific ICT Profiles in context, leading to the so-called generations 3 of the European ICT Professional Profiles family tree. Founded on consistent observations the document explains in more detail how to adapt the different components of the profiles to meet specific needs.

Relationship with CWA 16458:2018, European ICT professionals role profiles - Part 1: 30 ICT profiles and Part 2: User guides

The set of 30 generic ICT role profiles served as the foundation for this CWA. Based on desk research and expert input, relevant roles were selected and adjusted and other roles were added. Additional sections were introduced to the template to articulate transversal aspects, personal and interpersonal skills, and AI-specific competence context, while preserving structural continuity with the original ICT framework. The approach was informed by the guidance provided in Part 2 of CWA 16458. **Annex F** of this document 'Creating AI Professional Role Profiles using European ICT professional role profiles (CWA 16458)' describes this process in more detail.

It is important to note that this CWA follows the same principles as CWA 16458, which are described as follows [\[4\]](#):

"For a European set of ICT Professional Role Profiles to add value they must be *easily adaptable to the employment environment* and their contents must be *readily recognisable by ICT professionals*. They are not useful if, on the contrary, the employer has to change practices to meet profile descriptions. The European ICT Profile descriptions are therefore reduced to their core characteristics which clearly differentiate them one from another. *Further context-specific elements can be added* to the Profiles *according to the specific environments* in which Profiles are to be integrated. Technology is constantly changing resulting in the introduction of new products and services, often proprietary, which lead to a requirement for ICT professional knowledge update. However, in line with the e-CF, the role profiles are constructed to be *supplier neutral* and recognise that the underpinning competences and deliverables

remain constant, often regardless of the specific technology deployed. For example, different information technology operating systems are not explicitly identified nor are application names.

Flexibility for users, is a founding principle of the development of European ICT Professional Role Profiles

“... however well formulated; no single European ICT Professional Role Profile will fulfil the needs of every situation. In daily practice, one specific ICT Role Profile may be divided and performed by several people. Conversely one person’s job may combine components of several ICT Role Profiles” (italics added).

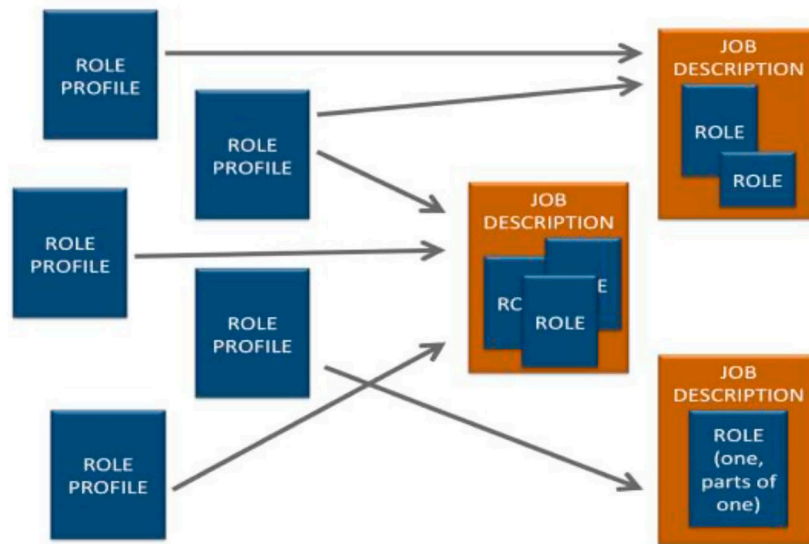


Figure R.2 — Relation between role profiles and job descriptions

SOURCE: CWA 16458-2 [4]

R.3 CEN/TS 17699:2022, Guidelines for developing ICT Professional Curricula as scoped by EN 16234-1 (e-CF)

[CEN/TS 17699:2022, Guidelines for developing ICT Professional Curricula](#) offers guidance for the design, redesign, development, and ongoing maintenance of curricula or learning programmes to ensure alignment with EN 16234-1:2019, the European e-Competence Framework (e-CF). It introduces a methodology based on educational profiles, presented as a step-by-step approach that supports the verification of how programme content corresponds with the competences defined in the e-CF. The use of EN 16234-1:2019 e-CF together with its related frameworks, such as CWA 16458:2018 European ICT Professional Role Profiles and EN 17748-1 European Foundational Body of Knowledge for the ICT Profession, is presented as a key element for guiding the design of ICT curricula and learning programmes. This approach contributes to the broader objective of strengthening a shared European community of ICT professionals. The document maintains a neutral position and is directly connected to the e-CF (EN 16234-1:2019) framework, without reflecting the specific interests of any particular stakeholder group. It is intended for use by educational institutions, training programmes, and certification providers, both public and private, that deliver education or training for ICT professionals. Specifically, the document provides: A methodological framework for connecting EN 16234 (e-CF) and related reference materials with new or existing learning programmes, a model that links ICT learning outcomes to competences defined within the e-CF and an overview of both strategic and operational considerations for implementing learning programmes based on the e-CF.

Relationship with CEN/TS 17699:2022, Guidelines for developing ICT Professional Curricula as scoped by EN16234-1 (e-CF)

The AI educational profiles are derived from the AI professional role profiles as presented in this document. The way in which an educational profile is created is based on the CEN/TS 17699:2022, Guidelines for developing ICT Professional Curricula, that contains guidelines for developing ICT professional curricula. Usually, an educational profile contains a general description, a set of programme learning outcomes, a set of unit learning outcomes and summative assessments. The same approach was followed in this document.

This document uses a template to ensure consistency between the educational profiles. The template is based on the educational profile template from CEN/TS 17699:2022. **Annex E** of this document provides an explanation of this template.

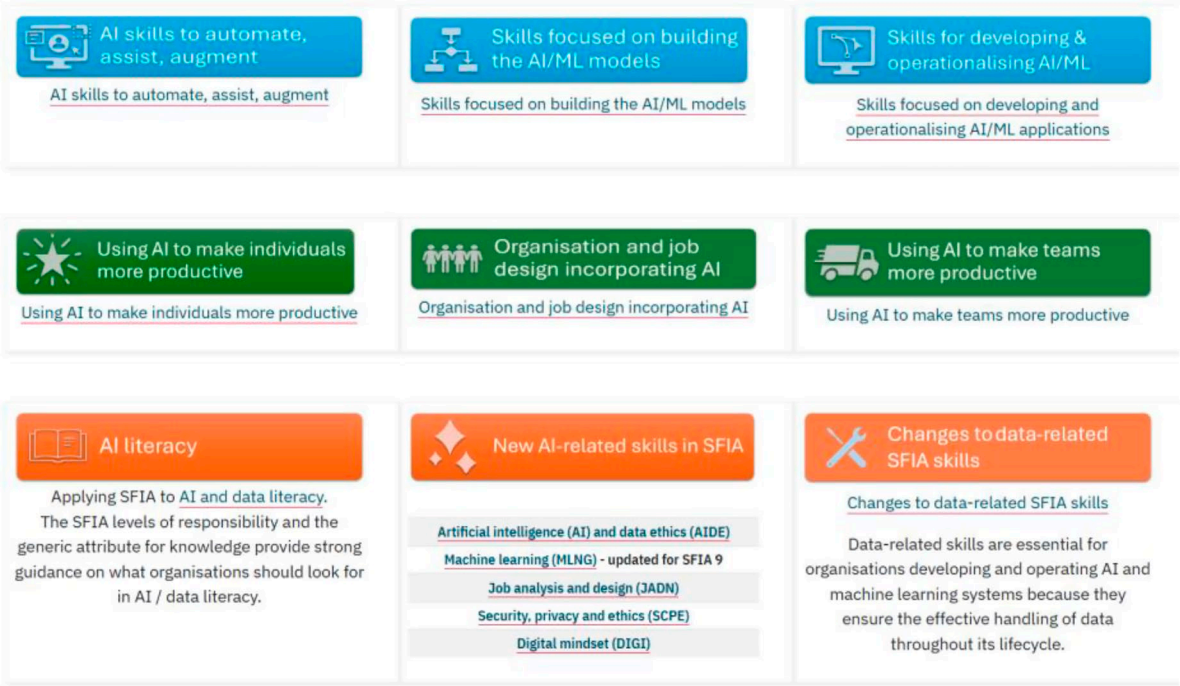
R.4 Skills Framework for the Information Age (SFIA) - A Framework for AI Skills

The [Skills Framework for the Information Age \(SFIA\)](#) was formally launched in 2000, growing from 1980s collaborative initiatives to become a globally accepted, not-for-profit framework for digital and ICT skills. It has evolved through regular, user-driven updates to define professional competencies across technology, digital transformation, and business. SFIA version 9 is the newest version of the global skills and competency framework, published in October 2024. It includes 147 professional skills. These skills are organised across 7 distinct levels of responsibility, covering various digital, technology, and business-related disciplines. Each skill is described at one or more of the 7 levels, depending on its real-world application, rather than all skills existing at all levels.

SFIA provides several views on their framework, such as Cybersecurity and Data science, data engineering and analytics. These views of SFIA provide a quick-start list of the SFIA skills which are most relevant to a selection of professional disciplines, industry topics and complementary frameworks. A special place is reserved for AI skills as SFIA provides a flexible framework for AI skills.

SFIA's [Framework for AI skills](#) provides a flexible framework describing professional skills for working with AI without prescribing specific technologies. First published in 2000, SFIA has evolved through successive updates, shaped by expert input from its global users to maintain its relevance and value to industry and business needs. SFIA began as a framework for the ICT community. It has grown into a framework that defines the skills and competencies needed by business and technology professionals who design, develop, implement, manage and protect the data and technology. The framework provides a consistent language for digital skills, commonly used for defining job roles, skill assessments, and career development.

The AI related skills in SFIA are organised as follows:



SFIA 9 skills focused on building the AI/ML models

SFIA skill - name	Code	SFIA skill - concise description
Data science	DATS	Applying mathematics, statistics, data mining and predictive modelling techniques to gain insights, predict behaviours and generate value from data.
Formal research	RSCH	Systematically creating new knowledge by data gathering, innovation, experimentation, evaluation and dissemination.
Emerging technology monitoring	EMRG	Identifying and assessing new and emerging technologies, products, services, methods and techniques.
Machine learning	MLNG	Developing systems that learn through experience and by the use of data.
Numerical analysis	NUAN	Creating, analysing, implementing, testing and improving algorithms for numerically solving mathematical problems.
High-performance computing	HPCC	Using advanced computer systems and special programming techniques to solve complex computational problems.

Figure R.3 — AI related skills in SFIA

Relationship with SFIA - Framework for AI Skills

e-CF and SFIA are two similar frameworks and their overall relationship, similarities and differences are described extensively in EN 16234-1:2019, B.6.

The current document has incorporated several SFIA AI skills from SFIA's Framework for AI Skills into the list of AI skills that form part of this document. Out of scope are skills related to the (professional) use of AI (e.g. using AI tools to automate, assist, augment), skills that are not purely AI skills, although often used in the context of AI, (e.g., formal research, high-performance computing) and skills that are defined as a competence in the e-CF (e.g., data science, technology monitoring), thus already in this way incorporated in the current document.

The following SFIA skills directly informed the list of AI skills in this document.

Table R.3 — Incorporated SFIA AI skills

SFIA skill		Description
Data analytics	DAAN	Enabling data-driven decision making by extracting, analysing and communicating insights from structured and unstructured data.
Data engineering	DENG	Designing, building, operationalising, securing and monitoring data pipelines and data stores.
Data modelling and design	DTAN	Developing models and diagrams to represent and communicate data requirements and data assets.
Machine learning	MLNG	Developing systems that learn through experience and by the use of data.
Artificial intelligence and data ethics	AIDE	Implementing and promoting ethical practices in the design, development, deployment and use of AI and data technologies.

R.5 Digital Competence Framework - DigComp 3.0

The European [Digital Competence Framework \(DigComp\)](#) [27] describes what is needed to be digitally competent in today's society, and supports the development of digital competence among individuals of all ages. It covers a wide range of skills levels, from basic to highly advanced and acknowledges the critical role of digital skills for all citizens in Europe, to ensure participation in society, learning, work and social inclusion.

DigComp 3.0 is the fifth version of the framework. The first version was published in 2013, with updates published in 2016, 2017 and 2022. The framework is developed by the European Commission's Joint Research Centre (JRC), in collaboration with the Directorate-General for Employment, Social Affairs and Inclusion (DG EMPL). DigComp is intended for individuals and organisations, whether local, regional, national, European or international, which share the common goal of understanding and identifying digital competence needs and supporting their development. The digital competence framework consists of 21 competences divided in five competence areas: information and data literacy, communication and collaboration, digital content creation (including programming), safety (including digital well-being and competences related to cybersecurity) and problem solving.

DigComp 3.0 builds on the initial work of DigComp 2.2 to systematically include the aspects of AI competence that are relevant for individuals to develop as part of their digital competence. AI competence is intertwined with and builds on other elements of digital competence. In DigComp 3.0, AI is framed as one digital technology among a range of digital technologies, while keeping the focus on the digital competences themselves.

AI is widely used and is increasingly embedded in existing digital technologies, which gives rise to a need for individuals to understand what AI is, ways in which AI can be used, and their rights and responsibilities for AI's safe and ethical use. AI-related knowledge, skills and attitudes are featured in all 21 competences of DigComp 3.0. Competence statements are labelled as being AI-Explicit or AI-Implicit.

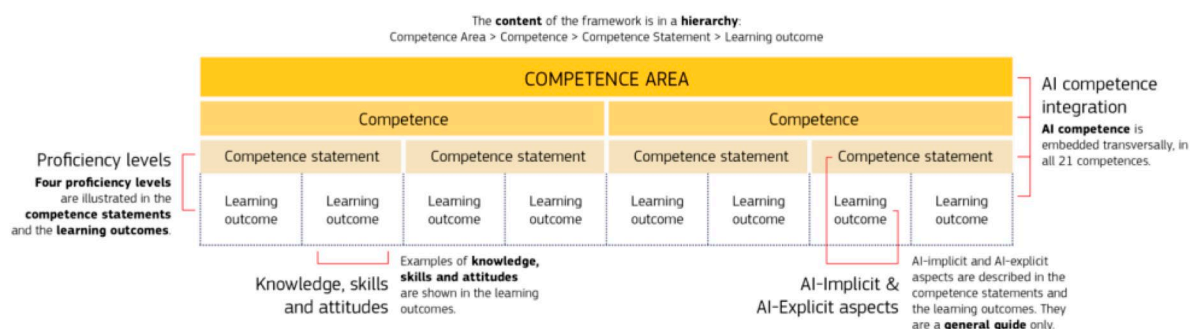


Figure R.4 — AI competence integration in DigComp 3.0

Relation with DigComp 3.0

The relationship between DigComp and e-CF is described extensively in EN 16234-1:2019, Annex B.4, highlighting the fact that both frameworks have their own well-defined scope, with limited overlap, and are complementary in addressing the competence and skills requirements for citizens (DigComp) and ICT professionals (e-CF) to meet challenges arising in the digital age.

In terms of this document it means that DigComp is focused on users and professional users of AI, striving for both digital competence and AI literacy, while this document is aimed at AI professionals. Clause 6 of this document explains those differences in detail.

R.6 European Skills, Competences, Qualifications and Occupations (ESCO)

[ESCO](#) provides a European multilingual classification of skills, competences and occupations that works as a dictionary, describing, identifying and classifying professional occupations and skills relevant for the EU labour market and education and training. The database can be accessed in two main ways: occupations and skills.

The occupations pillar organises the occupation concepts in ESCO. It uses hierarchical relationships between them, metadata as well as mappings to the International Standard Classification of Occupations (ISCO) in order to structure the occupations. The ESCO skills pillar distinguishes between skill/competence concepts and knowledge concepts by indicating the skill type. There is however no distinction between skills and competences. Each of these concepts comes with one preferred term and a number of non-preferred terms. Every concept also includes an explanation in the form of description.

Relation with European Skills, Competences, Qualifications and Occupations (ESCO)

This CWA incorporates the following ESCO AI related roles.

Table R.4 — Incorporated ESCO AI related roles

AI Professional Role Profile in CWA	ESCO Occupation (<i>Dataset v1.2.0</i>)
Data Scientist Leads the process of applying data analytics. Delivers insights from data by optimising the analytics process and presenting visual data representations. Finds, manages and merges multiple data sources and ensures consistency of datasets. Creates, identifies, selects and optimises the mathematical models, the algorithms and predictive models to deliver business value through insights. Communicates patterns and recommends ways of applying data	Data Scientist [2511.4] Data scientists find and interpret rich data sources, manage large amounts of data, merge data sources, ensure consistency of data-sets, and create visualisations to aid in understanding data. They build mathematical models using data, present and communicate data insights and findings to specialists and scientists in their team and if required, to a non-expert audience, and recommend ways to apply the data.
Data Analyst Analyses data in order to identify key insights for the organisation and ways the data can be used to solve problems. Imports, inspects, cleans, transforms, validates, models or interprets collections of data with regard to the business goals of the company. Ensures that the data sources and repositories provide consistent and reliable data. Prepares visualisations.	Data Analyst [2511.3] Data analysts import, inspect, clean, transform, validate, model, or interpret collections of data with regard to the business goals of the company. They ensure that the data sources and repositories provide consistent and reliable data. Data analysts use different algorithms and IT tools as demanded by the situation and the current data. They might prepare reports in the form of visualisations such as graphs, charts, and dashboards.
Data Engineer Develops the architecture needed to process, manage, and store large amounts of data. Designs the infrastructure and builds and maintains warehouses and data pipelines that collect, manage, and convert raw data into usable information for data scientists and analysts to leverage data for strategic advantage	Data Engineer [2511.20] Data engineers develop the architecture needed to process, manage, and store large amounts of data which will be used by data scientists for analysis. They design the infrastructure and maintain data pipelines and warehouses to leverage data for strategic advantage.
AI Engineer Builds and deploys AI models and systems to meet solution specifications. Ensures building and implementing AI systems that may encompass a wide range of techniques. Ensures scalability, dependability and efficiency	Artificial intelligence engineer [2511.11]* Artificial intelligence engineer apply methods of artificial intelligence in engineering, robotics and computer science to design programs which simulate intelligence including thinking models, cognitive and knowledge-based systems, problem solving, and decision making. They also integrate structured knowledge into computer systems (ontologies, knowledge bases) in order

AI Professional Role Profile in CWA	ESCO Occupation (<i>Dataset v1.2.0</i>)
of AI systems. Manages deployment pipelines for AI solutions. Many different specialisms of this role exist and can be focused on but are not limited to: ML, DL, NLP, computer vision, LLM, AI agents and quantum AI.	to solve complex problems normally requiring a high level of human expertise or artificial intelligence methods.
In this CWA the roles of Computer vision engineer and Language engineer are not separate roles; they are considered further specifications of the AI Engineer role.	Computer vision engineer [2511.2] Language engineer [2152.1.4]

An extensive mapping has been made between ESCO skills and the AI skill areas distinguished in this CWA [30][31]. This mapping is presented in [Annex R](#).

R.7 European Qualifications Framework (EQF)

The [European Qualifications Framework \(EQF\)](#) serves as a shared reference system across Europe for describing and comparing qualifications. Its main objective is to make it easier to understand how qualifications and learning outcomes from different countries and education systems relate to one another. The framework was established through the Recommendation on the European Qualifications Framework for lifelong learning, adopted by the European Parliament and the Council on 23 April 2008. The revised recommendation on the EQF was adopted on 22nd May 2017.

Within the EQF, qualifications are organised into eight distinct levels. Each level is described using three key dimensions: knowledge, skills, and responsibility and autonomy, which together indicate the complexity and independence expected at that level.

Relation with European Qualifications Framework (EQF)

The relationship between EQF learning levels and e-CF work proficiency levels has been systematically developed. However, the EQF and e-CF levels are not identical, the perspectives are different. This is described extensively in EN 16234-1:2019, B.2.

Although the e-CF competence proficiency levels (e-1 to e-5) are connected to EQF levels 3 to 8, they approach the concept from different viewpoints. The EQF focuses primarily on formal qualifications and learning outcomes, whereas the e-CF emphasizes competence as demonstrated in the workplace. Despite this distinction, the two frameworks are strongly linked because educational qualifications often represent the level of competence an individual has achieved. In this sense, a competence proficiency level can be viewed as the practical, workplace equivalent of a formal qualification.

Broadly speaking, approximate comparisons can be made between the two systems. For instance, proficiency level e-2 is often associated with an associate degree, e-3 with a bachelor's degree, and e-4 with a master's degree. However, competence levels in a professional environment are not determined solely by educational qualifications; they are also influenced by additional factors such as experience, responsibilities, and demonstrated performance in the workplace.

This consistent and rational relationship of e-CF levels e-1 to e-5 with the EQF levels 3 – 8 is illustrated in the table below.

Table R.5 — e-CF proficiency levels and EQF levels with education types

e-CF	EQF	Examples of types of education	
e-1	EQF 3	VET level 3	
e-2	EQF 4	VET level 4, Secondary Vocational Education; Higher general secondary education; Pre-university education	
	EQF 5	Associate Degree; post-secondary education	Undergraduate
e-3	EQF 6	Bachelor's degree; baccalaureate	
e-4	EQF 7	Master's degree	Graduate
e-5	EQF 8	Doctorate	

R.8 prEN 18274:2025 Competence requirements for professional AI ethicists

Currently, the prEN 18274 [\[8\]](#) is a provisional European Standard (pre-norm); a draft document that has not yet been formally adopted as a final EN standard. The forthcoming standard EN 18274 establishes competence requirements for professional AI ethicists and defines the necessary knowledge, skills, and attitudes that AI ethicists must demonstrate to effectively address ethical and societal concerns throughout the AI system life cycle.

AI Ethicists are considered professionals whose role is to contribute to the establishment, implementation, maintenance and continual improvement of AI ethics frameworks, guidelines and practices within organisations. They should have and maintain knowledge, skills and attitudes required to identify, evaluate and mitigate the ethical and societal risks and implications of AI systems and to support their alignment with human values, principles and societal norms. They should also stay up-to-date with the latest developments in AI research, technology and policy to fulfil their role successfully.

The document stresses the importance of integrating ethicists into teams to represent a strategic advantage for organisations designing, developing and using AI. AI ethicists help mitigate ethical and societal risks while promoting a proactive approach to responsible innovation, which can translate into a competitive the advantage in today's marketplace. The adoption of solid ethical principles can facilitate international cooperation, potentially opening doors to new markets and partnerships.

It clarifies that AI ethicists serve primarily as advisors rather than judges of what is ethically correct is relevant. Their role is to identify ethical considerations, facilitate informed discussions, provide guidance on ethical frameworks and support decision-making processes. While they contribute expertise on ethical matters, final ethical decisions remain the responsibility of organisational leadership and relevant stakeholders. AI ethicists help organisations navigate the complex ethical terrain of AI development and implementation, ensuring that technological innovation proceeds in an ethically informed and responsible manner.

Relation with prEN 18274:2025 Competence Requirements for Professional AI Ethicists

The role of the AI Ethicist is comparable to that of the Responsible AI Officer as described in this document. The terms AI ethicist, AI ethics officer, AI ethics specialist/manager/director/team leader are some of the alternative titles used in this document for the role of the Responsible AI Officer.

A full comparison between the two profiles is not well possible at this stage, as prEN 18274 is still a draft version. However, when the details of the Responsible AI Officer's role profile of this CWA are compared to those of the current draft profile of the AI Ethicist of prEN 18274, it becomes clear that these profiles are virtually identical. The tasks and skills overlap to a large extent, and the role is positioned in both documents purely as a supporting/advisory role.

Although prEN 18274 refers to EN 16234 "e-CF" and explains the relationship with the European general ICT competences standard e-CF, the document does not incorporate the competences from the e-CF. It does stress the facts that the e-CF:

- Provides a consistent reference for describing the roles, skills and responsibilities of AI ethicists, ensuring alignment with the European Qualifications Framework (EQF) and facilitating their integration into HR processes, training programmes and certification schemes.
- Helps organisations, educational institutions and policy-makers embed the professional competences of AI ethicists into recruitment, career development and continuous professional development practices, ensuring coherence with broader ICT competence frameworks.

R.9 NIST AI 600-1 - Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile (2023)

The [NIST AI 600-1](#) - Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile provides a cross-sectoral profile of and companion resource for the AI Risk Management Framework (AI RMF 1.0) for Generative AI. The AI RMF was released in January 2023, and is intended for voluntary use and to improve the ability of organisations to incorporate trustworthiness considerations into the design, development, use, and evaluation of AI products, services, and systems. The AI RMF is designed to equip those who play an active role in the AI system lifecycle, organisations and individuals, with approaches that increase the trustworthiness of AI systems, and to help foster the responsible design, development, deployment, and use of AI systems over time.

A profile is considered an implementation of the AI RMF functions, categories, and subcategories for a specific setting, application, or technology, in this case, Generative AI (GAI), based on the requirements, risk tolerance, and resources of the AI Risk Management Framework user. The aim of AI RMF profiles is to assist organisations in deciding how to best manage AI risks in a manner that is well-aligned with their goals, considers legal/regulatory requirements and best practices, and reflects risk management priorities. Consistent with other AI RMF profiles, the GAI profile offers insights into how risk can be managed across various stages of the AI lifecycle and for GAI as a technology.

The document starts with an extensive description of the risks unique to or exacerbated by GAI and the suggested actions to manage them. The actions are categorised in four areas related to GAI: Governance, Content Provenance, Pre-deployment Testing, and Incident Disclosure. Next, the suggested actions are organised by relevant AI RMF subcategories to streamline these activities alongside implementation of the AI RMF.

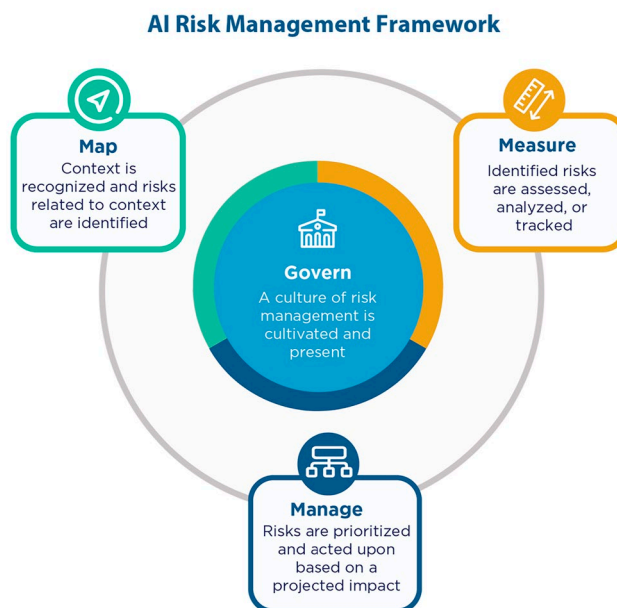


Figure R.5 — NIST Functions organise AI risk management activities (AI RMF)

Relation with NIST AI 600-1 - Artificial Intelligence Risk Management Framework: Generative Artificial Intelligence Profile (2023)

The profile described in the NIST document takes a different approach to the role profile in this CWA document. The NIST GenAI Profile is a description of GenAI-related risks and proposed measures to manage them, and is not linked to specific job titles within an organisation. However, the profile is linked to four high-level function groups: governance, mapping, measurement and management. The measures described in the NIST document to manage GenAI-related risks can be regarded as a further refinement of the AI RMF.

Like this CWA document, NIST's AI RMF also focuses on the entire AI lifecycle. The actions proposed in the GenAI profile can be applied flexibly, depending on an organisation's specific context, in the way that best suits their needs for managing AI risks based on their resources and capabilities. Assuming a governance structure is in place, functions can be performed in any order throughout the AI lifecycle, as deemed valuable by a user of the NIST AI RMF framework.

This means that the AI role profile framework of this CWA can be flexibly combined with the GenAI profile of the AI RMF, and that organisations can decide how and which actions are assigned to which organisational roles within their own context.

R.10 NIST IR 8596 - Cybersecurity Framework Profile for Artificial Intelligence (Cyber AI Profile)

The [NIST IR 8596](#) Cybersecurity Framework Profile for Artificial Intelligence (AI) Profile ("Cyber AI Profile") provides guidelines for managing cybersecurity risk related to AI systems as well as identifying opportunities for using AI to enhance cybersecurity capabilities. The Profile is based on the NIST Cybersecurity Framework 2.0.

The Cyber AI Profile provides prioritised cybersecurity guidelines for organisations securing AI, using AI to enhance cybersecurity defences, or defending against adversarial uses of AI. For each one of the core functions of the NIST Cybersecurity Framework 2.0 (govern, identify, protect, detect, respond and recover) considerations and priorities are described in relation to the three focus areas of the Cyber AI Profile: securing AI system components, conducting AI-enabled cyber defence and thwarting AI-enabled cyber-attacks.

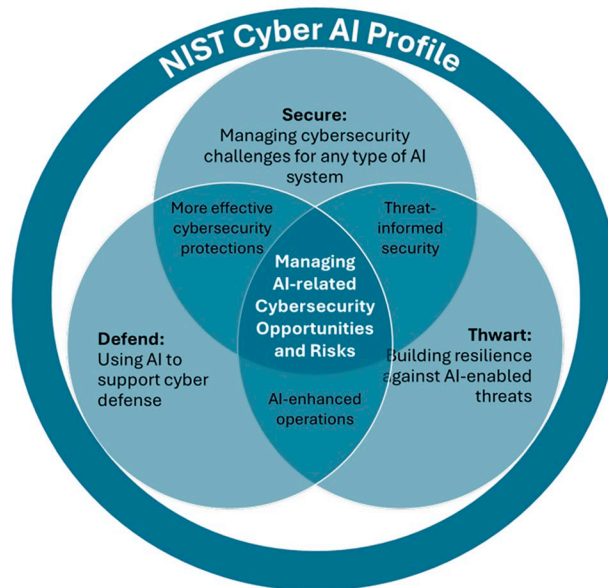


Figure R.6 — NIST Relationship Between Cyber AI Profile Focus Areas

Relation with NIST IR 8596 - Cybersecurity Framework Profile for Artificial Intelligence (Cyber AI Profile)

The profile described in the NIST document takes a different approach to the role profile in this CWA document. The NIST Cyber AI Profile is a description of cybersecurity related considerations and priorities, and is not linked to specific job titles within an organisation. However, the profile is linked to several high-level function groups of the NIST Cybersecurity Framework, that span the entire organisation. The guidelines for managing cybersecurity risk related to AI systems described in the NIST document can be regarded as a further refinement of the NIST Cybersecurity Framework 2.0.

NIST's guidelines can be applied flexibly, depending on an organisation's specific context, in the way that best suits their needs based on their resources and capabilities. This means that the AI role profile framework of this CWA can be flexibly combined with the Cyber AI Profile, and that organisations can decide how and which guidelines they want to implement within their own context.

R.11 EDISON Data Science Framework (EDSF)

The [EDISON Data Science Framework \(EDSF\) \[28\]](#), is a core product of the [EDISON Project](#). The EDISON project was launched under the Horizon 2020 Programme to build the Data Science profession for European research and industry. The framework provides a basis for the definition of the Data Science profession and other components related to Data Science education, training, organisational roles definition and skills management, as well as professional certification.

The EDSF consists of four components:

- EDSF Part 1: Data Science Competences Framework (CF-DS) Release 2
- EDSF Part 2: Data Science Body of Knowledge (DS-BoK) Release 2
- EDSF Part 3: Data Science Model Curriculum (MC-DS) Release 2
- EDSF Part 4: Data Science Professional Framework (DSPP) Release 2

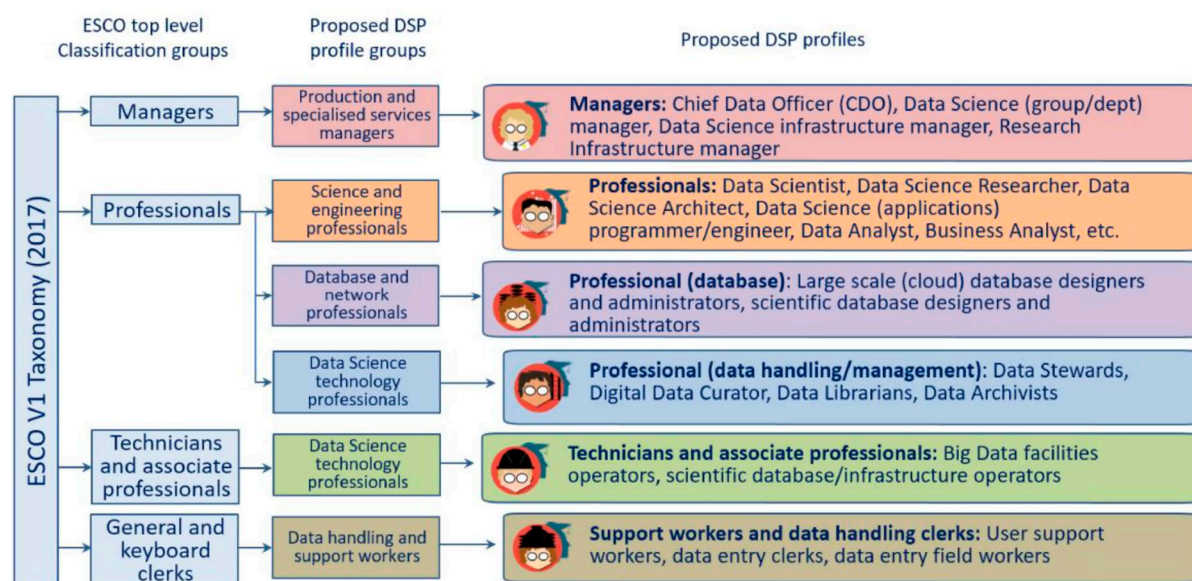


Figure R.7 — EDISON Data science profiles

SOURCE: EDSF Release 2: Part 4. Data Science Professional Profiles (DSPP) [28]

The EDSF Part 1 Data Science Competence Framework (CF-DS) includes specific data related competences required for successful work of Data Scientists. The competence groups are defined as follows:

- **Data Analytics (DSDA)** Use appropriate statistical techniques and predictive analytics on available data to deliver insights and discover new relations
- **Data Management (DSDM)** Develop and implement a data management strategy for data collection, storage, preservation, and availability for further processing.
- **Data Science Engineering (DSENG)** Use engineering principles to research, design, develop and implement new instruments and applications for data collection, analysis and management
- **Scientific and Research Methods (DSRM)** for research domain and **Business Process Management (DSBP)** Create new understandings and capabilities by using the scientific method (hypothesis, test/artefact, evaluation) or similar engineering methods to discover new approaches to create new knowledge and achieve research or organisational goals
- **Data Science Domain Knowledge (DSDK)** Use domain knowledge (scientific or business) to develop relevant data analytics applications, and adopt general Data Science methods to domain specific data types and presentations, data and process models, organisational roles and relations

Relation with EDISON Data Science Framework

Although the competences differ from the general ICT competences set out in the e-CF, the Data Science Framework adopts the same approach to competence definition as the e-CF v 3.0, competences defined as abilities supported by knowledge and skills with applied proficiency levels. The EDSF Part 4 Data Science Professional Framework (DSPP) defines data-related role profiles using the methodology and templates of the European ICT Professional Role Profiles.

The role profiles of the Data Scientist and the Data Steward have been fully developed as examples in the Data Science Framework. The role profile of the Data Scientist formed the basis for the role profile of the Data Scientist in this CWA document. The role of the Data Steward is not included in the AI role profile framework.

Not all data profiles mentioned in the EDISON framework form part of this AI role profile framework. Firstly, the focus here is on those roles that, in the current context, can be regarded as roles of AI professionals. Furthermore, the 2017 EDISON framework is now somewhat outdated, and some aspects have been superseded by recent developments.

The relationship between EDISON competency groups, roles and the roles in this framework is shown in the table below.

Table R.6 — Relation EDISON roles and AI role profiles

EDISON competence group	EDISON role(s)	CWA AI professional role(s)
Data Analytics (DSDA)	Data Scientist, Data Analyst, Business Analyst	Data Analyst, AI Business Analyst, Data Scientist
Data Management (DSDM)	Data Steward, Digital Data Curator, Data Librarian, Data Archivist	Data Curation Lead, Data Engineer, AI Data Trainer
Data Science Engineering (DSENG)	Data Science Architect, Data Science Application Programmer/Engineer	-
Scientific and Research Methods (DSRM)	Data Scientist, Data Science Researcher	Data Scientist, AI Researcher
Data Science Domain Knowledge (DSDK)	Business Analyst	AI Business Analyst

R.12 AI literacy frameworks

With the growing embeddedness of AI technologies and tools in different aspects of daily life in our societies, there is also a growing need for AI literacy, as the opportunities of AI also bring challenges.

There is also a growing number of AI literacy frameworks available, differing in detail and audience, but in general they focus on: the ability to understand what AI is and how it works at a conceptual level, recognise common uses and limitations of AI in everyday life, identify potential ethical, legal, and social implications of AI use and make informed decisions when interacting with or being affected by AI systems.

Prominent frameworks are:

- **European Commission, OECD, Code.org - [AI Literacy Framework for Primary and Secondary Education \(AILit Framework\)](#)**
Outlines competences and learning scenarios to inform learning materials, standards, school-wide initiatives, and responsible AI policies for primary and secondary education settings. The framework is designed for teachers, education leaders, education policymakers, and learning designers.
- **OECD - [PISA 2029, Media and Artificial Intelligence Literacy \(MAIL\) Assessment Framework](#)**
Provides an instrument to support the assessment of the set of competences required to engage effectively, ethically and responsibly with digital content, media platforms, and AI systems.
- **UNESCO - [AI competency framework for teachers](#)**
Intends to support the development of AI competencies among teachers to empower them to use these technological tools in their teaching practices in a safe, effective and ethical manner.
- **UNESCO - [AI competency framework for students](#)**

Provides a global reference framework on the core set of AI competencies for students to inform the design of national or institutional AI competency frameworks; specifies typical attitudinal and behavioural performance relating to the key aspects of AI competencies at different levels of mastery to help design AI-related curricular content for school students; and recommends an open-ended roadmap to help plan the learning sequence of AI curricula across grade levels.

Relation to AI literacy frameworks

[Clause 6.3](#) of this document has outlined the importance of AI literacy as well as the differences with AI, articulating the fact that AI literacy complements AI professionalism. Just like digital literacy, also AI literacy is considered an essential ‘given’ in this document and considered foundational. The AILit Framework has visualised this relationship as follows, showing the interdisciplinary links to reinforce the idea that AI literacy is a foundation for navigating and shaping the role of AI across contexts.

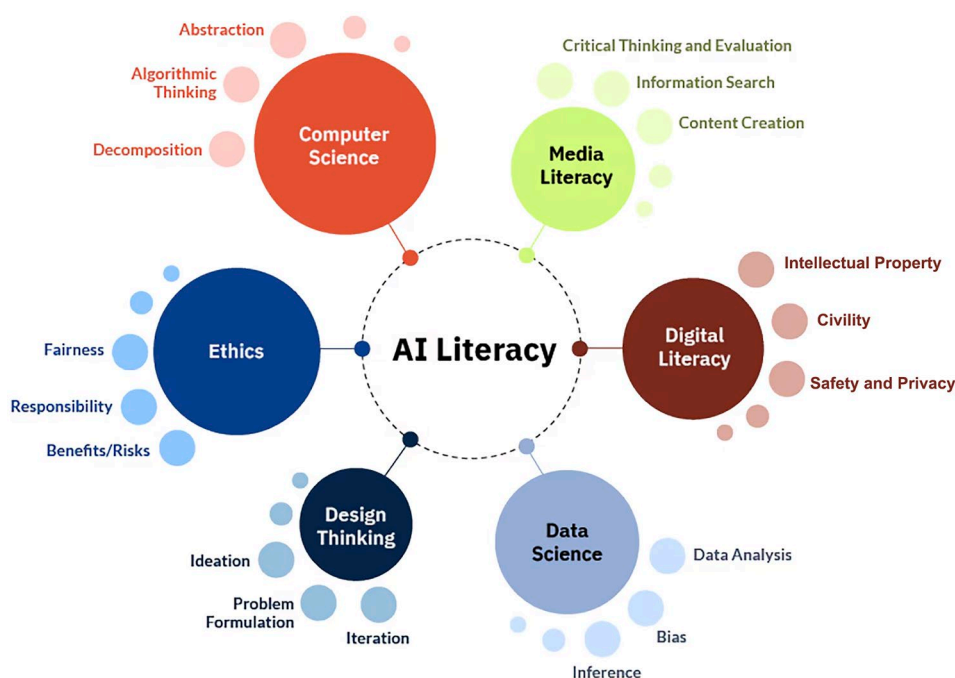


Figure R. 8 — AI literacy as foundation

SOURCE: OECD, AILit Framework [\[16\]](#)

R.13 Standards and normative instruments related to AI

There are numerous ISO standards and frameworks from authoritative sources related to AI and their number is growing continuously. Therefore, the aim is not to present an exhaustive list of all AI-related standards and frameworks, but rather to show how these different types of frameworks are related to this document.

AI standards can broadly be grouped into several key categories. First, standards that focus on defining what AI is, including clarifying core terms, methods, capabilities, and processes. Second, standards that address the societal and ethical implications of AI, such as responsible use, the impact on individuals and communities, and ways to build trust through transparency and the proper mitigation of bias.

Quality, testing, and assessment standards form another important category, covering the specification, measurement, and evaluation of AI system performance and reliability, including systematic testing and auditing. In addition, security and safety standards focus on risks unique to AI systems, such as vulnerabilities, potential misuse, and challenges like traceability.

Finally, there are standards that bring together organisational and strategic aspects of AI oversight. This category focuses on identifying, managing, and mitigating AI-specific risks, while also establishing organisation-wide measures, policies, and governance structures to ensure responsible and consistent AI use. The table below contains a non-exhaustive overview of some relevant AI standards.

Table R.7 — Standards and normative instruments related to AI (non-exhaustive list)

CONCEPT & TERMINOLOGY	
ISO/IEC 22989:2022 , <i>Information technology — Artificial intelligence — Artificial intelligence concepts and terminology</i>	Establishes terminology for AI and describes concepts in the field of AI. This document can be used in the development of other standards and in support of communications among diverse, interested parties or stakeholders.
ISO/IEC DIS 42102 <i>Information technology — Artificial intelligence — Framework for characterizing AI system methods and capabilities</i>	Provides a framework of descriptors to support the consistent characterization of AI system methods and capabilities. The framework helps AI stakeholders describe AI systems and have a common understanding of them. This document applies to all types of organisations involved in any of the lifecycle stages of AI systems as well as to any AI stakeholder roles.
ISO/IEC 23053:2022 <i>Framework for Artificial Intelligence (AI) Systems Using Machine Learning (ML)</i>	Provides a conceptual framework and shared terminology for describing AI systems that use machine learning (ML). It defines the components and functions of ML-based AI systems within the broader AI ecosystem, offering clarity on how these systems operate and interact. The standard is designed for both technical experts and non-specialists seeking to understand and explain ML systems in a structured, consistent way.
ISO/IEC 5338:2023 <i>Information technology — Artificial intelligence — AI system life cycle processes</i>	Defines a set of processes and associated concepts for describing the life cycle of AI systems based on machine learning and heuristic systems. The document provides processes that support the definition, control, management, execution and improvement of the AI system in its life cycle stages. These processes can also be used within an organisation or a project when developing or acquiring AI systems.
ETHICS, TRUST & TRANSPARENCY	
CEN/TS 17834:2022 , <i>European Professional Ethics Framework for the ICT Profession</i>	Provides a foundation for defining practical guidelines to improve ethics for different organisations across all technical areas. In addition, it provides a basis for aligning existing guidelines and initiatives and establishing comparisons.
ISO/IEC TR 24368 <i>Information technology — Artificial intelligence — Overview of ethical and societal concerns</i>	provides a high-level overview of the ethical and societal concerns surrounding artificial intelligence (AI). It outlines common sources of these concerns, highlights key principles and processes, and maps relevant international standards that support responsible AI development and use. The report is meant for technologists, regulators, interest groups, and society at large
UNESCO - Recommendation on the Ethics of Artificial Intelligence (Adopted 23 November 2021)	Provides a globally accepted normative instrument that focuses not only on the articulation of values and principles, but also on their practical realisation that serves as a basis to make AI systems work for the good of humanity, individuals, societies

	and the environment and ecosystems, and to prevent harm; to guide individuals, groups, communities, institutions and private sector companies to ensure the embedding of ethics in all stages of the AI system life cycle.
ISO/IEC 12792:2025 <i>Information technology — Artificial intelligence (AI) — Transparency taxonomy of AI systems</i>	Specifies a taxonomy of information elements to assist AI stakeholders with identifying and addressing the needs for transparency of AI systems. The document describes the semantics of the information elements and their relevance to the various objectives of different stakeholders. This document is applicable to any kind of organisation and application involving an AI system.
ETSI TS 104 224 V1.1.1 (2025-03) <i>Securing Artificial Intelligence (SAI); Explicability and transparency of AI processing</i>	Identifies steps to be taken by designers and implementers of AI platforms that give assurance of the explicability and transparency of AI processing. AI processing includes AI decision making and AI data processing. The present document identifies its target audience as designers and implementers who are making assurances to a lay person
ISO/IEC TR 24027:2021 <i>Information technology — Artificial intelligence (AI) — Bias in AI systems and AI aided decision making</i>	Addresses bias in relation to AI systems, especially with regards to AI-aided decision-making. Measurement techniques and methods for assessing bias are described, with the aim to address and treat bias-related vulnerabilities. All AI system lifecycle phases are in scope, including but not limited to data collection, training, continual learning, design, testing, evaluation and use.
ISO/IEC 4213:2022 <i>Information technology — Artificial intelligence — Assessment of machine learning classification performance</i>	Specifies methodologies for measuring classification performance of machine learning models, systems and algorithms.
ISO/IEC TR 24028:2020 <i>Information technology — Artificial intelligence — Overview of trustworthiness in artificial intelligence</i>	Surveys topics related to trustworthiness in AI systems, including approaches to establish trust in AI systems through transparency, explainability, controllability, etc.; engineering pitfalls and typical associated threats and risks to AI systems, along with possible mitigation techniques and methods; and approaches to assess and achieve availability, resiliency, reliability, accuracy, safety, security and privacy of AI systems.
ISO/IEC 42005:2025 <i>Information technology — Artificial intelligence (AI) — AI system impact assessment</i>	Provides guidance for organisations conducting AI system impact assessments. These assessments focus on understanding how AI systems, and their foreseeable applications, may affect individuals, groups, or society at large. The standard supports transparency, accountability and trust in AI by helping organisations identify, evaluate and document potential impacts throughout the AI system lifecycle.
QUALITY, TESTING & ASSESSMENT	
ISO/IEC 25059:2023 <i>Software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Quality model for AI systems</i>	Outlines a quality model for AI systems and is an application-specific extension to the standards on SQuaRE. The characteristics and sub-characteristics detailed in the model provide consistent terminology for specifying, measuring and evaluating AI system quality.

ISO/IEC TS 42119-2:2025 <i>Artificial intelligence — Testing of AI - Part 2: Overview of testing AI systems</i>	Provides requirements and guidance on the application of the ISO/IEC/IEEE 29119 series to the testing of AI systems.
ETSI TS 104 008 V1.1.1 (2026-01) <i>Methods for Testing & Specification (MTS); Continuous Auditing Based Conformity Assessment for AI-enabled systems (DTS/MTS-AI-00104008_ContAudit)</i>	Introduces a structured approach to ongoing auditing, replacing static, periodic evaluations with automated, real-time conformity checks by outlining the principles, prerequisites, processes and documentation practices for implementing Continuous Auditing Based Conformity Assessment (CABCA) within organisations.
ETSI TR 104 066 V1.1.1 (2024-07) <i>Securing Artificial Intelligence; Security Testing of AI</i>	identifies methods and techniques that are appropriate for security testing of ML-based components
ISO/IEC TR 24029-1:2021 <i>Artificial Intelligence (AI) — Assessment of the robustness of neural networks - Part 1: Overview</i>	Provides background about existing methods to assess the robustness of neural networks.
ISO/IEC 42006:2025 <i>Information technology — Artificial intelligence — Requirements for bodies providing audit and certification of artificial intelligence management systems</i>	Sets out the additional requirements for bodies that audit and certify artificial intelligence management systems (AIMS) according to ISO/IEC 42001.
SECURITY & SAFETY	
ISO/IEC DIS 27090 <i>Cybersecurity — Artificial Intelligence — Guidance for addressing security threats and compromises to artificial intelligence systems</i>	Addresses security threats and compromises specific to AI systems. This document aims to provide information to organisations to help them better understand the consequences of security threats specific to AI systems, throughout their life cycle, and descriptions of how to detect and mitigate such threats.
ETSI GR SAI 004 V1.1.1 (2020-12) <i>Securing Artificial Intelligence (SAI); Problem Statement</i>	Describes the problem of securing AI-based systems and solutions, with a focus on machine learning, and the challenges relating to confidentiality, integrity and availability at each stage of the machine learning lifecycle.
ETSI GR SAI 001 V1.1.1 (2022-01) <i>Securing Artificial Intelligence (SAI); AI Threat Ontology</i>	Defines what an AI threat is and defines how it can be distinguished from any non-AI threat.
ISO/IEC TR 5469 <i>Artificial intelligence — Functional safety and AI systems</i>	Describes the properties, related risk factors, available methods and processes to enable the developer of safety-related systems to appropriately apply AI technologies as part of safety functions by fostering awareness of the properties, functional safety risk factors, available functional safety methods and potential constraints of AI technologies.
ETSI TR 104 032 V1.1.1 (2024-02) <i>Securing Artificial Intelligence (SAI); Traceability of AI Models</i>	Describes the role of traceability in the challenge of securing AI and explores issues related to sharing and re-using models across tasks and industries. The scope includes threats, and their associated remediations where applicable, to ownership rights of AI creators as well as to verification of models origin

ETSI TR 104 159 V1.1.1 (2026-01) <i>Securing Artificial Intelligence (SAI); Understanding and Preventing Harm from Generative AI</i>	Highlights the impact of regulations and legislation to prevent harm from AI and ensure responsible use and development on generative AI and the measures developers may have to take to be compliant.
MANAGEMENT, GOVERNANCE & RISK	
ISO/IEC 42001:2023 <i>Information technology — Artificial intelligence — Management system</i>	Specifies requirements for establishing, implementing, maintaining, and continually improving an Artificial Intelligence Management System (AIMS) within organisations. It is designed for entities providing or utilising AI-based products or services, ensuring responsible development and use of AI systems.
ISO/IEC 38507:2022 <i>Information technology — Governance of IT — Governance implications of the use of artificial intelligence by organisations</i>	Provides guidance for members of the governing body of an organisation and to a wider community to enable and govern the use of AI, in order to ensure its effective, efficient and acceptable use within the organisation.
ISO/IEC 23894:2023 <i>Information technology — Artificial intelligence — Guidance on risk management</i>	Provides guidance on how organisations that develop, produce, deploy or use products, systems and services that utilise AI can manage risk specifically related to AI.
NIST AI 100-1 <i>Artificial Intelligence Risk Management Framework (AI RMF 1.0)</i>	Offers a resource to the organisations designing, developing, deploying, or using AI systems to help manage the many risks of AI and promote trustworthy and responsible development and use of AI systems.
ISO/IEC DIS 24970 <i>Artificial intelligence — AI system logging</i>	Describes common capabilities, requirements and a supporting information model for logging of events in AI systems. This document is designed to be used with a risk management system.

Relation with this document

It is important to distinguish between more general, high-level standards and more specific, technical ones. The general standards, particularly those related to concepts and terminology as well as ethics, trust, and transparency, cut across a wide range of AI roles. They provide a common foundation that enables different professionals to collaborate effectively and speak a shared language about AI.

In fact, some of these general standards can be seen as part of a baseline level of AI literacy that all professionals and professional users and not just technical specialists, should possess. Understanding what AI is, how it works at a high level, and what its ethical and societal implications are, is increasingly essential across functions such as management, legal, HR, and operations.

By contrast, the more specific and technical standards, such as those related to quality, testing, and assessment, security and safety, and elements of risk, governance, and management, tend to be more role-dependent. They require specialised expertise and are typically applied by technical professionals, auditors, or risk and compliance experts.

Together, these layers of standards highlight that responsible AI is not confined to a single role or team, but instead requires both broad organisational awareness and deep, role-specific expertise.

Building on this distinction, the general standards are particularly relevant across all role families in the AI role profiles framework. For instance, professionals in Data & Analysis (such as Data Scientists, Data Analysts, and AI Business Analysts) rely on shared terminology and ethical principles to correctly

interpret data and avoid biased or misleading outcomes. Similarly, roles in Development (including AI Engineers, AI Researchers, and AI Product Designers) must incorporate ethical considerations and transparency into system design from the outset. In Guidance and Governance functions, such as Responsible AI Officers, AI Advisors, AI Governance Officers, and AI Compliance Officer, these general standards form the core of their work, as they translate high-level principles into organisational policies and guidance. In Management roles (e.g., Chief AI Officer, AI Product Manager), a solid grasp of these foundational standards is essential for strategic decision-making and aligning AI initiatives with organisational values.

The more technical standards, on the other hand, map more directly to specialised roles. Within Development, roles such as AI Quality, Test & Evaluation Specialists and AI Engineers focus on implementing quality, testing, and assessment standards. In Operations, roles like MLOps Engineers, AI Reliability Engineers, and AI Observability & Monitoring Specialists are responsible for maintaining system performance, traceability, and robustness in production environments. Security and safety standards are primarily handled by AI Security Specialists and AI Safety Specialists, often in collaboration with development and operational roles. Meanwhile, risk, governance, and management standards are operationalised by Governance roles such as AI Risk Managers, AI Auditors, and AI Compliance Officers, as well as Management roles like AI Managers and AI Operations Managers, who ensure that risk controls and governance processes are embedded in day-to-day practices.

In practice, the guidelines derived from these standards are incorporated by professionals as part of their roles: they form task descriptions, inform day-to-day responsibilities, and are reflected in the knowledge and skill sets required for functions. How these guidelines are applied ultimately depends on the specific organisational context and the practical situations in which AI systems are developed, deployed and managed.

Overall, it is clear that while some standards require deep specialisation, many, especially those tied to AI literacy and ethical awareness, are shared responsibilities that cut across nearly all AI-related roles.

Annex S (informative)

AI skill areas in ESCO

The results presented in [Annex K](#) were obtained by mapping ESCO skill and knowledge examples to AI skills. This type of mapping was carried out using NLP methods, text embeddings, and similarity analysis, based on extensive research by Zare et al. [\[30\]\[31\]](#). Specifically, 13,939 ESCO skills together with AI skills were first converted into embeddings using the MPNet large language model (LLM). The resulting embedding vectors were then compared using cosine similarity. Through this approach, the most similar and most relevant ESCO skills were identified for each AI skill group. In this Annex, for every AI skills group, the top 10 similarities are presented including the similarity scores.

Technical & Engineering

Data Analytics	
ESCO Skill	Similarity
data analytics	0,825503
business analytics	0,707728
marketing analytics	0,690892
perform data analysis	0,665998
unstructured data	0,654328
analyse big data	0,653368
web analytics	0,652075
healthcare analytics	0,645925
data mining	0,641195
data mining methods	0,639256

Data Modelling	
ESCO Skill	Similarity
data models	0,730011
create data models	0,639797
data analytics	0,594416
perform data mining	0,592954
analyse big data	0,587581
database development tools	0,581199
ML (computer programming)	0,576319
data engineering	0,575574
data mining	0,574010
data science	0,566951

Data Engineering	
ESCO Skill	Similarity
data engineering	0,718634
implement data quality processes	0,650055
gather data	0,649409
manage standards for data exchange	0,645694
process data	0,626695
manage data	0,621453
data extraction, transformation and loading tools	0,612999
data analytics	0,599529
use data processing techniques	0,598991
deliver visual presentation of data	0,595063

Data Quality & Governance	
ESCO Skill	Similarity
data quality assessment	0,777193
implement data quality processes	0,770526
define data quality criteria	0,748049
manage data	0,746643
database quality standards	0,686746
manage standards for data exchange	0,609326
define quality standards	0,603776
manage data collection systems	0,596693
perform quality audits	0,595819
ICT quality policy	0,586684

Data Privacy Engineering	
ESCO Skill	Similarity
data protection	0,668354
ensure information privacy	0,642154
information confidentiality	0,571732
protect personal data and privacy	0,565882
manage digital identity	0,538697
apply information security policies	0,502292
ensure data protection in aviation operations	0,501767
security engineering	0,498090
data security principles	0,497664
cloud security and compliance	0,492533

Synthetic Data Generation	
ESCO Skill	Similarity
compile statistical data for insurance purposes	0,436693
data protection	0,414962
gather data	0,401761
ensure information privacy	0,400239
synthetic biology	0,372033
manage digital identity	0,363399
information confidentiality	0,363200
handle data samples	0,360261
protect personal data and privacy	0,357868
data mining	0,357759

Machine Learning	
ESCO Skill	Similarity
utilise machine learning	0,712585
ML (computer programming)	0,662113
machine learning	0,640478
data science	0,617273
data mining	0,610214
build predictive models	0,577001
data analytics	0,568686
perform data mining	0,565570
perform data analysis	0,550887
build recommender systems	0,548082

Deep Learning	
ESCO Skill	Similarity
deep learning	0,574067
artificial neural networks	0,463517
computer vision	0,355386
perform dimensionality reduction	0,344412
principles of artificial intelligence	0,334250
machine learning	0,327335
image recognition	0,326732
mechatronics	0,323408
utilise machine learning	0,311537
ML (computer programming)	0,308820

Natural Language Processing	
ESCO Skill	Similarity
natural language processing	0,774689
computational linguistics	0,476714
grammar	0,475129
cooperate in linguistic process steps	0,468362
develop data processing applications	0,466647
translate tags	0,455060
utilise regular expressions	0,437776
interpret technical texts	0,436606
task algorithmisation	0,431536
practical lexicography	0,430463

Generative AI	
ESCO Skill	Similarity
digital content creation	0,530915
integrate content into output media	0,527443
develop visual elements	0,510806
create digital images	0,492522
develop creative ideas	0,491783
compile content	0,489507
produce scanned images	0,488075
digital game creation systems	0,486828
use automatic programming	0,480132
create digital content	0,479424

Computer Vision	
ESCO Skill	Similarity
computer vision	0,627914
image recognition	0,611068
develop computer vision system	0,589500
analyse images	0,518391
utilise machine learning	0,462512
interpret medical images	0,448858
data mining	0,438216
read pictograms	0,430407
scan photos	0,424315
data analytics	0,424202

AI Platforms & Frameworks	
ESCO Skill	Similarity
software frameworks	0,489065
ML (computer programming)	0,449350
principles of artificial intelligence	0,449127
utilise machine learning	0,447891
define software architecture	0,446319
embedded systems	0,441632
ICT help platforms	0,439911
hardware platforms	0,439390
JavaScript Framework	0,416801
ICT architectural frameworks	0,415427

AI Infrastructure	
ESCO Skill	Similarity
deploy cloud resource	0,500767
automate cloud tasks	0,460033
design cloud networks	0,456236
design cloud architecture	0,455416
cloud technologies	0,441582
respond to incidents in cloud	0,431144
principles of artificial intelligence	0,427871
plan migration to cloud	0,427679
artificial neural networks	0,425172
utilise machine learning	0,407638

AI Tooling & Ecosystem	
ESCO Skill	Similarity
conduct threat intelligence	0,488935
utilise machine learning	0,484079
data extraction, transformation and loading tools	0,450103
automate cloud tasks	0,449328
problem-solving with digital tools	0,444466
keep up with the latest information systems solutions	0,441890
collaborate with technical experts on artworks	0,437858
Jenkins (tools for software configuration management)	0,433477
monitor developments in field of expertise	0,431418
utilise computer-aided software engineering tools	0,427780

AI System Architecture & Enterprise Integration	
ESCO Skill	Similarity
design enterprise architecture	0,548500
embedded systems	0,509126
principles of artificial intelligence	0,506222
service-oriented modelling	0,506051
ICT system integration	0,499367
system design	0,499211
keep up with the latest information systems solutions	0,493971
align software with system architectures	0,482794
manage ICT semantic integration	0,480738
systems thinking	0,478148

AI Solution Architecture	
ESCO Skill	Similarity
design for organisational complexity	0,527678
principles of artificial intelligence	0,494245
system design	0,477841
security engineering	0,462077
embedded systems	0,455086
design enterprise architecture	0,449795
design cloud architecture	0,448678
artificial neural networks	0,446691
service-oriented modelling	0,439029
ensure information privacy	0,435629

AI Automation	
ESCO Skill	Similarity
automate cloud tasks	0,601570
utilise machine learning	0,583552
operate automated process control	0,542452
data science	0,537280
develop automated software tests	0,533981
perform data analysis	0,525712
improve business processes	0,506412
task algorithmisation	0,505798
principles of artificial intelligence	0,505774
use scripting programming	0,503779

MLOps & AI Lifecycle Management	
ESCO Skill	Similarity
ML (computer programming)	0,526805
utilise machine learning	0,484075
systems development life-cycle	0,455763
automate cloud tasks	0,445014
data science	0,444752
service-oriented modelling	0,438464
respond to incidents in cloud	0,436217
develop predictive models	0,430170
plan migration to cloud	0,418751
DevOps	0,413082

Model Evaluation & Validation	
ESCO Skill	Similarity
risk modelling	0,515213
assess supplier risks	0,508086
develop predictive models	0,493034
assess reliability of data	0,492405
inspect data	0,484123
adapt evaluation methodology	0,477490
monitor the conformance to the project methodology	0,476676
check system parameters against reference values	0,475441
evaluation theory	0,474971
perform quality audits	0,473509

Testing AI-based systems	
ESCO Skill	Similarity
execute software tests	0,583710
develop automated software tests	0,577577
tools for ICT test automation	0,556718
perform test run	0,544154
verify formal ICT specifications	0,538688
test system accessibility for users with special needs	0,536482
develop ICT test suite	0,530353
execute integration testing	0,521500
perform software recovery testing	0,514281
run simulations	0,512043

AI Performance Monitoring	
ESCO Skill	Similarity
predictive maintenance	0,552093
monitor system performance	0,534356
monitor production developments	0,494824
cloud monitoring and reporting	0,457922
monitor automated machines	0,452071
test sensors	0,448674
monitor mine production	0,440735
perform failure analysis of production process	0,432938
report on production results	0,425414
analyse production processes for improvement	0,420295

Model Optimization & Efficiency	
ESCO Skill	Similarity
optimise production processes parameters	0,393362
design passive energy measures	0,388529
energy efficiency	0,387441
instruct on energy saving technologies	0,381583
optimise fleet usability	0,371700
lead process optimisation	0,368852
quality and cycle time optimisation	0,361492
ML (computer programming)	0,359737
perform energy simulations	0,351540
work efficiently	0,345130

Safe, Responsible & Sustainable AI	
ESCO Skill	Similarity
principles of artificial intelligence	0,536873
ICT safety	0,456887
green computing	0,444287
perform safety data analysis	0,433915
human factors regarding safety	0,433694
install safety devices	0,429836
safety engineering	0,428820
develop ICT safety information	0,419055
protect the environment from the impact of the digital technologies	0,416417
create safe working protocols	0,415477

Explainability & Interpretability (XAI)	
ESCO Skill	Similarity
principles of artificial intelligence	0,392264
process qualitative information	0,362305
inspect data	0,357277
manage findable accessible interoperable and reusable data	0,356805
customer insight	0,351866
interpret extraction data	0,344234
utilise machine learning	0,341365
build predictive models	0,338192
machine learning	0,336837
conduct threat intelligence	0,335940

Human-model Interaction Design	
ESCO Skill	Similarity
design user interface	0,616820
design interaction model	0,567846
human-robot collaboration	0,559583
human-computer interaction	0,540802
software interaction design	0,483101
liaise with engineers	0,452250
consult with technical staff	0,445536
interact with healthcare users	0,443169
collaborate with technical experts on artworks	0,440375
collaborate with designers	0,439566

AI Security	
ESCO Skill	Similarity
security engineering	0,504548
principles of artificial intelligence	0,490812
data protection	0,490063
cyber security	0,488987
ensure information security	0,458221
web application security threats	0,450722
utilise machine learning	0,446220
manage digital identity	0,443388
ensure data protection in aviation operations	0,437357
cyber-attack counter-measures	0,429407

Prompt Engineering	
ESCO Skill	Similarity
task algorithmisation	0,465543
read standard blueprints	0,448283
produce scanned images	0,412183
instructional design models	0,410718
build predictive models	0,391038
structure information	0,389717
accurately estimate work hours	0,389059
create software design	0,376979
anticipate shipment handling requirements	0,371375
develop predictive models	0,368193

Human-Centred AI & UX	
ESCO Skill	Similarity
design user interface	0,469597
usability engineering	0,443673
human-robot collaboration	0,441754
human-computer interaction	0,436843
design interaction model	0,429126
design customer experiences	0,407328
build trust	0,401607
principles of artificial intelligence	0,401261
create prototype of user experience solutions	0,397433
combine business technology with user experience	0,388158

Business & Management

AI Strategy	
ESCO Skill	Similarity
apply strategic thinking	0,578140
insourcing strategy	0,553562
develop information security strategy	0,535799
develop account strategy	0,522415
define technology strategy	0,518294
implement sales strategies	0,514256
develop company strategies	0,511704
information security strategy	0,508883
business strategy concepts	0,503837
strategic planning	0,503044

AI Market & Technology Intelligence	
ESCO Skill	Similarity
interpret current data	0,533400
emergent technologies	0,512899
conduct threat intelligence	0,491211
trend watching	0,489002
data science	0,485323
utilise machine learning	0,482919
news analytics	0,478768
innovate in ICT	0,475838
perform data mining	0,464482
market analysis	0,458682

AI Business Applications & Impact	
ESCO Skill	Similarity
data science	0,534536
business intelligence	0,498254
utilise machine learning	0,482325
perform data mining	0,458335
deliver business research proposals	0,457926
business analytics	0,456567
make data-driven decisions	0,452297
manage business knowledge	0,442330
business analysis	0,436753
interpret business information	0,430425

AI Value Measurement & ROI	
ESCO Skill	Similarity
perform asset recognition	0,474203
marketing analytics	0,469418
make data-driven decisions	0,468012
utilise machine learning	0,464898
evaluate benefit plans	0,459599
provide cost benefit analysis reports	0,449357
business intelligence	0,447560
manage project metrics	0,443883
perform data analysis	0,439481
deliver business research proposals	0,438008

AI Economics & Cost Management	
ESCO Skill	Similarity
principles of artificial intelligence	0,512977
data science	0,502701
utilise machine learning	0,465455
provide cost benefit analysis reports	0,451722
prepare cost-plus pricing models	0,440974
optimise production	0,432951
artificial neural networks	0,429662
consider economic criteria in decision making	0,425750
mathematical economics	0,411611
evaluate cost of software products	0,409770

AI Product Management	
ESCO Skill	Similarity
product life-cycle	0,519261
perform product planning	0,508321
develop product design	0,502651
product data management	0,498550
develop new products	0,491291
plan product management	0,488110
produce customised products	0,480394
develop product policies	0,479315
provide customised products	0,474668
detect product defects	0,472190

Vendor & Partner Management for AI	
ESCO Skill	Similarity
liaise with industry experts	0,526019
software components suppliers	0,517582
manage outsourced security	0,505767
implement procurement of innovation	0,478540
create cooperation modalities	0,473451
perform procurement market analysis	0,466282
manage procurement planning	0,464749
keep up with the latest information systems solutions	0,452764
coordinate orders from various suppliers	0,450043
conduct threat intelligence	0,446485

Project & Program Management of AI Initiatives	
ESCO Skill	Similarity
project management	0,553427
manage several projects	0,552986
manage engineering project	0,545634
perform project management	0,535063
manage research and development projects	0,531642
manage schedule of tasks	0,523359
manage project changes	0,512479
organise project meetings	0,512349
manage ICT project	0,509629
manage artistic project	0,506504

Change Management for AI	
ESCO Skill	Similarity
adapt to changing situations	0,446512
manage ICT change request process	0,444610
manage ICT legacy implication	0,439306
monitor ICT research	0,431634
keep up with digital transformation of industrial processes	0,418184
deploy ICT systems	0,414947
adapt to change	0,407156
apply change management	0,406736
manage changes in ICT system	0,406550
develop ICT workflow	0,406033

Operating Model Design for AI	
ESCO Skill	Similarity
service-oriented modelling	0,481853
principles of artificial intelligence	0,463491
design interaction model	0,441952
Open source model	0,438885
develop strategy to solve problems	0,427885
manage business knowledge	0,419899
model based system engineering	0,416968
create data models	0,415324
design campaign actions	0,403068
design for organisational complexity	0,402564

AI Adoption & Enablement	
ESCO Skill	Similarity
manage business knowledge	0,519960
develop ICT workflow	0,457007
assess ICT knowledge	0,450938
keep up with digital transformation of industrial processes	0,446700
apply business acumen	0,444031
business intelligence	0,441958
establish data processes	0,439805
propose ICT solutions to business problems	0,439774
creatively use digital technologies	0,436658
conduct impact evaluation of ICT processes on business	0,432812

Governance, Risk & Policy

AI Governance	
ESCO Skill	Similarity
internet governance	0,496733
principles of artificial intelligence	0,496476
information governance compliance	0,480017
manage ICT data classification	0,450728
implement cloud security and compliance	0,449554
manage ICT data architecture	0,436690
manage intellectual property rights	0,436324
manage data for legal matters	0,433436
conduct threat intelligence	0,429825
manage advocacy strategies	0,429087

Model Risk Management (MRM)	
ESCO Skill	Similarity
risk modelling	0,500886
utilise machine learning	0,474035
product usage risks analysis	0,470919
quantitative risk analysis techniques	0,464366
build predictive models	0,456310
qualitative risk analysis techniques	0,444290
risk management	0,444081
ICT process quality models	0,438239
ML (computer programming)	0,432940
implement ICT risk management	0,429357

Third-Party & Supply Chain AI Risk	
ESCO Skill	Similarity
product usage risks analysis	0,562924
manage outsourced security	0,526566
assess supplier risks	0,519794
manage commercial risks	0,511237
conduct threat intelligence	0,496610
forecast organisational risks	0,483081
estimate impact of risks	0,479685
qualitative risk analysis techniques	0,479387
coordinate orders from various suppliers	0,475605
internal risk management policy	0,475071

AI Ethics	
ESCO Skill	Similarity
principles of artificial intelligence	0,591295
data ethics	0,545800
ethics	0,500735
manage ethical issues within social services	0,488276
ethical hacking principles	0,481534
apply research ethics and scientific integrity principles in research activities	0,477016
treat animals ethically	0,469565
follow code of ethics for biomedical practices	0,455424
morality	0,447915
apply ICT system usage policies	0,446556

AI Risk, Assurance & Audit	
ESCO Skill	Similarity
monitor automated machines	0,534359
execute ICT audits	0,520344
ensure information security	0,508850
ensure accuracy of aeronautical data	0,500178
assess risks of clients' assets	0,500157
manage system security	0,499209
handle cybersecurity incidents	0,497490
guarantee students' safety	0,482762
identify ICT system weaknesses	0,480762
perform risk analysis	0,474827

AI Incident Management & Response	
ESCO Skill	Similarity
handle cybersecurity incidents	0,641409
respond to incidents in cloud	0,585738
identify ICT system weaknesses	0,547547
conduct threat intelligence	0,541284
process incident reports for prevention	0,533026
identify security threats	0,516242
cyber-attack counter-measures	0,515675
solve ICT system problems	0,511985
maintain incident reporting records	0,509260
handle incidents	0,507375

AI Policy & Regulation	
ESCO Skill	Similarity
ICT security legislation	0,531800
manage data for legal matters	0,527362
intellectual property law	0,525010
apply system organisational policies	0,517646
establish usage policies	0,516671
ensure compliance with legal requirements	0,512007
information governance compliance	0,509907
comply with legal regulations	0,505563
apply company policies	0,504404
security regulations	0,503058

AI Compliance & Regulatory Readiness	
ESCO Skill	Similarity
principles of artificial intelligence	0,520893
ensure compliance with legal requirements	0,513095
comply with legal regulations	0,496251
ensure adherence to organisational ICT standards	0,486045
manage IT security compliances	0,479343
develop documentation in accordance with legal requirements	0,477957
ensure conformity to specifications	0,473446
communicate regulations	0,472047
prepare compliance documents	0,471027
keep up-to-date with regulations	0,467038

Regulatory Reporting & Documentation	
ESCO Skill	Similarity
develop documentation in accordance with legal requirements	0,630068
communicate regulations	0,591441
manage manufacturing documentation	0,586238
prepare compliance documents	0,575659
manage data for legal matters	0,551405
identify market requirements for ICT documentation	0,544477
information governance compliance	0,544091
provide technical documentation	0,537385
ensure compliance with legal requirements	0,536360
make legislation transparent for users of social services	0,528605

Annex T
(informative)

AI role profiles and AI Act actor categories

This annex provides a mapping between the AI role profiles in this CEN Workshop Agreement and the actor categories distinguished by the AI Act [9]. As there is not a one-to-one relationship between the AI Act actor categories and the professional role profiles defined in this CWA, it is important to note that this mapping only *illustrates likely areas of contribution and accountability support*, rather than formal legal designation under the AI Act.

The AI Act applies the following definitions of the different actors:

‘provider’ means a natural or legal person, public authority, agency or other body that develops an AI system or a general-purpose AI model or that has an AI system or a general-purpose AI model developed and places it on the market or puts the AI system into service under its own name or trademark, whether for payment or free of charge [Art.3(3)];

‘deployer’ means a natural or legal person, public authority, agency or other body using an AI system under its authority except where the AI system is used in the course of a personal non-professional activity [Art.3(4)];

‘authorised representative’ means a natural or legal person located or established in the Union who has received and accepted a written mandate from a provider of an AI system or a general-purpose AI model to, respectively, perform and carry out on its behalf the obligations and procedures established by this Regulation [Art.3(5)];

‘importer’ means a natural or legal person located or established in the Union that places on the market an AI system that bears the name or trademark of a natural or legal person established in a third country [Art.3(6)];

‘distributor’ means a natural or legal person in the supply chain, other than the provider or the importer, that makes an AI system available on the Union market [Art.3(7)];

‘operator’ means a provider, product manufacturer, deployer, authorised representative, importer or distributor [Art.3(8)].

Table T.1 — AI role profiles and AI Act actor categories

AI Act actor category	Relevant CWA AI roles	Rationale for mapping
Provider	AI Architect, AI Engineer, AI Application Developer, AI Researcher, AI Product Designer, AI Product Manager, AI Tech Lead, AI Manager, Chief AI Officer, AI Compliance Officer, AI Governance Officer, AI Risk Manager, Responsible AI Officer, AI Security Specialist, AI Quality, Test & Evaluation Specialist, MLOps Engineer, AI Deployment	Providers are responsible for developing AI systems or placing them on the market under their own name or trademark. This requires roles associated with design, development, testing, deployment, governance, documentation, data governance, risk management, safety, security, and regulatory compliance across the AI lifecycle.

AI Act actor category	Relevant CWA AI roles	Rationale for mapping
	Engineer, Data Scientist, Data Engineer, Data Curation Lead	
Deployer	AI Business Analyst, AI Transformation Lead, AI Operations Manager, AI Project Manager, AI Service Support Specialist, Human-AI Interaction Lead, AI Reliability Engineer, AI Observability & Monitoring Specialist, AI Incident Response & Reporting Lead, AI Safety Specialist, Responsible AI Officer, AI Educator, AI Compliance Officer	Deployers use AI systems under their authority and therefore require competencies related to operational implementation, human oversight, monitoring, incident management, workforce AI literacy, organisational adoption, and ensuring lawful and safe use in practice.
Authorised Representative	AI Compliance Officer, AI Governance Officer, AI Risk Manager, Chief AI Officer, AI Advisor, Responsible AI Officer	Authorised representatives perform regulatory and procedural obligations on behalf of providers established outside the Union. This requires expertise in governance, accountability, compliance, risk management, and communication with supervisory authorities.
Importer	AI Compliance Officer, AI Governance Officer, AI Risk Manager, AI Product Manager, AI Operations Manager, AI Security Specialist	Importers place on the Union market AI systems originating from third countries and therefore require competencies in supplier due diligence, conformity verification, contractual governance, cybersecurity, and regulatory assurance.
Distributor	AI Product Manager, AI Transformation Lead, AI Operations Manager, AI Service Support Specialist, AI Compliance Officer	Distributors make AI systems available on the Union market and therefore require awareness of compliance obligations, traceability, operational handling, user support, and communication of instructions and limitations to customers and users.
Operator	All roles	The AI Act defines “operator” as an overarching category covering providers, deployers, authorised representatives, importers, distributors, and product manufacturers. Since AI systems are developed, deployed, governed, monitored, supported, and audited through multidisciplinary collaboration, all professional roles defined in this CWA may contribute to operator responsibilities depending on organisational context.

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