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AI Professional Role Profiles and Educational Profiles

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Foreword

This CEN Workshop Agreement (CWA XXXX:YYYY) 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 YYYY-MM-DD, 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.

The final text of this CEN Workshop Agreement was provided to CEN for publication on YYYY MM-DD.

Results incorporated in this CWA received funding from the European Commission's Erasmus+ programme (Partnerships for Innovation; Alliances for Sectoral Cooperation on Skills), project ARISA (Artificial Intelligence Skills Alliance) under grant agreement No 101056236 — ERASMUS-EDU-2021-PI-ALL-INNO.

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Introduction

This CEN Workshop Agreement (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.

Aim

CEN/CENELEC Workshop Agreement (CWA XXXX:YYYY) 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 artificial intelligence (AI).

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.

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.

Artificial intelligence 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): "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 (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 (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. 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 overall.

The dynamic situation of the AI field

AI constitutes a rapidly evolving and 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 CEN Workshop Agreement 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.

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.

Target audience

This document is addressed to a broad range of stakeholders involved in the development, deployment, use and governance of artificial intelligence, 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.

1 Scope

This CWA provides a set of role profiles and a set of educational profiles in the area of artificial intelligence (AI). 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 (TS 17699).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CWA 16458-1:2018, *European ICT professionals role profiles — Part 1: 30 ICT profiles*

CWA 16458-2:2018 *European ICT professionals role profiles — Part 2: User guides*

CEN/TS 17699:2021, *Guidelines for developing ICT Professional Curricula as scoped by EN 16234-1 (e-CF)*

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, 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, 3.2]

3.3
artificial intelligence
AI
<discipline> research and development of mechanisms and applications of AI systems (3.1.4)

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), 3.1.3]

3.4

artificial intelligence system

AI system

engineered system that generates outputs such as content, forecasts, recommendations or decisions for a given set of human-defined objectives

Note 1 to entry: 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.

Note 2 to entry: AI systems are designed to operate with varying levels of automation.

[SOURCE: ISO/IEC 22989:2022(en), 3.1.4]

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, 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

role

a function or part performed especially in a particular operation or process

3.8

role profile

and tasks in a role and the individual skills, competences and knowledge required to undertake them

[SOURCE: CWA 16458-2:2018]

3.9

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, 3.18]

3.10

task

an 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

3.11

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, 3.8]

3.12

competence

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

[SOURCE: EN 16234-1:2019, 3.5]

3.13

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 characterized 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, 3.11]

3.14

<general>knowledge

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

[SOURCE: EN 17748-1:2022, 3.6]

3.15

common knowledge

knowledge shared by all ICT professionals

[SOURCE: EN 17748-1:2022, 3.7]

3.16

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, 3.9]

3.17

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, 3.7]

3.18

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, 74, p122]

3.19

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, 316, p536]

3.20

learning unit

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

[SOURCE: CEN/TS 17699:2022, 3.29]

3.21

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, 3.32]

3.22

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, 3.34]

3.23

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, 3.33]

3.24
deliverable
tangible or intangible result of a process of development, meant to be provided to another person

[SOURCE: CEN/TS 17699:2022, 3.35]

3.25
assessment
act of judging or deciding the amount, value, quality, or importance of something

[SOURCE: CEN/TS 17699:2022, 3.36]

3.26
summative assessment
assessment that indicates whether a learner has acquired the learning outcomes to an adequate level, usually resulting in a reward such as credits, a certificate or a diploma

[SOURCE: CEN/TS 17699:2022, 3.37]

3.27
formative assessment
assessment that provides insight into the learner's progress and serves as an opportunity to give directions on further development

[SOURCE: CEN/TS 17699:2022, 3.38]

4 Abbreviations and acronyms

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

Table 01 — Abbreviations and acronyms

AI	Artificial intelligence
BI	Business intelligence
Dev	Development
DL	Deep learning
ICT	Information and communication technology
LLM	Large language model
ML	Machine learning
NLP	Natural language processing
Ops	Operations
UX	User experience

5 The AI professional

The role and educational profiles presented in this CWA are focused on professionals, specifically AI professionals. Obviously, AI belongs to the field of IT and AI professionals are IT professionals, 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.

5.1 The AI user

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.

5.1.1 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.

5.1.2 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 01. 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.

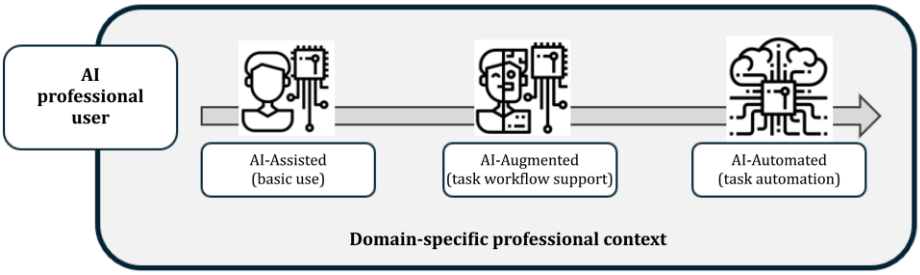


Figure 01 — The professional user of AI

5.2 The AI professional

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.

5.2.1 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 industries 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[1]:

- 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,

[1] Innovation Value Institute (IVI) & Council of European Professional Informatics Societies (CEPIS) (2012). *E-Skills and ICT Professionalism, Fostering the ICT Profession in Europe*, European Commission.
At: https://op.europa.eu/en/publication-detail/-/publication/c2fb780a-19fd-4aa2-984a-8024d8378f0a

- 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.

5.2.2 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, professional users and professionals are regularly 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 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 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 a 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. In addition, there are several other aspects that distinguish the AI professional from the professional user, as discussed above.

Annex O compares lay users, professional users and AI professionals and how they relate to AI systems depending on their role and level of responsibility.

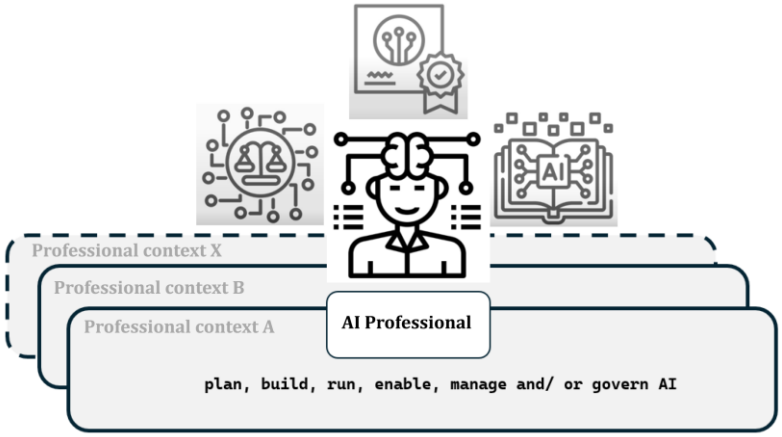


Figure 02 — The AI professional

5.3 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 live, 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[2] 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, Art 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 available[3], 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.

[2] Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence … (Artificial Intelligence Act)
ELI: http://data.europa.eu/eli/reg/2024/1689/oj

[3] Of which the frameworks of UNESCO (AI competency framework for teachers (2024) https://doi.org/10.54675/ZJTE2084 and AI competency framework for students (2024) https://doi.org/10.54675/JKJB9835) and of OECD (AI Literacy Framework for Primary and Secondary Education (2025) https://ailiteracyframework.org/) are well known.

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, 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 P the key differences between AI literacy and AI professionalism are clarified further.

6 AI professional role profiles

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. This set of professional AI job profiles can help to dynamically address the staffing needs of this market.

6.1 Professional role profiles basic principles

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 personal development 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 should be considered 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.

6.1.1 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. 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.

6.2 AI professional role profiles

The CEN Workshop Agreement aims to enhance transparency and alignment within the European AI competences and skills landscape by introducing a set of European AI professional profiles. To address the current diversity in AI job 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. These profiles serve as a reference for European stakeholders to develop the needed context-specific AI functions. 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[4], 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.

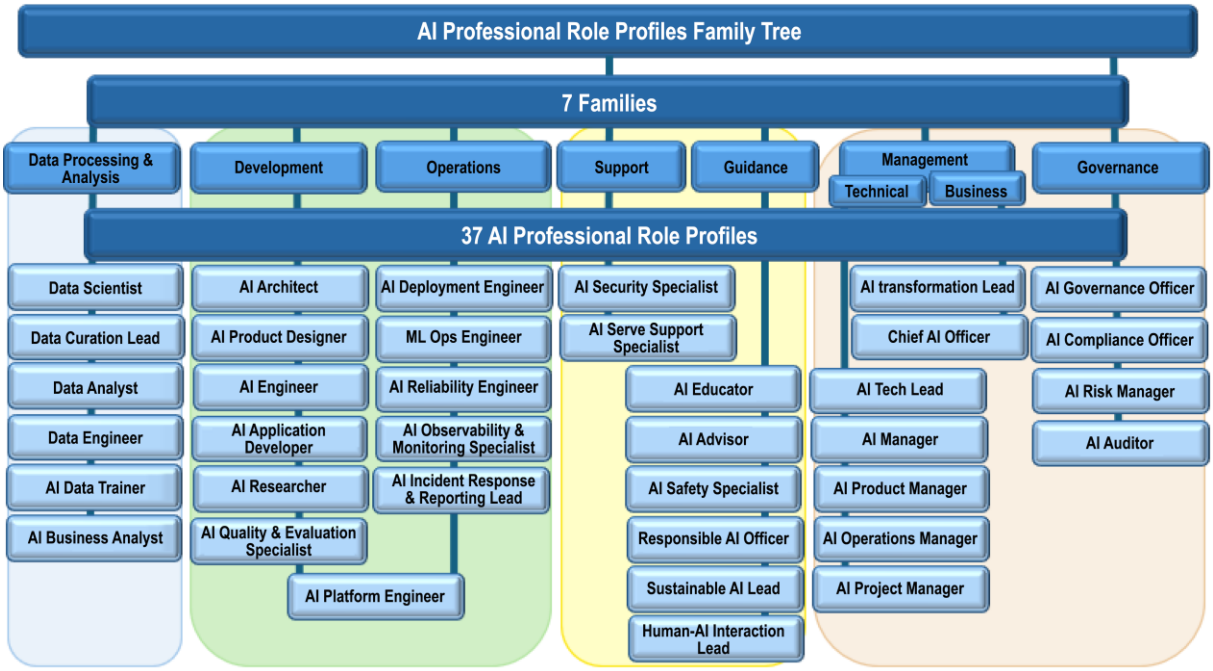


Figure 03 — AI professional role profiles family tree

The seven AI professional families collectively span the full OECD AI System Lifecycle[5]. 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.

The AI professional role profiles as presented in this document are derived from the generic set of European ICT professional role profiles (CWA 16458)[6]. The relation to this document is explained in Annex F. Annex G describes the criteria used for adding a role.

[4] EN 16234-1:2019, *e-Competence Framework (e-CF) - A common European Framework for ICT Professionals in all sectors - Part 1: Framework.*

[5] OECD (2022). *OECD Framework for the Classification of AI systems*. OECD Digital Economy Papers, No. 323, OECD Publishing, Paris. https://doi.org/10.1787/cb6d9eca-en

[6] CWA 16458-1:2018 CEN Workshop Agreement (CWA) –*European ICT Professional Role Profiles version 2 –Part 1: Full descriptions.*

The AI 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), a list of AI skill areas and descriptions (Annex J), AI role profiles mapped to AI skill areas (Annex K), AI role profiles mapped to personal skills (Annex L), AI role profiles mapped to interpersonal skills (Annex M), and AI role profiles mapped to deliverables (Annex N).

6.2.1 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 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.

6.2.2 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[7], 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.

[7] High-Level Expert Group on AI (AI HLEG)(2019). *Ethics guidelines for trustworthy AI*. https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai

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 a 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". The specification uses *deliverables* such as "Legal and Ethical Considerations" and "AI Ethics KPI's"; *AI skills* such as "AI Ethics", "Safe & Responsible AI" and "AI Business Application & Impact"; and *tasks* such as "Comply with ethical guidelines" and "Identify and mitigate ethical and safety risks".

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 European Professional Ethics Framework for the ICT Profession (EU ICT Ethics). 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, organization or humanity. In practice, it is concerned with how IT professionals and IT management should make decisions regarding professional conduct[8]. Ethics is also an element of the ethical dimensions of personal/interpersonal skills.

7 AI Educational Profiles

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.

7.1 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.

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

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 should be considered that there may be several educational profiles that relate to a single professional role profile. 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, 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.

7.2 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 (TS 17699), that contains guidelines for developing ICT professional curricula[9]. Usually, an educational profile contains a general description, a set of programme learning outcomes, a set of unit learning outcomes and summative assessments.

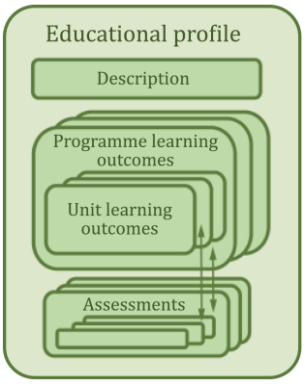


Figure 04 — Elements of an educational profile[10]

[9] CEN/TS 17699:2022, *Guidelines for developing ICT Professional Curricula as scoped by EN 16234-1 (e-CF).*

[10] Figure taken from: TS 17699:2021.

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 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 competencies 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 necessary ones are. The set can also be easily adapted to local, context-specific requirements. 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.

The full descriptions of all 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. Annex E provides a short explanation of this template.

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 CWA 16458 for European ICT professional role profiles.

Annex E. Educational Profile Template

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

Annex F. Creating AI Professional Role Profiles using European ICT professional role profiles (CWA 16458)

Short description how the AI Role Profiles were created, based on CWA 16458.

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 role profiles vs 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), including indicative proficiency levels.

Annex J. AI skill areas descriptions

The concise descriptions for each AI skill area.

Annex K. Table – AI role profiles vs AI skill areas

A table that links role profiles to AI skill areas.

Annex L. Table – AI role profiles vs personal skills

A table that links role profiles to personal skills.

Annex M. Table – AI role profiles vs interpersonal skills

A table that links role profiles to interpersonal skills.

Annex N. Table – AI role profiles vs deliverables

A table that links role profiles to deliverables.

Annex O. Comparison between 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 P. Key differences between AI literacy and AI professionalism

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

Annex B
(normative)

Role Profiles for AI Professionals

B.1 Clause title

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, covering their purpose, core responsibilities, tasks, required competences and associated 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 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. These provide a list of role titles and their alternative titles and cross-references between AI role profiles and e-Competence Framework (e-CF) competences, AI skill areas, personal and interpersonal skills, and key deliverables. 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.

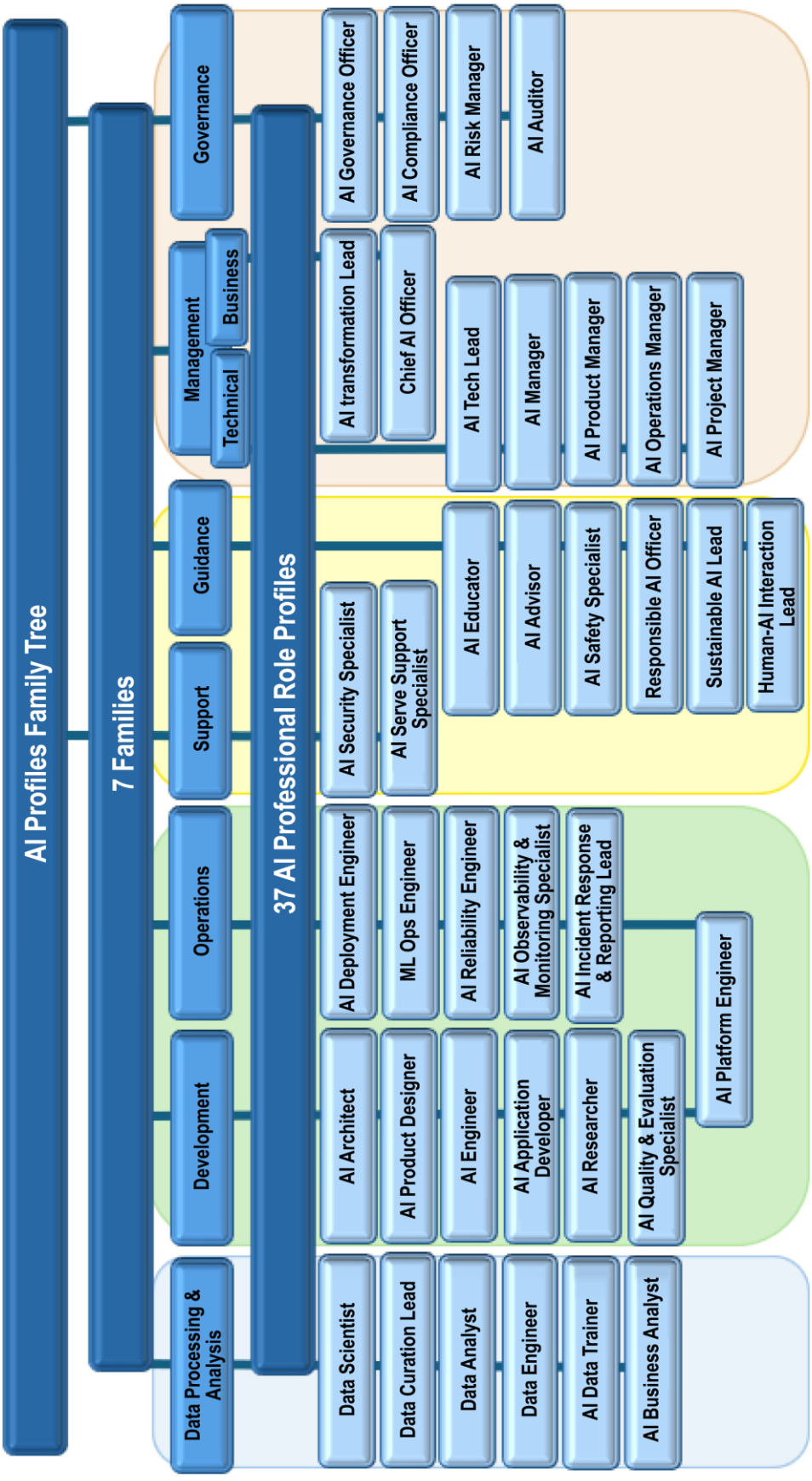


Figure B.1 — Family Tree

B.2 Data Processing & Analysis Roles

<table>
<tr><td> </td><td colspan="3">DATA PROCESSING & ANALYSIS</td><td>[1]</td></tr>
<tr><td>Profile title</td><td colspan="3">DATA SCIENTIST</td><td>[1.1]</td></tr>
<tr><td>Related titles</td><td colspan="4">Data Scientist AI, AI Data Scientist.</td></tr>
<tr><td>Summary statement</td><td colspan="4">Leads the process of applying data analytics. Delivers insights from data by optimising the analytics process and presenting visual data representations.</td></tr>
<tr><td>Mission</td><td colspan="4">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.</td></tr>
<tr><td>Deliverables</td><td colspan="2">Accountable</td><td>Responsible</td><td>Contributor</td></tr>
<tr><td></td><td colspan="2">• Annotation and Judgment
• Data Collection and Representation
• Execution Evaluation Tasks</td><td>• Business Insights from Data
• Data Management Plan
• Data Selection
• Experiment design
• Disseminating Findings
• Original High Quality Research</td><td>• Data Analytics
• Data Management System
• Data Model
• Evaluation Outcome Reporting
• Incident Response Plan
• Test Plan</td></tr>
<tr><td>Main tasks</td><td colspan="4">• 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</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td>Descriptor</td></tr>
<tr><td>e-Competences
(from e-CF)</td><td>A.7.</td><td>Technology Trend Monitoring</td><td>e-4</td><td>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.</td></tr>
</table>

	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.
	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.
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 • Solve problems • Think innovatively		*Self-management skills* • Attend to detail • Assume accountability • Cope with uncertainty • Exert willingness to learn	*Social and communication skills* • Communicate • Teach, train, instruct others • Work in teams • Build team spirit • 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.	
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

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

<table>
<tr><th></th><th colspan="2"></th><th>Level</th><th colspan="2">Descriptor</th></tr>
<tr><td rowspan="6">e-Competences
(from e-CF)</td><td>A.4.</td><td>Product/ Service Planning</td><td>e-3</td><td colspan="2">Plans and manages product or service activities, including AI-enabled elements, ensuring alignment with business objectives, delivery constraints and regulatory requirements.</td></tr>
<tr><td>D.2.</td><td>ICT Quality Strategy Development</td><td>e-4</td><td colspan="2">Defines, evolves, and integrates AI quality objectives across projects and value streams. Guides teams to ensure trustworthy and resilient AI systems.</td></tr>
<tr><td>D.7.</td><td>Data Science and Analytics</td><td>e-4</td><td colspan="2">Leads data science and analytics initiatives that enable AI solutions, optimising AI-supported processes and organisational decision-making.</td></tr>
<tr><td>E.3.</td><td>Risk Management</td><td>e-3</td><td colspan="2">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.</td></tr>
<tr><td>E.5.</td><td>Process Improvement</td><td>e-3</td><td colspan="2">Independently performs and monitors AI development and operational processes. Contributes to AI process evaluation, improvement suggestions, and risk awareness.</td></tr>
<tr><td>E.6.</td><td>ICT Quality Management</td><td>e-4</td><td colspan="2">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.</td></tr>
<tr><td>Transversal aspects
(from e-CF)</td><td colspan="5">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</td></tr>
<tr><td>Personal and interpersonal skills</td><td colspan="2">Thinking skills
Think analytically
Organise information
Identify problems
Think creatively</td><td colspan="2">Self-management skills
Focus on quality
Attend to detail
Assume accountability</td><td>Social and communication skills
Communicate
Teach, train, instruct others
Work in teams
Build team spirit
Comply with regulations</td></tr>
<tr><td>KPI area</td><td colspan="5">Datasets that meet agreed quality, metadata, and governance standards</td></tr>
</table>

	DATA PROCESSING & ANALYSIS	**[1]**
Profile title	**DATA ANALYST**	**[1.3]**
Related titles	Data Analyst AI, AI Data Analyst, AI Analyst, Big Data 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 *(from e-CF)*	**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.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-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.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.
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 • Improvise	*Self-management skills* • Attend to detail • Assume responsibility • Cope with uncertainty • Exert willingness to learn	*Social and communication skills* • Report • Work in teams • Build team spirit • Comply with regulations	
KPI area	Value, quality, effectiveness and timeliness of data analytics			

<table>
<tr><td> </td><td colspan="3">DATA PROCESSING & ANALYSIS</td><td>[1]</td></tr>
<tr><td>Profile title</td><td colspan="3">DATA ENGINEER</td><td>[1.4]</td></tr>
<tr><td>Related titles</td><td colspan="4">Data Engineer AI, AI Data Engineer, Big Data Engineer, Big Data Specialist.</td></tr>
<tr><td>Summary statement</td><td colspan="4">Develops the architecture needed to process, manage, and store large amounts of data.</td></tr>
<tr><td>Mission</td><td colspan="4">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.</td></tr>
<tr><td>Deliverables</td><td colspan="2">Accountable</td><td>Responsible</td><td>Contributor</td></tr>
<tr><td></td><td colspan="2">• Annotating and Labelling Datasets</td><td>• Built Pipeline
• Data Infrastructure
• Data Model
• Data Pipeline Integration
• Data Pipeline Reliability and Scalability</td><td>• Automated Workflows
• Data Collection and Representation
• Data Selection
• Incident Response Plan
• Data Management Plan</td></tr>
<tr><td>Main tasks</td><td colspan="4">• 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</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td>Descriptor</td></tr>
<tr><td rowspan="3">e-Competences
(from e-CF)</td><td>A.5.</td><td>Architecture Design</td><td>e-3</td><td>Independently implements and adapts AI-enabled architectural solutions. Ensures alignment with enterprise architecture and policies. Identifies minor risks and recommends improvements.</td></tr>
<tr><td>B.2.</td><td>Component Integration</td><td>e-3</td><td>Independently integrates AI components into systems, ensuring interoperability, performance and security. Selects appropriate integration approaches and contributes to AI system design.</td></tr>
<tr><td>B.6.</td><td>Systems Engineering</td><td>e-3</td><td>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.</td></tr>
</table>

	D.7.	Data Science and Analytics	e-2	Applies basic data collection, cleaning, and analysis techniques to support AI-driven projects under supervision.
	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-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.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.
	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)*	*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 • Solve problems • Improvise	*Self-management skills* • Focus on quality • Assume accountability • Cope with uncertainty • Exert willingness to learn	*Social and communication skills* • Communicate • Teach, train, instruct others • Work in teams • Build team spirit • Comply with regulations
KPI area	Effectiveness of data pipelines and infrastructure		

<table>
<tr><td> </td><td colspan="3">DATA PROCESSING & ANALYSIS</td><td>[1]</td></tr>
<tr><td>Profile title</td><td colspan="3">AI DATA TRAINER</td><td>[1.5]</td></tr>
<tr><td>Related titles</td><td colspan="4">Training Data Specialist, Data Annotation Specialist, Data Annotator, AI Data Labelling, Labelling Specialist, Training Data Annotator, Data Tagging Specialist.</td></tr>
<tr><td>Summary statement</td><td colspan="4">Ensures that training datasets are fit for purpose without bias.</td></tr>
<tr><td>Mission</td><td colspan="4">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.</td></tr>
<tr><td>Deliverables</td><td colspan="2">Accountable</td><td>Responsible</td><td>Contributor</td></tr>
<tr><td></td><td colspan="2">• Quality of AI Dataset and Annotations</td><td>• Annotating and Labelling Datasets
• Data Verification and Validation
• Evaluation of AI Performance</td><td>• AI Solution Requirements
• Data Acquisition
• Data Annotation Guidelines
• New AI Solution Proposal</td></tr>
<tr><td>Main tasks</td><td colspan="4">• 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.</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td>Descriptor</td></tr>
<tr><td>e-Competences
(from e-CF)</td><td>B.3.</td><td>Testing</td><td>e-2</td><td>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.</td></tr>
<tr><td></td><td>B.5.</td><td>Documentation Production</td><td>e-2</td><td>Produces simple AI-related documents following established templates and guidelines.</td></tr>
<tr><td></td><td>D.7.</td><td>Data Science and Analytics</td><td>e-2</td><td>Applies basic data collection, cleaning, and analysis techniques to support AI-driven projects under supervision.</td></tr>
<tr><td></td><td>D.11</td><td>Needs Identification</td><td>e-3</td><td>Independently engages stakeholders to identify and validate needs, translating them into AI solution requirements.</td></tr>
<tr><td>Transversal aspects
(from e-CF)</td><td colspan="4">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</td></tr>
</table>

Personal and interpersonal skills	*Thinking skills* • Think analytically • Plan activities • Solve problems • Improvise	*Self-management skills* • Meet commitments • Assume responsibility • Cope with uncertainty • Exert willingness to learn	*Social and communication skills* • Communicate • Teach, train, instruct others • Build team spirit • Comply with regulations
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, Data & Analytics Translator, Decision Engineer.	
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 *(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.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.
	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 *(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 holistically • Plan activities • Identify problems • Solve problems • Think creatively	*Self-management skills* • Meet commitments • Exert result-orientedness • Cope with uncertainty • Exert willingness to learn	*Social and communication skills* • Persuade • Negotiate • Exert customer orientedness • Work in teams • 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.3 Development and Operations Roles

<table>
<tr><td></td><td colspan="3">DEVELOPMENT & OPERATIONS</td><td>[2]</td></tr>
<tr><td>Profile title</td><td colspan="3">AI ARCHITECT</td><td>[2.1]</td></tr>
<tr><td>Related titles</td><td colspan="4">AI Solution Architect, AI Enterprise Architect, AI Infrastructure Engineer, Agentic AI System Architect.</td></tr>
<tr><td>Summary statement</td><td colspan="4">Plans, designs and integrates the AI architecture.</td></tr>
<tr><td>Mission</td><td colspan="4">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.</td></tr>
<tr><td>Deliverables</td><td>Accountable</td><td>Responsible</td><td colspan="2">Contributor</td></tr>
<tr><td></td><td>• Data Architecture
• Data Management System
• Data Model
• Data Infrastructure
• ML Workflows
• AI/ML Security Guidelines</td><td>• Choice of Technology
• Selecting Models, Architecture and Techniques
• Infrastructure Strategy
• Integrated AI Solution
• System Architecture</td><td colspan="2">• AI Strategy & Implementation
• Business Requirements for AI Exploitation
• AI Solution Requirements
• Budget Plan
• Development Process</td></tr>
<tr><td>Main tasks</td><td colspan="4">• 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</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td>Descriptor</td></tr>
<tr><td>e-Competences
(from e-CF)</td><td>A.1.</td><td>IS and Business Strategy Alignment</td><td>e-4</td><td>Aligns IS and AI strategy with business strategy, integrating AI capabilities into enterprise architecture while managing risk, sourcing, and governance.</td></tr>
</table>

	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.
	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)*	*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 • 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 • Work in teams • Exert organisation sensitivity • Motivate others • Comply with regulations
KPI area	Effectiveness and efficiency of AI solution implementation		

<table>
<tr><td> </td><td colspan="3">DEVELOPMENT & OPERATIONS</td><td>[2]</td></tr>
<tr><td>Profile title</td><td colspan="3">AI PRODUCT DESIGNER</td><td>[2.2]</td></tr>
<tr><td>Related titles</td><td colspan="4">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.</td></tr>
<tr><td>Summary statement</td><td colspan="4">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.</td></tr>
<tr><td>Mission</td><td colspan="4">Ensures AI products and services are intuitive, usable, and aligned with user and business needs.</td></tr>
<tr><td>Deliverables</td><td colspan="2">Accountable</td><td>Responsible</td><td>Contributor</td></tr>
<tr><td></td><td colspan="2">• Human–AI Interaction Design
• Trust & Usability of AI Experiences</td><td>• AI Experience Design Specs
• AI System User Instructions</td><td>• Product Strategy & Feature Definition
• AI Governance Policy</td></tr>
<tr><td>Main tasks</td><td colspan="4">• 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 behavior, 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</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td>Descriptor</td></tr>
<tr><td rowspan="2">e-Competences
(from e-CF)</td><td>A.4.</td><td>Product/Service Planning</td><td>e-3</td><td>Plans and manages product or service activities, including AI-enabled elements, ensuring alignment with business objectives, delivery constraints and regulatory requirements.</td></tr>
<tr><td>A.6.</td><td>Application Design</td><td>e-3</td><td>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.</td></tr>
</table>

	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* • Identify problems • Solve problems • Think creatively	*Self-management skills* • Focus on quality • Meet commitments • Assume responsibility • Exert willingness to learn	*Social and communication skills* • Communicate • 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 • Test Result

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)*	*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 • Plan activities • Solve problems • Think innovatively	*Self-management skills* • Meet commitments • Assume responsibility • Cope with uncertainty • Exert willingness to learn	*Social and communication skills* • Communicate • Teach, train, instruct others • Work in teams • Build team spirit • Comply with regulations
KPI area	Fully functional AI models, systems and algorithms		

<table>
<tr><td> </td><td colspan="3">DEVELOPMENT & OPERATIONS</td><td>[2]</td></tr>
<tr><td>Profile title</td><td colspan="3">AI APPLICATION DEVELOPER</td><td>[2.4]</td></tr>
<tr><td>Related titles</td><td colspan="4">AI Developer, AI Software 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.</td></tr>
<tr><td>Summary statement</td><td colspan="4">Designs and develops AI applications to meet solution specifications.</td></tr>
<tr><td>Mission</td><td colspan="4">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.</td></tr>
<tr><td>Deliverables</td><td colspan="2">Accountable</td><td>Responsible</td><td>Contributor</td></tr>
<tr><td></td><td colspan="2">• Documented Code</td><td>• Functioning AI System
• AI/ML Component
• Integrated AI Solution</td><td>• AI Solution Documentation</td></tr>
<tr><td>Main tasks</td><td colspan="4">• 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</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td>Descriptor</td></tr>
<tr><td rowspan="4">e-Competences
(from e-CF)</td><td>A.6.</td><td>Application Design</td><td>e-3</td><td>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.</td></tr>
<tr><td>B.1.</td><td>Application Development</td><td>e-3</td><td>Develops AI-enhanced applications according to specifications, integrating AI/ML models into software solutions. Applies established AI platforms and frameworks to achieve functional requirements.</td></tr>
<tr><td>B.2.</td><td>Component Integration</td><td>e-3</td><td>Independently integrates AI components into systems, ensuring interoperability, performance and security. Selects appropriate integration approaches and contributes to AI system design.</td></tr>
<tr><td>B.3.</td><td>Testing</td><td>e-2</td><td>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.</td></tr>
</table>

<table>
<tr><td></td><td>B.5.</td><td>Documentation Production</td><td>e-3</td><td colspan="3">Independently produces and maintains AI documentation that integrates technical and compliance requirements.</td></tr>
<tr><td>Transversal aspects
(from e-CF)</td><td colspan="6">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</td></tr>
<tr><td>Personal and interpersonal skills</td><td colspan="2">Thinking skills
Think analytically
Plan activities
Solve problems
Think innovatively</td><td colspan="2">Self-management skills
Meet commitments
Assume responsibility
Cope with uncertainty
Exert willingness to learn</td><td>Social and communication skills
Communicate
Teach, train, instruct others
Work in teams
Build team spirit
Comply with regulations</td></tr>
<tr><td>KPI area</td><td colspan="6">Fully functional AI applications</td></tr>
</table>

<table>
<tr><td></td><td colspan="4">DEVELOPMENT & OPERATIONS</td><td>[2]</td></tr>
<tr><td>Profile title</td><td colspan="4">AI RESEARCHER</td><td>[2.5]</td></tr>
<tr><td>Related titles</td><td colspan="5">ML Researcher, AI/ML Scientist, AI Research Scientist, AI Research Engineer.</td></tr>
<tr><td>Summary statement</td><td colspan="5">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.</td></tr>
<tr><td>Mission</td><td colspan="5">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.</td></tr>
<tr><td>Deliverables</td><td colspan="2">Accountable</td><td colspan="2">Responsible</td><td>Contributor</td></tr>
<tr><td></td><td colspan="2">• Experiment Design
• Original high quality research
• Disseminating Findings
• Research Impact and - Publications</td><td colspan="2">• Developed AI Models and Experiments
• Ethical Standards in Research
• Research Strategies for AI Policies</td><td>• AI Model
• Community Engagement
• Educational Initiatives
• Knowledge or Information Base
• Selecting Models, Architecture and Techniques</td></tr>
<tr><td>Main tasks</td><td colspan="5">• 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</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td colspan="2">Descriptor</td></tr>
<tr><td>e-Competences
(from e-CF)</td><td>A.7.</td><td>Technology Trend Monitoring</td><td>e-5</td><td colspan="2">Provides strategic vision and authority for ICT and AI innovation. Initiates and governs transformational AI initiatives and shapes long-term AI adoption strategies.</td></tr>
<tr><td></td><td>A.9.</td><td>Innovating</td><td>e-5</td><td colspan="2">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.</td></tr>
</table>

	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)*	*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 • Solve problems • Think creatively	*Self-management skills* • Act independently • Forms judgements • Manage frustration • Demonstrate curiosity	*Social and communication skills* • Promote • Teach, train, instruct others • Build and maintain networks • Hold a vision • Exert ethical behaviour	
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	• Annotation and Judgment Task • Feedback Documentation • Executed Evaluation Tasks • Test result	• Validated AI Solution • Quality Assurance and Auditing • AI solution documentation • Legal, Ethical and Safety Compliance

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-centeredness 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 *(from e-CF)*	**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 • Exert willingness to learn	*Social and communication skills* • Report • Build team spirit • Comply with regulations
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, 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**
		• Model Deployment Pipelines • CI/CD Pipelines	• 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 *(from e-CF)*	**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)*	*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 • Plan activities • Identify problems • Solve problems • Think innovatively	*Self-management skills* • Focus on quality • Assume responsibility • Cope with uncertainty • Exert willingness to learn	*Social and communication skills* • 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 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	• 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 • Standardise 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 *(from e-CF)*	**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.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 *(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 • Plan activities • Solve problems • Improvise	*Self-management skills* • Act independently • Assume accountability • Cope with uncertainty • Exert willingness to learn	*Social and communication skills* • Communicate • 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**
	• Test Result	• Evaluation of Quality and Reliability • Quality Assurance and Auditing • Scalability and Reliability	• Metric Development • Software Quality • Test Procedure
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		

<table>
<tr><th></th><th colspan="2"></th><th>Level</th><th>Descriptor</th></tr>
<tr><td rowspan="4">e-Competences
(from e-CF)</td><td>B.3.</td><td>Testing</td><td>e-3</td><td>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.</td></tr>
<tr><td>C.5.</td><td>Systems Management</td><td>e-3</td><td>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.</td></tr>
<tr><td>E.3.</td><td>Risk Management</td><td>e-3</td><td>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.</td></tr>
<tr><td>E.6.</td><td>ICT Quality Management</td><td>e-3</td><td>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.</td></tr>
<tr><td>Transversal aspects
(from e-CF)</td><td colspan="4">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</td></tr>
<tr><td>Personal and interpersonal skills</td><td colspan="2">Thinking skills
Think analytically
Think critically
Identify problems
Improvise</td><td>Self-management skills
Focus on quality
Forms judgements
Cope with stress
Manage frustration
Exert willingness to learn</td><td>Social and communication skills
Report
Comply with regulations</td></tr>
<tr><td>KPI area</td><td colspan="4">Reliable and resilient AI systems and pipelines</td></tr>
</table>

	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

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 *(from e-CF)*	**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)*	*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 • Identify problems • Improvise	*Self-management skills* • Focus on quality • Forms judgements • Cope with stress • Manage frustration • Exert willingness to learn	*Social and communication skills* • Report • Comply with regulations	
KPI area	AI systems that are observable, measurable, and trustworthy in operation			

<table>
<tr><td></td><td colspan="4">DEVELOPMENT & OPERATIONS</td><td>[2]</td></tr>
<tr><td>Profile title</td><td colspan="4">AI INCIDENT RESPONSE & REPORTING LEAD</td><td>[2.11]</td></tr>
<tr><td>Related titles</td><td colspan="5">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.</td></tr>
<tr><td>Summary statement</td><td colspan="5">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.</td></tr>
<tr><td>Mission</td><td colspan="5">Ensures safe, reliable, and accountable AI operations by leading incident response, analysing root causes, and providing clear, actionable reporting to stakeholders and regulators.</td></tr>
<tr><td>Deliverables</td><td colspan="2">Accountable</td><td>Responsible</td><td colspan="2">Contributor</td></tr>
<tr><td></td><td colspan="2">• Incident Response plan
• Incident Report</td><td>• AI Risk Dashboards & Metrics
• Regulatory Compliance Submissions</td><td colspan="2">• AI System Improvements
• Organisational Risk & Governance Reports</td></tr>
<tr><td>Main tasks</td><td colspan="5">• 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</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td colspan="2">Descriptor</td></tr>
<tr><td rowspan="2">e-Competences
(from e-CF)</td><td>B.5.</td><td>Documentation Production</td><td>e-3</td><td colspan="2">Independently produces and maintains AI documentation that integrates technical and compliance requirements.</td></tr>
<tr><td>C.3.</td><td>Service Delivery</td><td>e-3</td><td colspan="2">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.</td></tr>
</table>

	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)*	*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 quickly • Solve problems	*Self-management skills* • Focus on quality • Make decisions • Assume accountability • Cope with uncertainty	*Social and communication skills* • Report • Collaborate with others • Manage others • 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**
		• AI Solution in Operation • Operational Guidelines for AI Platform Usage	• End-to-End AI Deployment Pipelines • AI Model Performance & Scalability Reports

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 *(from e-CF)*	**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 *(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 quickly • Plan activities • Solve problems • Improvise	*Self-management skills* • Meet commitments • Assume responsibility • Cope with stress • Exert willingness to learn	*Social and communication skills* • Communicate • Exert customer orientedness • Comply with regulations
KPI area	Effectiveness of AI infrastructure in operation		

B.4 Support and Guidance Roles

	SUPPORT & GUIDANCE		**[3]**
Profile title	**AI SECURITY SPECIALIST**		**[3.1]**
Related titles	AI Security Engineer, AI Security Professional, AI Security Operations Center 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	• Incident Response Plan • AI Security Strategy • Information Security Risk Assessment • Security Measures against AI/ ML-Specific Attacks	• AI/ML Security Guidelines • AI Compliance Risk Mitigation Plan • Risk Management Policy • Information Security Risk Treatment Plan • Information Security Policy • Secure and Compliant Solution
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		

<table>
<tr><th></th><th colspan="2"></th><th>Level</th><th>Descriptor</th></tr>
<tr><td rowspan="8">e-Competences
(from e-CF)</td><td>A.5.</td><td>Architecture Design</td><td>e-3</td><td>Independently implements and adapts AI-enabled architectural solutions. Ensures alignment with enterprise architecture and policies. Identifies minor risks and recommends improvements.</td></tr>
<tr><td>A.7.</td><td>Technology Trend Monitoring</td><td>e-4</td><td>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.</td></tr>
<tr><td>C.4.</td><td>Problem Management</td><td>e-3</td><td>Independently diagnoses and resolves routine ICT and AI incidents. Applies established procedures to prevent recurrence.</td></tr>
<tr><td>D.1.</td><td>Information Security Strategy Development</td><td>e-4</td><td>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.</td></tr>
<tr><td>D.3.</td><td>Education and Training Provision</td><td>e-3</td><td>Implements AI training programs and integrates AI learning into development plans.</td></tr>
<tr><td>E.3.</td><td>Risk Management</td><td>e-3</td><td>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.</td></tr>
<tr><td>E.8.</td><td>Information Security Management</td><td>e-4</td><td>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.</td></tr>
<tr><td>Transversal aspects
(from e-CF)</td><td colspan="4">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</td></tr>
<tr><td>Personal and interpersonal skills</td><td colspan="2">Thinking skills
Think critically
Plan activities
Identify problems
Improvise</td><td>Self-management skills
Focus on quality
Assume accountability
Cope with uncertainty
Exert willingness to learn</td><td>Social and communication skills
Report
Teach, train, instruct others
Work in teams
Comply with regulations</td></tr>
<tr><td>KPI area</td><td colspan="4">Effectiveness of security measures in place</td></tr>
</table>

<table>
<tr><td> </td><td colspan="3">SUPPORT & GUIDANCE</td><td>[3]</td></tr>
<tr><td>Profile title</td><td colspan="3">AI SERVICE SUPPORT SPECIALIST</td><td>[3.2]</td></tr>
<tr><td>Related titles</td><td colspan="4">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.</td></tr>
<tr><td>Summary statement</td><td colspan="4">Provides remote or onsite diagnosis and user support to internal or external clients with technical issues regarding AI-enabled services.</td></tr>
<tr><td>Mission</td><td colspan="4">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.</td></tr>
<tr><td>Deliverables</td><td>Accountable</td><td>Responsible</td><td colspan="2">Contributor</td></tr>
<tr><td></td><td>• Resolved Support Tickets/Incident Records
• User Support Case Resolution Outcomes</td><td>• Incident and Service Support Reports
• Troubleshooting Guides</td><td colspan="2">• Continuous Service Improvement Backlog</td></tr>
<tr><td>Main tasks</td><td colspan="4">• 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</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td>Descriptor</td></tr>
<tr><td>e-Competences
(from e-CF)</td><td>C.1.</td><td>User Support</td><td>e-2</td><td>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.</td></tr>
</table>

	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	*Thinking skills* • Think quickly • Identify problems • Solve problems	*Self-management skills* • Focus on quality • Assume responsibility • Exert result-orientedness • Manage frustration	*Social and communication skills* • Communicate • Report • Show empathy • Exert customer orientednss
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.	
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 Training Policy • AI Learning Programme/Training Course • AI Literacy Programme • Educational Initiatives	• AI Training Policy • Quality Assurance (Training) • Legal, Ethical and Safety Compliance • AI Literacy Programme

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 programs 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)*	*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 • Organise information • Think innovatively • Improvise	*Self-management skills* • Focus on quality • Attend to detail • Assume accountability • Forms judgements • Exert willingness to learn • Demonstrate curiosity	*Social and communication skills* • Communicate • Show empathy • Exert customer orientedness • Coach, mentor, advise others • Teach, train, instruct others • Exert social awareness • Motivate others • 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 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 • Research Strategies for AI Policies • Information Security Risk Assessment • 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 *(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.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 *(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 • Think holistically • Identify problems • Solve problems • Think creatively • Think innovatively	*Self-management skills* • Focus on quality • Meet commitments • Show initiative • Forms judgements • Cope with uncertainty • Manage frustration	*Social and communication skills* • 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	Relevance of proposals regarding AI solutions to business needs		

<table>
<tr><td> </td><td colspan="3">SUPPORT & GUIDANCE</td><td>[3]</td></tr>
<tr><td>Profile title</td><td colspan="3">AI SAFETY SPECIALIST</td><td>[3.5]</td></tr>
<tr><td>Related titles</td><td colspan="4">AI Safety Expert, Safety Expert for AI Systems, AI Safety Engineer, AI Trust and Safety Engineer, AI Safety ML Engineer.</td></tr>
<tr><td>Summary statement</td><td colspan="4">Ensures that AI systems are developed, deployed, and maintained with a focus on user safety, trust, and ethical standards.</td></tr>
<tr><td>Mission</td><td colspan="4">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.</td></tr>
<tr><td>Deliverables</td><td colspan="2">Accountable</td><td>Responsible</td><td>Contributor</td></tr>
<tr><td></td><td colspan="2">• Safety of Stakeholders
• Incident Response</td><td>• Safety Plans</td><td>• Legal, Ethical and Safety Standards
• AI Compliance Risk Mitigation Plan
• Guidelines, Recommendations and Regulations regarding AI
• Risk Management Policy</td></tr>
<tr><td>Main tasks</td><td colspan="4">• 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</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td>Descriptor</td></tr>
<tr><td>e-Competences
(from e-CF)</td><td>A.5.</td><td>Architecture Design</td><td>e-3</td><td>Independently implements and adapts AI-enabled architectural solutions. Ensures alignment with enterprise architecture and policies. Identifies minor risks and recommends improvements.</td></tr>
</table>

	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.
	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-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 programs 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-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)*	*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 critically • Plan activities • Identify problems • Improvise	*Self-management skills* • Focus on quality • Assume accountability • Cope with uncertainty • Exert willingness to learn	*Social and communication skills* • Report • Teach, train, instruct others • Work in teams • 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	• AI Ethics KPI's • AI Ethics Policy • Fundamental Rights Impact Assessment • Legal and Ethical Considerations	• Risk Management Policy • AI Literacy Programme • 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 and KPI's governing the ethical, human-centric use of AI technologies • Identify and mitigate ethical and safety risks associated with AI systems and practices • Ensure AI systems comply with data privacy regulations and oversees measures to protect sensitive information • 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 • Conduct training programs on AI ethics for employees • Provide leadership for ensuring 'human-centricity' by design • Promote implementation of corporate mechanisms to handle AI ethics issues • 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 *(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.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 programs 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.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.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.
	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)*	*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 • Identify problems	*Self-management skills* • Act independently • Focus on quality • Attend to detail • Show initiative • Show commitment • Show determination • Forms judgements • Manage frustration	*Social and communication skills* • Communicate • Promote • Persuade • Report • Coach, mentor, advise others • Teach, train, instruct others • Exert political sensitivity • 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.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-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.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 *(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 holistically • Think creatively • Think innovatively	*Self-management skills* • Act independently • Focus on quality • Show initiative • Make decisions • Show determination • Manage frustration	*Social and communication skills* • Promote • Persuade • Negotiate • Teach, train, instruct others • Hold a vision • Exert ethical behaviour • Comply with regulations
KPI area	Sustainable AI systems and operations		

<table>
<tr><td> </td><td colspan="3">SUPPORT & GUIDANCE</td><td>[3]</td></tr>
<tr><td>Profile title</td><td colspan="3">HUMAN-AI INTERACTION LEAD</td><td>[3.8]</td></tr>
<tr><td>Related titles</td><td colspan="4">Head of Human–AI Interaction, Director of Human–AI Experience, Human–AI Strategy Lead, Human-Centered AI Lead, Head of AI Interaction, Director of Human-Centered AI.</td></tr>
<tr><td>Summary statement</td><td colspan="4">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.</td></tr>
<tr><td>Mission</td><td colspan="4">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.</td></tr>
<tr><td>Deliverables</td><td>Accountable</td><td colspan="2">Responsible</td><td>Contributor</td></tr>
<tr><td></td><td>• Human Oversight Framework and Operations
• Personnel Training and Qualifications Record</td><td colspan="2">• Intervention Decision and Execution
• Human Oversight Instructions</td><td>• Legal, Ethical and Safety Compliance Documentation
• Legal, Ethical and Safety Standards</td></tr>
<tr><td>Main tasks</td><td colspan="4">• 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</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td>Descriptor</td></tr>
<tr><td rowspan="2">e-Competences
(from e-CF)</td><td>A.6.</td><td>Application Design</td><td>e-3</td><td>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.</td></tr>
<tr><td>A.7.</td><td>Technology Trend Monitoring</td><td>e-3</td><td>Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.</td></tr>
</table>

	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.
	C.4.	Problem Management	e-3	Independently diagnoses and resolves routine ICT and AI incidents. Applies established procedures to prevent recurrence.
	D.3.	Education and Training Provision	e-3	Implements AI training programs 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 *(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 quickly • Organise information • Identify problems	*Self-management skills* • Forms judgments • Assume responsibility • Cope with uncertainty • Cope with stress • Exert willingness to learn	*Social and communication skills* • Collaborate with others • 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.5 Management Roles

<table>
<tr><td> </td><td colspan="3">MANAGEMENT</td><td>[4]</td></tr>
<tr><td>Profile title</td><td colspan="3">AI TRANSFORMATION LEAD</td><td>[4.1]</td></tr>
<tr><td>Related titles</td><td colspan="4">AI Innovation Leader, AI Transformation Officer.</td></tr>
<tr><td>Summary statement</td><td colspan="4">Provides leadership for the implementation of the AI transformation of the organisation, driving successful adoption of AI.</td></tr>
<tr><td>Mission</td><td colspan="4">Drives cultural change and builds digital capability to deliver innovative AI-based business models, products, services, and processes.</td></tr>
<tr><td>Deliverables</td><td>Accountable</td><td>Responsible</td><td colspan="2">Contributor</td></tr>
<tr><td></td><td>• Community Engagement
• AI/ML Business Case
• Business Plan for AI Exploitation
• Change Management Plan</td><td>• AI Transformation Strategy
• AI Transformation Roadmap
• AI Transformation KPIs</td><td colspan="2">• Data governance framework
• AI Literacy Programme
• AI Solution Choice
• Guidelines, Recommendations and Regulations regarding AI</td></tr>
<tr><td>Main tasks</td><td colspan="4">• 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</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td>Descriptor</td></tr>
<tr><td>e-Competences
(from e-CF)</td><td>A.1.</td><td>IS and Business Strategy Alignment</td><td>e-5</td><td>Leads enterprise-wide IS and AI strategy; anticipates long-term business needs and drives innovation.</td></tr>
</table>

	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)*	*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 • Think holistically • Plan activities • Solve problems • Think creatively • Think innovatively • Improvise	*Self-management skills* • Act independently • Show initiative • Make decisions • Assume responsibility • Assume accountability • Show determination • Exert result-orientedness • Cope with uncertainty • Manage frustration • Adapt to change	*Social and communication skills* • 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, 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 • AI Transformation Roadmap • Information 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 • Ensure transparency, fairness, robustness, and accountability in AI outputs • Establish organisation-wide AI literacy development programs • Define KPI's for AI success and monitor business impact • Ensure compliance with emerging AI regulations (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 *(from e-CF)*	**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 *(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 • Think holistically • Identify problems • Solve problems • Think innovatively	*Self-management skills* • Focus on quality • Make decisions • Assume responsibility • Assume accountability • Cope with uncertainty • Adapt to change	*Social and communication skills* • Communicate • Resolve conflict • Coach, mentor, advise others • Build and maintain networks • Exert business orientation • Exert organisation 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	• Model Training and Evaluation Pipelines • Code Quality and Engineering Standards for AI Projects • AI Tool Portfolio • Development Process	• 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 *(from e-CF)*	**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 *(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 • Think holistically • Plan activities • Think innovatively	*Self-management skills* • Make decisions • Assume responsibility • Show commitment	*Social and communication skills* • Communicate • Resolve conflict • Collaborate with others • Build and maintain networks • Exert business orientation • Manage others • Build team spirit • Exert ethical behaviour • Comply with regulations
KPI area	Business user requirement satisfaction		

<table>
<tr><td> </td><td colspan="3">MANAGEMENT</td><td>[4]</td></tr>
<tr><td>Profile title</td><td colspan="3">AI MANAGER</td><td>[4.4]</td></tr>
<tr><td>Related titles</td><td colspan="4">Manager of AI, AI Programme Manager, AI Portfolio Manager, AI Team Manager, AI General Manager.</td></tr>
<tr><td>Summary statement</td><td colspan="4">Oversees the AI team’s people, resources, and overall performance, ensuring that the team is organised, skilled, and aligned with organisational objectives.</td></tr>
<tr><td>Mission</td><td colspan="4">Builds, leads, and grows a high-performing AI team that delivers impactful solutions, balancing talent development, team productivity, and alignment with business goals.</td></tr>
<tr><td>Deliverables</td><td colspan="2">Accountable</td><td>Responsible</td><td>Contributor</td></tr>
<tr><td></td><td colspan="2">• AI Team Capacity and Staffing Plans
• AI Team Performance and Development Plans
• AI Resource Allocation Reports</td><td>• AI Talent Development Programs
• Reports on Team Achievements and Challenges
• Coalitions in AI ecosystem</td><td>• AI Roadmap Recommendations
• AI Compliance
• Legal, Ethical and Safety Compliance</td></tr>
<tr><td>Main tasks</td><td colspan="4">• 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 programs, 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)</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td>Descriptor</td></tr>
<tr><td>e-Competences
(from e-CF)</td><td>D.9.</td><td>Personnel Development</td><td>e-4</td><td>Integrates AI competence development into team/organisation processes, guides others in AI adoption, and evaluates learning impact.</td></tr>
</table>

	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.
	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)*	*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 • Think holistically • Plan activities • Think innovatively	*Self-management skills* • Make decisions • Assume responsibility • Show commitment	*Social and communication skills* • 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	• Detailed AI product Requirements • User stories for AI Initiatives • AI Release Plan	• 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, prioritize, 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 *(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.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.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.
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 • Think holistically • Plan activities • Think innovatively	*Self-management skills* • Focus on quality • Make decisions • Assume responsibility • Exert result-orientedness • Cope with stress	*Social and communication skills* • 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			

<table>
<tr><td> </td><td colspan="3">MANAGEMENT</td><td>[4]</td></tr>
<tr><td>Profile title</td><td colspan="3">AI OPERATIONS MANAGER</td><td>[4.6]</td></tr>
<tr><td>Related titles</td><td colspan="4">Manager AI Operations, AI Data Operations Manager.</td></tr>
<tr><td>Summary statement</td><td colspan="4">Manages AI operations, including the people and overall resources involved. Ensures deploying, running, and maintaining AI systems reliably in production.</td></tr>
<tr><td>Mission</td><td colspan="4">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.</td></tr>
<tr><td>Deliverables</td><td>Accountable</td><td colspan="2">Responsible</td><td>Contributor</td></tr>
<tr><td></td><td>• Production-Ready AI Systems and Pipelines
• Operational Performance Dashboards
• Automated workflows
• Validated AI Solution</td><td colspan="2">• CI/CD Pipelines for AI Models
• Monitoring and Alerting Reports
• Operational Process Documentation
• HR development plan
• Incidents database</td><td>• Sustainable AI Policy Legal, Ethical and Safety Compliance</td></tr>
<tr><td>Main tasks</td><td colspan="4">• 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)</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td>Descriptor</td></tr>
<tr><td>e-Competences
(from e-CF)</td><td>C.2.</td><td>Change Support</td><td>e-3</td><td>Plans and executes AI-related changes. Evaluates impact and coordinates changes to minimise service disruption and risk.</td></tr>
</table>

	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 *(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 • Think holistically • Plan activities • Think innovatively	*Self-management skills* • Focus on quality • Make decisions • Assume responsibility • Exert result-orientedness • Cope with stress	*Social and communication skills* • 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.		
Summary statement	Plans, executes 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 Solution Documentation • Integrated AI Solution	• Validated AI Solution • AI Project Plan & Design • Quality Plan • AI Solution Choice	• 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 *(from e-CF)*	**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.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.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 *(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 • Solve problems • Improvise	*Self-management skills* • Manage time • Meet commitments • Assume accountability • Exert result-orientedness • Cope with uncertainty • Cope with stress	*Social and communication skills* • Communicate • Report • Collaborate with others • Work in teams • Exert social awareness • Manage others • Control progress • Build team spirit • Exert ethical behaviour • Comply with regulations
KPI area	AI project goals achievement		

B.6 Governance Roles

<table>
<tr><td> </td><td colspan="4">GOVERNANCE</td><td>[5]</td></tr>
<tr><td>Profile title</td><td colspan="4">AI GOVERNANCE OFFICER</td><td>[5.1]</td></tr>
<tr><td>Related titles</td><td colspan="5">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.</td></tr>
<tr><td>Summary statement</td><td colspan="5">Leads the development, implementation, and oversight of an organisation’s AI governance framework and AI policy.</td></tr>
<tr><td>Mission</td><td colspan="5">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.</td></tr>
<tr><td>Deliverables</td><td colspan="2">Accountable</td><td colspan="2">Responsible</td><td>Contributor</td></tr>
<tr><td></td><td colspan="2">• Organisation-wide AI Governance Framework (Policies, Standards, Procedures)
• AI Ethics and Accountability Guidelines
• Strategic AI Governance Reports</td><td colspan="2">• Governance Committees or Boards
• Approval of Workflows for AI Projects
• Governance Maturity Assessments
• Legal, Ethical and Safety Compliance Documentation</td><td>• Risk Mitigation Plans
• AI Strategy & Implementation
• Strategic Alignment</td></tr>
<tr><td>Main tasks</td><td colspan="5">• 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 standardization initiatives
• Promote awareness and training on AI governance across the organisation</td></tr>
<tr><td></td><td colspan="2"></td><td>Level</td><td colspan="2">Descriptor</td></tr>
<tr><td>e-Competences
(from e-CF)</td><td>A.1.</td><td>IS and Business Strategy Alignment</td><td>e-4</td><td colspan="2">Aligns IS and AI strategy with business strategy, integrating AI capabilities into enterprise architecture while managing risk, sourcing, and governance.</td></tr>
<tr><td></td><td>A.7.</td><td>Technology Trend Monitoring</td><td>e-3</td><td colspan="2">Independently monitors ICT and AI technology trends and evaluates innovation opportunities. Ensures the feasibility and relevance of AI adoption initiatives within a defined domain.</td></tr>
</table>

	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.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.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)*	*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 • Think holistically • Organise information	*Self-management skills* • Act independently • Focus on quality • Assume accountability • Exert result-orientedness • Attend to detail • Assume responsibility • Cope with uncertainty • Exert willingness to learn	*Social and communication skills* • Communicate • Promote • Persuade • Collaborate with others • Build and maintain networks • 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 Compliancy Officer.	
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 Reports • Regulatory Adherence Documentation for AI Systems • Internal AI Compliance Checklists and Records • AI Literacy Programme	• AI Compliance Risk Mitigation Plan • AI Compliance KPI's • AI Compliance Policy • Compliance Assessments of AI Projects • Legal, Ethical and Safety Standards	• AI Company Policy • Quality Assurance • Risk Management Policy • AI Governance Framework Documentation

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 and the associated implications of this • Conduct training programs 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 *(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.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)*	*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 • Identify problems	*Self-management skills* • Act independently • Focus on quality • Attend to detail • Show initiative • Assume responsibility • Show commitment • Show determination • Forms judgements	*Social and communication skills* • Communicate • Promote • Persuade • Report • Coach, mentor, advise others • Teach, train, instruct 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**
	• Risk Assessment Reports • Risk Mitigation Plans for AI Projects • Risk Dashboards or Risk Heatmaps	• Risk Evaluations of AI Systems • AI Risk Register • AI Risk Management Strategies and Controls • Risk Management Policy	• Governance Reports • AI Governance Policy • AI Security Strategy • Legal, Ethical and Safety Compliance Documentation

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 • Maintain comprehensive records of risk assessments, mitigation plans, incidents, and outcomes • Follow AI safety and ethical guidelines in the identification, assessment and treatment of risks • Advise on risk prioritisation for new AI projects • Evaluate third-party AI tools and vendors for risk exposure • Promote a risk-aware culture across AI development teams

			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.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.
	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)*	*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 • Think holistically • Identify problems • Solve problems	*Self-management skills* • Act independently • Focus on quality • Attend to detail • Assume responsibility • Exert result-orientedness • Forms judgements	*Social and communication skills* • Communicate • Report • Teach, train, instruct 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.	
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 • Audits of AI Models and Processes • AI Documentation Review • AI System Tests for Fairness, Bias, and Accuracy	• Legal, Ethical and Safety Compliance Documentation • Governance Framework • Risk Evaluation Insights • Risk Assessment Register

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.
	C.4.	Problem Management	e-3	Independently diagnoses and resolves routine ICT and AI incidents. Applies established procedures to prevent recurrence.
	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.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.
	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.

<table>
<tr><td></td><td>E.9.</td><td>IS Governance</td><td>e-4</td><td colspan="3">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.</td></tr>
<tr><td>Transversal aspects
(from e-CF)</td><td colspan="6">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</td></tr>
<tr><td>Personal and interpersonal skills</td><td colspan="2">Thinking skills
Think analytically
Think critical
Think holistically
Identify problems
Plan activities</td><td colspan="2">Self-management skills
Act independently
Focus on quality
Attend to detail
Assume responsibility
Exert result-orientedness
Forms judgements
Demonstrate curiosity</td><td>Social and communication skills
Communicate
Report
Exert customer orientedness
Teach, train, instruct others
Build and maintain networks
Exert business orientation
Exert organisation sensitivity
Motivate others
Exert ethical behaviour
Comply with regulations
Respect confidentiality
Demonstrate trustworthiness</td></tr>
<tr><td>KPI area</td><td colspan="6">Achievement of company quality goals regarding the AI system</td></tr>
</table>

Annex C
(normative)

Educational profiles for AI professionals

C.1 Introduction

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 proficiency. 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.

The annex 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. 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.

	DATA PROCESSING & ANALYSIS		**[1]**
Profile title	**DATA SCIENTIST**		**[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: 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. 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 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
	E.3.	Risk Management	e-2
Complexity	The profile has an EQF7 level.		
Deliverables	• Data Collection and Representation • Data Selection • Business Insights from Data • Originality and Quality of Research • Quality of AI Dataset and Annotations • Data Acquisition • Data Annotation Guidelines • Data Management Plan • Model Tuning and Fine-tuning • Designing and Conducting Experiments • Metric Development • Research Impact and Publications • Disseminating Findings		

1. PLO Technology Trend Monitoring [EQF7]	
The learner has demonstrated capability to…	
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 capability to…	
Deliver impactful AI-enabled innovations in professional contexts by leading collaborative development, aligning technical and organizational 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 organizational 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 organizational 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 organizational 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 capability 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 behavior 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 organizational 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]	
The learner has demonstrated capability 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, organizational, or research contexts.	
Unit Learning Outcomes	
4.1	Design AI-augmented analytics workflows and solutions for complex, multi-factor problems in organizational 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 organizational projects.
4.4	Generate actionable insights and recommendations to improve decision-making and outcomes in business, organizational, 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]	
The learner has demonstrated capability to…	
Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organizational units by aligning AI knowledge management with organizational 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 organizational, 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 organizational objectives to support innovation, effectiveness, and sustainable use of AI technologies.

6. PLO Needs Identification [EQF7]	
The learner has demonstrated capability to…	
Leads the end-to-end needs identification process with stakeholders, ensuring AI-driven solution recommendations are strategically aligned with organizational 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 organizational needs.
6.2	Critically assess and ensure that AI-driven solution proposals align with organizational 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-centered design principles, project management tools, or feedback loops.

7. PLO Forecast Development [EQF7]	
The learner has demonstrated capability to…	
Enhance organizational 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 organizational 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 organizational 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.

8. PLO Risk Management [EQF5]	
The learner has demonstrated capability 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	
8.1	Identify common AI system risks, including bias, model drift, and data privacy issues, by referring to organisational policies and guidelines in operational AI systems.
8.2	Describe AI system behaviours and operational characteristics using standard monitoring tools and templates in deployed AI applications.
8.3	Record AI risk incidents and observations in standardised registers within organisational AI workflows.
8.4	Recognize ethical and compliance-related considerations in the use of AI systems in predictable operational contexts such as customer support or data processing tasks.
8.5	Apply basic AI risk documentation techniques to support supervisors or team members in operational decision-making.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Trend analysis report, written assignment with rubric
1.2	Opportunity assessment matrix, graded report or case study analysis
1.3	Integrated opportunity brief, written synthesis evaluated by rubric
1.4	Solution design document, project proposal evaluation
1.5	Validation report, simulation or pilot data review
1.6	Presentation/report, oral defense or stakeholder-style review
2.1	Team collaboration report documenting AI solution design efforts
2.2	Architecture/integration report for AI solution
2.3	Deployed AI solution demonstration or portfolio submission
2.4	Evaluation report measuring real-world AI solution effectiveness
2.5	Risk/trade-off analysis report for AI innovation projects
2.6	Stakeholder communication materials (presentations, briefs) for AI innovations
3.1	Review of AI testing framework documentation
3.2	Evaluation of AI critical evaluation report
3.3	Assessment of AI methodology innovation report
3.4	Review of AI ethics/compliance record
3.5	Evaluation of AI team coordination report
4.1	Review of AI workflow documentation
4.2	Evaluation of analytical model outputs
4.3	Assessment of data integrity & ethics report
4.4	Evaluation of insights & recommendations report
4.5	Review of team coordination documentation
4.6	Assessment of performance & risk framework
4.7	Evaluation of reproducible AI pipelines
5.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design
5.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines
5.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment

5.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model
5.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report
6.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs for AI needs identification
6.2	AI Solution Alignment Report – assessed via written report analyzing AI solutions against strategic, regulatory, and value alignment
6.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results
6.4	AI Implementation & Enhancement Plan – assessed via documented implementation roadmap with iterative improvement strategy for AI solutions
7.1	Analytical report or case study submission assessing explanation of AI adoption patterns and operational implications
7.2	Market intelligence brief evaluated for depth of insight and relevance to business function analysis
7.3	Predictive data analysis report assessed for accuracy of interpretation and appropriate use of metrics
7.4	Forward-looking forecast document graded for integration of predictive insights and actionable recommendations
7.5	Process improvement proposal evaluated for feasibility, innovation, and impact potential
7.6	Feasibility and business value assessment (cost-benefit analysis) reviewed for rigor and logical justification
8.1	Comprehensive AI risk evaluation report graded for depth, multi-dimensional coverage, and contextual reasoning
8.2	Submission of AI governance framework design, evaluated for process completeness, scalability, and alignment with organisational needs
8.3	Strategic recommendations document assessed for practicality, impact, and contribution to compliance and resilience
8.4	Cross-functional coordination report evaluated for documentation of collaborative activities and consistency in risk management practices
8.5	Policy alignment analysis assessed for clarity, alignment with regulations, and integration with organisational strategy

	DATA PROCESSING & ANALYSIS		**[1]**
Profile title	**DATA CURATION LEAD**		**[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: 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. 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 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.		
Deliverables	• Legal and Ethical Considerations on data • AI Ethics KPI's • Data Governance Framework		

1. PLO Product/Service Planning [EQF6]	
The learner has demonstrated capability to…	
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 capability to…	
Define, evaluate, coordinate, and optimize AI quality strategies by integrating ethical, resilience, and performance considerations across AI systems, using relevant frameworks and monitoring to address complex problems and enhance organizational 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 organizational goals, using AI performance metrics, KPIs, and benchmarking tools.
2.3	Coordinate cross-functional activities to implement AI quality strategies and ensure alignment with organizational objectives.
2.4	Optimize 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 organizational decision-making.

3. PLO Data Science and Analytics [EQF7]	
The learner has demonstrated capability 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, organizational, or research contexts.	
Unit Learning Outcomes	
3.1	Design AI-augmented analytics workflows and solutions for complex, multi-factor problems in organizational 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 organizational projects.
3.4	Generate actionable insights and recommendations to improve decision-making and outcomes in business, organizational, 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]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability to…	
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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Evaluation of **system specification report**, oral questioning, peer review
1.2	Assessment of **risk and cost assessment matrix**, case study analysis, written report
1.3	Review of **structured product/service plan**, project plan submission, rubric-based scoring
1.4	Audit of **compliance and documentation package**, checklist verification, documented evidence evaluation
1.5	Assessment of **stakeholder communication deliverables**, presentation evaluation, report grading, feedback from simulated stakeholders
2.1	Assessment of AI training module design document and AI use-case mapping
2.2	Evaluation of AI training materials and recorded or observed AI training session
2.3	Review of AI learning feedback summary and revised AI training content
2.4	Assessment of AI ethics and governance training materials and applied AI case examples
2.5	Evaluation of documented AI learner support evidence and facilitation notes
2.6	Review of AI instructional design rationale and alignment with learning objectives
3.1	Review of AI workflow documentation
3.2	Evaluation of analytical model outputs
3.3	Assessment of data integrity & ethics report
3.4	Evaluation of insights & recommendations report
3.5	Review of team coordination documentation
3.6	Assessment of performance & risk framework
3.7	Evaluation of reproducible AI pipelines
4.1	Written AI risk assessment report evaluated against completeness and methodological correctness
4.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
4.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
4.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
4.5	Review of AI system performance logs, annotated with identified emerging risks and analysis

4.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
5.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of performance improvements
5.2	Analysis report submission with metrics calculations; peer review or instructor feedback.
5.3	Risk and ethical assessment report evaluated against a checklist; case study review
5.4	Team project documentation assessed via contribution logs and peer evaluation
5.5	Comparative performance report graded against metrics and benchmarks; oral defense or presentation optional
5.6	Lessons-learned or reflective report reviewed for completeness, clarity, and insightfulness.
6.1	Design assignment producing an integrated AI quality management framework
6.2	Case study analysis justifying adaptation of AI quality approaches to complex organisational contexts
6.3	Evaluation report assessing effectiveness of AI quality and risk controls
6.4	Risk assessment document analysing trustworthiness and uncertainty in AI systems
6.5	Project-based assessment with an AI quality assurance implementation plan
6.6	Strategic decision brief based on interpreted AI quality evidence
6.7	Critical reflective essay on limitations of AI quality management practices

	DATA PROCESSING & ANALYSIS		**[1]**
Profile title	**DATA ANALYST**		**[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: 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. 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 added when translating this profile to a curriculum.		
			Level
Competences	**A.3.**	Business Plan Development	e-3
	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-4
	D.11.	Needs Identification	e-3
	E.3.	Risk Management	e-2
Complexity	The profile has an EQF7 level.		
Deliverables	• Data Analytics • Data Quality & Integrity • Business Insights from data		

1. PLO Business Plan Development [EQF6]	
The learner has demonstrated capability 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	
1.1	Apply established business planning and cost–benefit methods appropriately to a data- or AI-driven initiative in a commercial or organizational 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 User Experience [EQF6]	
The learner has demonstrated capability to…	
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	
2.1	Analyse user needs, goals, and behaviour in AI-supported applications, such as recommendation or automation systems.
2.2	Apply and adapt UX and HCI methods using AI design tools and frameworks to design user interactions for AI-enabled products and services.
2.3	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.
2.4	Assess ethical implications of AI-driven user experiences by considering issues such as bias, fairness, and transparency.

3. PLO Documentation Production [EQF5]	
The learner has demonstrated capability to…	
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 organizational and regulatory standards in routine AI development contexts.	
Unit Learning Outcomes	
3.1	Identify key AI documentation types, requirements, and templates used in routine AI projects, such as model datasheets, user manuals, or compliance checklists.
3.2	Explain the purpose of technical, compliance, and transparency documentation for AI systems, by referring to examples like algorithmic decision logs or fairness assessment reports.
3.3	Produce basic AI technical and compliance documents under guidance, following predefined templates, using standard documentation formats and structured forms.
3.4	Use document-management tools to store, retrieve, and update AI documentation, in systems that support organized and version-controlled storage.
3.5	Verify that information in AI documents is accurate, complete, and aligned with organizational standards, by cross-checking against project requirements and regulatory guidelines.

4. PLO Data Science and Analytics [EQF6]	
The learner has demonstrated capability to…	
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	
4.1	Analyse data from multiple sources such as databases, APIs, or log files to identify patterns and trends relevant for AI-enhanced decision-making.
4.2	Integrate structured and unstructured datasets using data integration tools or programming languages to improve AI model performance.
4.3	Apply predictive analytics and basic machine learning methods in Python, R, or equivalent tools to support AI-assisted decision-making.
4.4	Evaluate datasets for quality, bias, and compliance in accordance with ethical, privacy, or regulatory standards.
4.5	Communicate findings effectively through reports, dashboards, or presentations to support organizational AI-driven processes.
4.6	Produce data storytelling artifacts such as visual narratives or annotated dashboards to convey insights for AI-enabled decisions.

5. PLO Information and Knowledge Management [EQF7]	
The learner has demonstrated capability to…	
Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organizational units by aligning AI knowledge management with organizational 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 organizational, 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 organizational objectives to support innovation, effectiveness, and sustainable use of AI technologies.

6. PLO Needs Identification [EQF6]	
The learner has demonstrated capability to…	
Independently engage with stakeholders to identify and validate needs, translating them into feasible AI and technology solution options, while considering business objectives and organizational 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 organizational 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 Risk Management [EQF5]	
The learner has demonstrated capability 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	
7.1	Identify common AI system risks, including bias, model drift, and data privacy issues, by referring to organisational policies and guidelines in operational AI systems.
7.2	Describe AI system behaviours and operational characteristics using standard monitoring tools and templates in deployed AI applications.
7.3	Record AI risk incidents and observations in standardised registers within organisational AI workflows.
7.4	Recognize ethical and compliance-related considerations in the use of AI systems in predictable operational contexts such as customer support or data processing tasks.
7.5	Apply basic AI risk documentation techniques to support supervisors or team members in operational decision-making.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Evaluation of business plan document, written report review
1.2	Alternatives comparison matrix, case study analysis
1.3	Cost–benefit analysis report, calculations checked against data
1.4	Feasibility summary, rubric-based evaluation of clarity and alignment
1.5	Team contribution evidence, peer evaluation, observation of group work
1.6	Presentation or report, assessed with communication rubric
2.1	AI user research report, submission and review, practical observation of research artefacts
2.2	AI UX prototype evaluation, practical design assignment, rubric-based assessment
2.3	AI interface mockups, heuristic evaluation report, peer and instructor review
2.4	AI ethics assessment report, written case analysis, ethical decision reflection
3.1	Review of submitted AI documentation inventory or reference table; quiz or oral questioning on AI documentation types and template purposes
3.2	Written explanation or short report linking AI documentation types to purposes; scenario-based questions on AI transparency or compliance documents
3.3	Evaluation of completed AI datasheet, compliance checklist, or user guide for accuracy, completeness, and adherence to template
3.4	Inspection of document repository showing correct storage, retrieval, and versioning of AI documentation; submission of log demonstrating updates
3.5	Review of annotated AI documents or verification checklist demonstrating corrected errors and alignment with organizational standards
4.1	Evaluation of integrated datasets
4.2	Assessment of analytics report
4.3	Review of predictive model outputs
4.4	Audit of dataset evaluation report
4.5	Assessment of findings presentation
4.6	Evaluation of data storytelling artifacts
5.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design
5.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines

5.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment
5.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model
5.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report
6.1	Stakeholder Needs Report – assessed via written report of AI stakeholder needs and validation summary
6.2	Requirement Analysis Matrix – assessed via submitted matrix mapping functional, technical, and business requirements to AI solutions
6.3	AI Solution Options Brief – assessed via presentation or report proposing feasible AI solution options
6.4	AI Data Analysis Summary – assessed via submitted dashboard, data visualization, or short report analyzing data to inform AI solutions
6.5	AI Ethical & Regulatory Assessment – assessed via written document outlining ethical and regulatory considerations in AI solution proposals
7.1	Written report or checklist evaluating identification of AI risks in a sample system; observation of correctly applied organisational policies
7.2	Review of standardised system behaviour logs or monitoring templates for completeness and accuracy
7.3	Inspection of risk incident registers documenting AI incidents or anomalies; grading for clarity and correctness
7.4	Short case-study assignment or quiz assessing recognition of ethical and compliance considerations in operational AI contexts
7.5	Submission of operational risk documentation reviewed for structure, clarity, and support for supervisor decision-making

	DATA PROCESSING & ANALYSIS		**[1]**
Profile title	**DATA ENGINEER**		**[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: 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. 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 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
	D.10.	Information and Knowledge Management	e-4
	E.3.	Risk Management	e-2
	E.6.	ICT Quality Management	e-4
	E.8.	Information Security Management	e-4
Complexity	The profile has an EQF7 level.		
Deliverables	• Annotating and Labelling Datasets • Data Model • Data Management System • Built Pipeline • Data Architecture • Data Pipeline Reliability and Scaleability • Data Infrastructure • ML Workflows • Data Security • Data Pipeline Integration		

1. PLO Architecture Design [EQF6]	
The learner has demonstrated capability 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 Component Integration [EQF6]	
The learner has demonstrated capability 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 Systems Engineering [EQF6]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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	
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 Information and Knowledge Management [EQF7]	
The learner has demonstrated capability to…	
Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organizational units by aligning AI knowledge management with organizational 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 organizational, 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 organizational objectives to support innovation, effectiveness, and sustainable use of AI technologies.

6. PLO Risk Management [EQF5]	
The learner has demonstrated capability 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	
6.1	Identify common AI system risks, including bias, model drift, and data privacy issues, by referring to organisational policies and guidelines in operational AI systems.
6.2	Describe AI system behaviours and operational characteristics using standard monitoring tools and templates in deployed AI applications.
6.3	Record AI risk incidents and observations in standardised registers within organisational AI workflows.
6.4	Recognize ethical and compliance-related considerations in the use of AI systems in predictable operational contexts such as customer support or data processing tasks.
6.5	Apply basic AI risk documentation techniques to support supervisors or team members in operational decision-making.

7. PLO ICT Quality Management [EQF7]	
The learner has demonstrated capability to…	
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	
7.1	Design AI quality management frameworks by integrating governance mechanisms, metrics, and ethical principles.
7.2	Adapt AI quality approaches to complex organisational contexts involving multiple AI systems and stakeholders.
7.3	Evaluate the effectiveness of AI quality controls using performance, risk, and compliance evidence.
7.4	Assess AI-related risks and uncertainties in relation to trustworthiness, fairness, and system robustness.
7.5	Manage the implementation of AI quality assurance activities within organisational or cross-functional projects.
7.6	Interpret AI quality outcomes to inform strategic decisions on AI deployment, scaling, or modification.
7.7	Critically reflect on limitations of AI quality practices in light of evolving technological, ethical, or regulatory conditions.

8. PLO Information Security Management [EQF7]	
The learner has demonstrated capability to…	
Secure organizational 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 organizational 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 organizational projects.
8.4	Evaluate AI security operations in live organizational environments using compliance and audit frameworks to ensure regulatory and ethical alignment.
8.5	Apply AI governance frameworks across organizational AI systems to optimize operational resilience and trustworthiness.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Evaluation of architecture diagrams, Component inventory review
1.2	Grading of AI module code, Review of module documentation
1.3	Assessment of risk checklist, Ethics report evaluation
1.4	Evaluation of integrated prototype, Deployment report review
2.1	AI integration requirements analysis report; comparative system context matrix
2.2	Implemented AI integration solution (code & configuration); AI integration architecture diagram
2.3	Configured AI models and data pipelines; AI API/interface specification
2.4	AI system test results (performance, security, reliability); AI evaluation summary
2.5	Written AI integration justification report; oral project defence or presentation
3.1	Evaluation of AI design diagrams, design report submission
3.2	Review of integrated AI module, integration report
3.3	Assessment of AI test report, performance dashboard
3.4	Review of AI bias report, privacy documentation, explainability report
3.5	Evaluation of AI evaluation report, recommendations report
3.6	Review of AI project documentation
4.1	Review of dataset inventory
4.2	Inspection of cleaned dataset
4.3	Evaluation of descriptive analytics report
4.4	Ethics checklist audit
4.5	Assessment of data visualizations
5.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design
5.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines
5.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment
5.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model
5.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report

6.1	Written report or checklist evaluating identification of AI risks in a sample system; observation of correctly applied organisational policies
6.2	Review of standardised system behaviour logs or monitoring templates for completeness and accuracy
6.3	Inspection of risk incident registers documenting AI incidents or anomalies; grading for clarity and correctness
6.4	Short case-study assignment or quiz assessing recognition of ethical and compliance considerations in operational AI contexts
6.5	Submission of operational risk documentation reviewed for structure, clarity, and support for supervisor decision-making
7.1	Design assignment producing an integrated AI quality management framework
7.2	Case study analysis justifying adaptation of AI quality approaches to complex organisational contexts
7.3	Evaluation report assessing effectiveness of AI quality and risk controls
7.4	Risk assessment document analysing trustworthiness and uncertainty in AI systems
7.5	Project-based assessment with an AI quality assurance implementation plan
7.6	Strategic decision brief based on interpreted AI quality evidence
7.7	Critical reflective essay on limitations of AI quality management practices
8.1	Review of Organizational Security Policy Document, rubric-based evaluation for completeness and regulatory alignment
8.2	Evaluation of Mitigation Implementation Report, evidence of addressing model manipulation, adversarial attacks, and privacy risks
8.3	Review of Team Management Log and project records for execution of AI security and compliance initiatives
8.4	Assessment of Operational Compliance Report, audit-style evaluation for regulatory and ethical adherence
8.5	Review of Governance Application Report evidence embedded in policy, mitigation, and compliance documentation

	DATA PROCESSING & ANALYSIS		**[1]**
Profile title	**DATA TRAINER**		**[1.5]**
Description (Goal and Scope)	This educational profile relates to the AI professional role profile 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: 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. 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 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.		
Deliverables	• Annotating and Labelling Datasets • Evaluation of AI Performance • Data Verification and Validation		

1. PLO Testing [EQF5]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability to…	
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 organizational 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 organized and version-controlled storage.
2.5	Verify that information in AI documents is accurate, complete, and aligned with organizational standards, by cross-checking against project requirements and regulatory guidelines.
2.6	
2.7	

3. PLO Data Science and Analytics [EQF5]	
The learner has demonstrated capability 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 capability to…	
Independently engage with stakeholders to identify and validate needs, translating them into feasible AI and technology solution options, while considering business objectives and organizational 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 organizational 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Review of AI test execution report
1.2	Evaluation of AI error/anomaly log
1.3	Assessment of AI bias report
1.4	Inspection of AI test documentation
1.5	Review of AI compliance checklist
2.1	Review of submitted AI documentation inventory or reference table; quiz or oral questioning on AI documentation types and template purposes.
2.2	Written explanation or short report linking AI documentation types to purposes; scenario-based questions on AI transparency or compliance documents.
2.3	Evaluation of completed AI datasheet, compliance checklist, or user guide for accuracy, completeness, and adherence to template.
2.4	Inspection of document repository showing correct storage, retrieval, and versioning of AI documentation; submission of log demonstrating updates.
2.5	Review of annotated AI documents or verification checklist demonstrating corrected errors and alignment with organizational standards.
3.1	Review of dataset inventory
3.2	Inspection of cleaned dataset
3.3	Evaluation of descriptive analytics report
3.4	Ethics checklist audit
3.5	Assessment of data visualizations
4.1	Stakeholder Needs Report – assessed via written report of AI stakeholder needs and validation summary
4.2	Requirement Analysis Matrix – assessed via submitted matrix mapping functional, technical, and business requirements to AI solutions
4.3	AI Solution Options Brief – assessed via presentation or report proposing feasible AI solution options
4.4	AI Data Analysis Summary – assessed via submitted dashboard, data visualization, or short report analyzing data to inform AI solutions
4.5	AI Ethical & Regulatory Assessment – assessed via written document outlining ethical and regulatory considerations in AI solution proposals

	DATA PROCESSING & ANALYSIS		**[1]**
Profile title	**AI BUSINESS ANALYST**		**[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: 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. 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 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
	E.7.	Business Change Management	e-3
Complexity	The profile has an EQF7 level.		
Deliverables	• Business Requirements for AI Exploitation • Evaluation Outcome Reporting • AI/ML Business Case • Business Relationship • Business Plan for AI Exploitation • Strategic Alignment • AI Needs Analysis • Opportunity Memo		

1. PLO IS and Business Strategy Alignment [EQF7]	
The learner has demonstrated capability 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 Business Plan Development [EQF6]	
The learner has demonstrated capability 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 organizational 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 capability 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]	
The learner has demonstrated capability 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, organizational, or research contexts.	
Unit Learning Outcomes	
4.1	Design AI-augmented analytics workflows and solutions for complex, multi-factor problems in organizational 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 organizational projects.
4.4	Generate actionable insights and recommendations to improve decision-making and outcomes in business, organizational, 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]	
The learner has demonstrated capability to…	
Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organizational units by aligning AI knowledge management with organizational 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 organizational, 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 organizational objectives to support innovation, effectiveness, and sustainable use of AI technologies.

6. PLO Needs Identification [EQF7]	
The learner has demonstrated capability to…	
Leads the end-to-end needs identification process with stakeholders, ensuring AI-driven solution recommendations are strategically aligned with organizational 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 organizational needs.
6.2	Critically assess and ensure that AI-driven solution proposals align with organizational 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-centered design principles, project management tools, or feedback loops.

7. PLO Relationship Management [EQF6]	
The learner has demonstrated capability 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.
7.7	

8. PLO Process Improvement [EQF7]	
The learner has demonstrated capability to…	
Optimize 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 optimize 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 organizational 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.

9. PLO Business Change Management [EQF6]	
The learner has demonstrated capability to…	
Evaluate AI adoption opportunities and design change strategies for organizational 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	
3.1	Evaluate AI adoption opportunities and determine potential organizational benefits using case studies or business process analyses.
3.2	Design change strategies for teams and processes that address AI-specific risks such as bias, drift, or cybersecurity in operational settings.
3.3	Implement stakeholder engagement activities to promote AI adoption through workshops, meetings, or training programs.
3.4	Monitor and interpret AI performance metrics to guide adjustments in adoption strategies using dashboards, reports, or KPIs.
3.5	Identify and document potential challenges and limitations of AI adoption in real-world organizational contexts.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Written Report, Case Study Analysis, Data-Driven Mapping
1.2	Alignment Assessment Report, Portfolio Review, Gap Analysis Presentation
1.3	Governance Assessment Report, Compliance Checklist Submission
1.4	IS/Architecture Design Diagrams, Modelling Artefact Review
1.5	AI/Data Solution Prototype, Demonstration, Performance Metrics Report
1.6	Organisational Impact Report, Value-Creation Analysis, Oral Defence/Presentation
2.1	Evaluation of business plan document, written report review
2.2	Alternatives comparison matrix, case study analysis
2.3	Cost–benefit analysis report, calculations checked against data
2.4	Feasibility summary, rubric-based evaluation of clarity and alignment
2.5	Team contribution evidence, peer evaluation, observation of group work
2.6	Presentation or report, assessed with communication rubric
3.1	Trend analysis report, written assignment with rubric
3.2	Opportunity assessment matrix, graded report or case study analysis
3.3	Integrated opportunity brief, written synthesis evaluated by rubric
3.4	Solution design document, project proposal evaluation
3.5	Validation report, simulation or pilot data review
3.6	Presentation/report, oral defense or stakeholder-style review
4.1	Review of AI workflow documentation
4.2	Evaluation of analytical model outputs
4.3	Assessment of data integrity & ethics report
4.4	Evaluation of insights & recommendations report
4.5	Review of team coordination documentation
4.6	Assessment of performance & risk framework
4.7	Evaluation of reproducible AI pipelines
5.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design
5.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines

5.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment
5.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model
5.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report
5.6	Stakeholder Needs Report – assessed via written report of AI stakeholder needs and validation summary
6.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs for AI needs identification
6.2	AI Solution Alignment Report – assessed via written report analyzing AI solutions against strategic, regulatory, and value alignment
6.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results
6.4	AI Implementation & Enhancement Plan – assessed via documented implementation roadmap with iterative improvement strategy for AI solutions
7.1	Written stakeholder analysis report, graded on clarity, completeness, and identification of ethical/privacy issues.
7.2	Presentation or recorded team briefing assessed on clarity, relevance, and communication effectiveness.
7.3	Peer evaluation and review of collaborative project documentation; assessment of contribution logs.
7.4	Submission of coordinated project documentation with stakeholder feedback records; rubric-based evaluation.
7.5	Evaluation report or reflective log comparing proposed vs. actual solutions; assessed on analytical reasoning.
7.6	Recommendations report or lessons learned document; assessed on feasibility, clarity, and actionable insights.
8.1	Evaluation report assessed for completeness, accuracy, and integration of metrics and governance.
8.2	Consolidated workflow documentation or project plan graded on clarity, coordination, and integration.
8.3	Optimized workflow diagrams or implementation logs evaluated for measurable efficiency improvements.
8.4	Compliance checklist or audit report reviewed for thoroughness and adherence to standards.
8.5	KPI analysis report or dashboards graded on validity of analysis and conclusions.
8.6	Knowledge repository, workshop materials, or presentations assessed for clarity, usefulness, and dissemination quality.

8.7	Innovation proposal evaluated on originality, feasibility, and alignment with AI trends.
9.1	AI Adoption Assessment Report, Case Study Analysis
9.2	Change Strategy Plan Document, Written Justification
9.3	Stakeholder Engagement Record, Reflection Notes, Training/Workshop Feedback
9.4	AI Performance Monitoring Dashboard, KPI Reports
9.5	Adoption Challenges Log (if used), Summary Table or Annotated Notes

	DEVELOPMENT & OPERATIONS		**[2]**
Profile title	**AI ARCHITECT**		**[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: 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. 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 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
	E.9.	IS Governance	e-4
Complexity	The profile has an EQFX level.		
Deliverables	• Choice of Technology • Selecting Models, Architecture and Techniques • New AI Solution Proposal • AI Security Policy • System Architecture • Infrastructure Strategy • Integrated AI Solution • Technical Aspects of AI Projects • Integrated Solution • Safety of Stakeholders		

1. PLO IS and Business Strategy Alignment [EQF7]	
The learner has demonstrated capability 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 Architecture Design [EQF7]	
The learner has demonstrated capability 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	Optimize 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 capability 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]	
The learner has demonstrated capability 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	
4.1	Analyse the environmental, social, and economic performance of AI systems in applied project settings, such as optimizing 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]	
The learner has demonstrated capability 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	
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 capability to…	
Develop, optimize, 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 organizational contexts, such as automated decision-making systems or AI-driven platforms
6.2	Optimize 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 capability 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]	
The learner has demonstrated capability 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.

9. PLO IS Governance [EQF7]	
The learner has demonstrated capability to…	
Design, apply, and evaluate AI governance frameworks and lifecycle controls, by integrating regulatory requirements, ethical principles, organizational risk appetite, and business objectives to guide responsible AI deployment, manage AI-specific risks, and support accountable decision-making in organizational 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Written Report, Case Study Analysis, Data-Driven Mapping
1.2	Alignment Assessment Report, Portfolio Review, Gap Analysis Presentation
1.3	Governance Assessment Report, Compliance Checklist Submission
1.4	IS/Architecture Design Diagrams, Modelling Artefact Review
1.5	AI/Data Solution Prototype, Demonstration, Performance Metrics Report
1.6	Organisational Impact Report, Value-Creation Analysis, Oral Defence / Presentation
2.1	Review of dependency diagrams, Analysis report evaluation
2.2	Assessment of architecture blueprint, Design document grading, Prototype/simulation evaluation
2.3	Evaluation of team deployment plan, Observation of deployment report outcomes
2.4	Assessment of risk & bias report, Ethics evaluation report review
2.5	Grading of technical documentation, Presentation slides review
2.6	Evaluation of performance report, Review of optimized system documentation
3.1	Trend analysis report, written assignment with rubric
3.2	Opportunity assessment matrix, graded report or case study analysis
3.3	Integrated opportunity brief, written synthesis evaluated by rubric
3.4	Solution design document, project proposal evaluation
3.5	Validation report, simulation or pilot data review
3.6	Presentation/report, oral defense or stakeholder-style review
4.1	Sustainability analysis report of an AI system
4.2	Comparative evaluation matrix with written improvement proposal
4.3	Completed sustainability assessment framework applied to an AI project
4.4	Project presentation or written project memo
4.5	Sustainability risk and trade-off identification document
4.6	Structured reflective statement on sustainable AI practice
5.1	Organisational AI integration requirements analysis; stakeholder and compliance mapping
5.2	Operational AI integration architecture and deployment package; lead integration documentation

5.3	AI system validation report (performance, security, regulatory compliance); acceptance evidence
5.4	AI integration coordination artefacts (interface agreements, handover documents); stakeholder communication summary
5.5	AI integration strategy recommendation report; business-aligned justification dossier
6.1	Review of deployed AI system, deployment documentation
6.2	Assessment of AI monitoring dashboard, optimization report
6.3	Evaluation of AI team coordination report, meeting logs
6.4	Review of AI compliance report, audit trail
6.5	Assessment of AI KPI report, recommendation report
6.6	Evaluation of AI training materials, mentorship documentation
6.7	Assessment of AI continuous improvement plan, monitoring dashboard
7.1	Written AI risk assessment report evaluated against completeness and methodological correctness
7.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
7.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
7.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
7.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
7.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
8.1	Evaluation of Vulnerability Analysis Report detailing AI components and workflow weaknesses
8.2	Review of Risk Assessment Matrix, including severity and mitigation measures, using rubric
8.3	Assessment of Secure Development Implementation Plan, evidence of applied DevSecMLOps practices
8.4	Observation and review of Monitoring Dashboard or Log outputs during lab exercises
8.5	Assessment of Team Project Security Plan documentation, peer and instructor evaluation of collaboration and security planning
9.1	Applied AI Governance Framework submission, assessed for alignment with business objectives and risk appetite.

9.2	Governance Effectiveness Report evaluated against performance metrics, compliance outcomes, and incident handling.
9.3	Stakeholder Coordination Plan assessed for clarity of roles, responsibilities, and collaboration mechanisms.
9.4	Risk Mitigation Register graded for completeness, accuracy, and suitability of mitigation strategies.
9.5	Improvement Recommendations Report evaluated for practicality, regulatory alignment, and ethical soundness.
9.6	Governance Communication Brief assessed for clarity, persuasiveness, and suitability for target stakeholders.

	DEVELOPMENT & OPERATIONS		**[2]**
Profile title	**AI PRODUCT DESIGNER**		**[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 relvant learning outcomes so they are capable of fulfilling the mission of the role: Ensures AI products and services are intuitive, usable, and aligned with user and business needs. 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 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.		
Deliverables	• AI System User Instructions • AI Experience Design Specs • Product Strategy & Feature Definition		

1. PLO Product/Service Planning [EQF6]	
The learner has demonstrated capability to…	
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 capability 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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability 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	
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 organizational 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]	
The learner has demonstrated capability to…	
Independently engages with stakeholders to identify and validate needs, translating them into feasible AI and technology solution options, while considering business objectives and organizational 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 organizational 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]	
The learner has demonstrated capability 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Evaluation of system specification report, oral questioning, peer review
1.2	Assessment of risk and cost assessment matrix, case study analysis, written report
1.3	Review of structured product/service plan, project plan submission, rubric-based scoring
1.4	Audit of compliance and documentation package, checklist verification, documented evidence evaluation
1.5	Assessment of stakeholder communication deliverables, presentation evaluation, report grading, feedback from simulated stakeholders
2.1	Review of AI requirement specification document, oral questioning on requirement analysis
2.2	Evaluation of AI design document and workflow diagrams, design critique sessions
2.3	Assessment of AI technology selection report, including justification of choices against constraints
2.4	Analysis of AI integration assessment report, peer or instructor review
2.5	Assessment of AI usability report, including demonstration of prototype and user feedback summary
2.6	Review of AI validation report with test results, automated model evaluation, and instructor feedback
3.1	AI Opportunity Report (written assignment), Presentation of AI opportunity findings
3.2	AI Prototype demonstration, Code or model submission
3.3	Technical documentation for AI implementation, Portfolio entry
3.4	Evaluation report of AI solution, Peer or tutor review
3.5	Design brief for AI solution, Written justification of design choices
3.6	Iteration log or versioned AI prototype, Reflection note on improvements
4.1	AI requirements analysis document, submission and review by instructor/stakeholders
4.2	Multidisciplinary AI UX package, team project deliverables, portfolio evaluation
4.3	AI standards compliance report, rubric-based assessment, audit of artefacts
4.4	AI UX risk assessment report, scenario analysis, case study evaluation
4.5	AI stakeholder recommendation report, presentation to stakeholders, written justification
4.6	AI implementation feedback log, reflective report, evidence of iterative improvement

5.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence; peer-review of contributions.
5.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components; grading rubric based on completeness and accuracy.
5.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs; assessment of clarity, cohesion, and accessibility.
5.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements; submission of compliance verification report.
5.5	Evaluation of customized AI documentation templates and modified project documentation; assessment based on alignment with project-specific requirements and adaptability.
6.1	Stakeholder Needs Report – assessed via written report of AI stakeholder needs and validation summary
6.2	Requirement Analysis Matrix – assessed via submitted matrix mapping functional, technical, and business requirements to AI solutions
6.3	AI Solution Options Brief – assessed via presentation or report proposing feasible AI solution options
6.4	AI Data Analysis Summary – assessed via submitted dashboard, data visualization, or short report analyzing data to inform AI solutions
6.5	AI Ethical & Regulatory Assessment – assessed via written document outlining ethical and regulatory considerations in AI solution proposals
7.1	Written stakeholder analysis report, graded on clarity, completeness, and identification of ethical/privacy issues.
7.2	Presentation or recorded team briefing assessed on clarity, relevance, and communication effectiveness.
7.3	Peer evaluation and review of collaborative project documentation; assessment of contribution logs.
7.4	Submission of coordinated project documentation with stakeholder feedback records; rubric-based evaluation.
7.5	Evaluation report or reflective log comparing proposed vs. actual solutions; assessed on analytical reasoning.
7.6	Recommendations report or lessons learned document; assessed on feasibility, clarity, and actionable insights.

	DEVELOPMENT & OPERATIONS		**[2]**
Profile title	**AI ENGINEER**		**[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: 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. 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 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.		
Deliverables	• Software Design Description • Implemented AI System • Software Quality • Documented Code • AI/ML Security Guidelines • Secure AI/ML Lifecycle • Incident Response Plan • Technological Interventions • Security and Compliance • Incident Response • Development, Testing & Deployment of AI Systems • Test Procedure • Test Plan • Test Procedure • AI Model • AI Solution Documentation • Data governance framework		

1. PLO Application Design [EQF6]	
The learner has demonstrated capability 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	
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 capability 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 capability 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]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
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 behavior.

6. PLO Solution Deployment [EQF6]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability 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	
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 organizational 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]	
The learner has demonstrated capability 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 optimize 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 optimization.
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]	
The learner has demonstrated capability to…	
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 organizational AI-driven processes.
9.6	Produce data storytelling artifacts such as visual narratives or annotated dashboards to convey insights for AI-enabled decisions.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Review of AI requirement specification document, oral questioning on requirement analysis
1.2	Evaluation of AI design document and workflow diagrams, design critique sessions
1.3	Assessment of AI technology selection report, including justification of choices against constraints
1.4	Analysis of AI integration assessment report, peer or instructor review
1.5	Assessment of AI usability report, including demonstration of prototype and user feedback summary
1.6	Review of AI validation report with test results, automated model evaluation, and instructor feedback
2.1	Annotated portfolio submission, short written test
2.2	Comparative analysis table, oral explanation or peer review
2.3	Trend mapping report, written report evaluation
2.4	Mini prototype/simulation demonstration, lab report
2.5	Ethics and impact briefing, rubric-based report assessment
2.6	Presentation/dashboard, peer and instructor evaluation
3.1	AI Model Selection Report, Written Justification
3.2	AI Component Demonstration, Code Submission
3.3	Requirements Analysis Document, Use Case Mapping
3.4	AI Performance Evaluation Report, Metric Analysis
3.5	Technical Documentation, Presentation/Slide Deck
3.6	Test Reports, Unit Test Logs, Debugging Evidence
4.1	AI integration requirements analysis report; comparative system context matrix
4.2	Implemented AI integration solution (code & configuration); AI integration architecture diagram
4.3	Configured AI models and data pipelines; AI API/interface specification
4.4	AI system test results (performance, security, reliability); AI evaluation summary
4.5	Written AI integration justification report; oral project defence or presentation
5.1	Review of AI evaluation plan
5.2	Assessment of AI analytical report
5.3	Evaluation of AI fairness/compliance report

5.4	Review of AI recommendation report
5.5	Inspection of AI metric/explainability outputs
6.1	Deployed AI solution demonstration; integration scripts review; architecture diagram evaluation
6.2	AI performance report review; monitoring dashboard evaluation; troubleshooting log analysis
6.3	Updated/retrained AI model verification; workflow documentation review; test result analysis
6.4	Operational manual evaluation; lifecycle documentation review; handover report assessment
6.5	Bias/fairness report evaluation; data privacy compliance review; security assessment evaluation
7.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence; peer-review of contributions.
7.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components; grading rubric based on completeness and accuracy.
7.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs; assessment of clarity, cohesion, and accessibility.
7.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements; submission of compliance verification report.
7.5	Evaluation of customized AI documentation templates and modified project documentation; assessment based on alignment with project-specific requirements and adaptability.
8.1	Assessment of AI incident investigation report; depth and accuracy of data analysis
8.2	Evaluation of root cause evaluation; impact analysis review
8.3	Review of mitigation plan; effectiveness of corrective/preventive measures
8.4	Assessment of monitoring/knowledge strategy document; clarity and feasibility of design
8.5	Review of advisory report; quality of recommendations for AI performance and ethical compliance
9.1	Evaluation of integrated datasets
9.2	Assessment of analytics report
9.3	Review of predictive model outputs
9.4	Audit of dataset evaluation report
9.5	Assessment of findings presentation
9.6	Evaluation of data storytelling artifacts

	DEVELOPMENT & OPERATIONS		**[2]**
Profile title	**AI APPLICATION DEVELOPER**		**[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: 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. 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 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.		
Deliverables	• Integrated AI Solution • AI Solution Documentation • Functioning AI System • AI/ML Component		

1. PLO Application Design [EQF6]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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	
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 organizational 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Review of AI requirement specification document, oral questioning on requirement analysis
1.2	Evaluation of AI design document and workflow diagrams, design critique sessions
1.3	Assessment of AI technology selection report, including justification of choices against constraints
1.4	Analysis of AI integration assessment report, peer or instructor review
1.5	Assessment of AI usability report, including demonstration of prototype and user feedback summary
1.6	Review of AI validation report with test results, automated model evaluation, and instructor feedback
2.1	AI Model Selection Report, Written Justification
2.2	AI Component Demonstration, Code Submission
2.3	Requirements Analysis Document, Use Case Mapping
2.4	AI Performance Evaluation Report, Metric Analysis
2.5	Technical Documentation, Presentation / Slide Deck
2.6	Test Reports, Unit Test Logs, Debugging Evidence
3.1	AI integration requirements analysis report; comparative system context matrix
3.2	Implemented AI integration solution (code & configuration); AI integration architecture diagram
3.3	Configured AI models and data pipelines; AI API/interface specification
3.4	AI system test results (performance, security, reliability); AI evaluation summary
3.5	Written AI integration justification report; oral project defence or presentation
4.1	Review of AI test execution report
4.2	Evaluation of AI error/anomaly log
4.3	Assessment of AI bias report
4.4	Inspection of AI test documentation
4.5	Review of AI compliance checklist
5.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence; peer-review of contributions.

5.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components; grading rubric based on completeness and accuracy.
5.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs; assessment of clarity, cohesion, and accessibility.
5.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements; submission of compliance verification report.
5.5	Evaluation of customized AI documentation templates and modified project documentation; assessment based on alignment with project-specific requirements and adaptability.

	DEVELOPMENT & OPERATIONS		**[2]**
Profile title	**AI RESEARCHER**		**[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: 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. 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 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.		
Deliverables	• Developed AI Models and Experiments • Ethical Standards in Research • Research Strategies for AI Policies		

1. PLO Technology Trend Monitoring [EQF8]	
The learner has demonstrated capability to…	
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 capability to…	
Formulate and direct the strategic orientation for AI-driven innovation by envisioning and realising transformative AI applications that generate new organizational 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 organizational or societal contexts.
2.2	Envision and conceptualize transformative AI applications that create new markets, services, organizational capabilities, or societal value.
2.3	Lead and influence multidisciplinary teams and stakeholders in the realization of AI-enabled innovation initiatives at organizational 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 capability 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 organizational, 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]	
The learner has demonstrated capability to…	
Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organizational units by aligning AI knowledge management with organizational 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 organizational, 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 organizational objectives to support innovation, effectiveness, and sustainable use of AI technologies.

5. PLO Needs Identification [EQF7]	
The learner has demonstrated capability to…	
Lead the end-to-end needs identification process with stakeholders, ensuring AI-driven solution recommendations are strategically aligned with organizational 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 organizational needs.
5.2	Critically assess and ensure that AI-driven solution proposals align with organizational 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-centered design principles, project management tools, or feedback loops.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Evaluation of AI trend reports, critical review of AI comparative analyses, annotated AI bibliographies
1.2	Assessment of AI innovation proposals, review of AI frameworks, evaluation of AI strategy papers
1.3	Assessment of AI transformation plans, review of AI governance frameworks, case study evaluation of AI interventions
1.4	Evaluation of AI ethical assessments, review of AI compliance reports, assessment of AI sustainability matrices
1.5	Assessment of AI evaluation reports, review of AI decision matrices, evaluation of AI risk management plans
1.6	Assessment of AI executive briefings, review of AI policy reports, evaluation of AI white papers
1.7	Evaluation of AI leadership reflections, review of AI change case studies, assessment of AI governance documentation
2.1	Assessment of an AI strategic priority framework and AI contextual analysis report, supported by a written strategic justification.
2.2	Evaluation of a transformative AI application concept dossier and AI market or ecosystem model, assessed through a vision paper review.
2.3	Assessment of an AI innovation governance model and AI stakeholder strategy, supported by documented AI leadership decisions and a reflective leadership narrative.
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.
2.5	Evaluation of an AI-enabled business or operating model and AI scalability and feasibility analysis, assessed through a written innovation case.
2.6	Assessment of an AI innovation evaluation framework and AI impact assessment report, supported by evidence-based performance analysis.
2.7	Evaluation of a responsible AI governance framework and AI ethical, legal, and risk assessment, assessed through a policy or governance review.
2.8	Examination of a doctoral-level AI practice-based research report and original AI innovation contribution, including defence or viva.
2.9	Assessment of an AI reflective strategy portfolio and revised AI innovation strategy, evaluated through critical reflection and adaptive reasoning.
3.1	Review of innovative AI methodology
3.2	Assessment of integrated datasets & analytics outputs
3.3	Evaluation of AI solution implementation

3.4	Review of evaluation report (ethics, operational, societal, data quality)
3.5	Assessment of research questions & frameworks
3.6	Evaluation of experiment/analysis outputs
3.7	Critical appraisal of methods, AI models, and research outcomes
3.8	Review of dissemination outputs (publications, presentations, collaborations)
4.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design
4.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines
4.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment
4.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model
4.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report
5.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs for AI needs identification
5.2	AI Solution Alignment Report – assessed via written report analyzing AI solutions against strategic, regulatory, and value alignment
5.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results
5.4	AI Implementation & Enhancement Plan – assessed via documented implementation roadmap with iterative improvement strategy for AI solutions

	DEVELOPMENT & OPERATIONS		**[2]**
Profile title	**AI QUALITY & EVALUATION SPECIALIST**		**[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: Designs and executes testing, validation, and evaluation processes that assess AI models and systems against technical, ethical, and business requirements. 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 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.		
Deliverables	• Test Result • Annotation and Judgment Task • Executing Evaluation Tasks • Feedback Documentation		

1. PLO Sustainability Management [EQF6]	
The learner has demonstrated capability 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	
1.1	Analyse the environmental, social, and economic performance of AI systems in applied project settings, such as optimizing 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 capability 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 behavior 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 organizational 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 capability 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 organizational 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]	
The learner has demonstrated capability to…	
Define, evaluate, coordinate, and optimize AI quality strategies by integrating ethical, resilience, and performance considerations across AI systems, using relevant frameworks and monitoring to address complex problems and enhance organizational 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 organizational goals, using AI performance metrics, KPIs, and benchmarking tools.
4.3	Coordinate cross-functional activities to implement AI quality strategies and ensure alignment with organizational objectives.
4.4	Optimize 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 organizational decision-making.

5. PLO Data Science and Analytics [EQF5]	
The learner has demonstrated capability 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 Risk Management [EQF6]	
The learner has demonstrated capability 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	
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 capability 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 capability 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Sustainability analysis report of an AI system
1.2	Comparative evaluation matrix with written improvement proposal
1.3	Completed sustainability assessment framework applied to an AI project
1.4	Project presentation or written project memo
1.5	Sustainability risk and trade-off identification document
1.6	Structured reflective statement on sustainable AI practice
2.1	Review of AI testing framework documentation
2.2	Evaluation of AI critical evaluation report
2.3	Assessment of AI methodology innovation report
2.4	Review of AI ethics/compliance record
2.5	Evaluation of AI team coordination report
3.1	Evaluation of AI documentation repository for organization, 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.
4.1	AI strategy document submission, Strategy alignment matrix review, Risk brief presentation
4.2	AI evaluation report analysis, KPI framework submission, Benchmarking report review
4.3	Coordination plan review, Stakeholder map submission, Executive summary presentation
4.4	AI optimization plan submission, Monitoring framework evaluation, Recommendation report review
4.5	Problem-solving case study submission, Decision log analysis, Scenario planning report presentation

5.1	Review of dataset inventory
5.2	Inspection of cleaned dataset
5.3	Evaluation of descriptive analytics report
5.4	Ethics checklist audit
5.5	Assessment of data visualizations
6.1	Written AI risk assessment report evaluated against completeness and methodological correctness
6.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
6.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
6.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
6.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
6.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
7.1	Individual assignment evaluating AI quality metrics selection with written justification
7.2	Case-based exercise analysing governance and monitoring configurations
7.3	Data analysis report on AI performance, fairness, reliability, and security
7.4	Group project with documented implementation of AI quality improvement measures
7.5	Written report or dashboard presenting AI quality findings
7.6	Structured evaluation paper or exam question assessing AI outcomes against business, ethical, and regulatory criteria
8.1	Evaluation of Vulnerability Analysis Report detailing AI components and workflow weaknesses
8.2	Review of Risk Assessment Matrix, including severity and mitigation measures, using rubric
8.3	Assessment of Secure Development Implementation Plan, evidence of applied DevSecMLOps practices
8.4	Observation and review of Monitoring Dashboard or Log outputs during lab exercises
8.5	Assessment of Team Project Security Plan documentation, peer and instructor evaluation of collaboration and security planning

	DEVELOPMENT & OPERATIONS		**[2]**
Profile title	**AI DEPLOYMENT ENGINEER**		**[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: Ensures AI solutions move reliably from development to production by managing deployment pipelines, environment configurations, and release processes while minimising operational risk and downtime. 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 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.		
Deliverables	• CI/CD Pipelines • Model Deployment Processes • Using Performance & Monitoring Dashboards		

1. PLO Component Integration [EQF6]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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 Data Science and Analytics [EQF5]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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	
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 organizational or cross-functional contexts.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	AI integration requirements analysis report; comparative system context matrix
1.2	Implemented AI integration solution (code & configuration); AI integration architecture diagram
1.3	Configured AI models and data pipelines; AI API/interface specification
1.4	AI system test results (performance, security, reliability); AI evaluation summary
1.5	Written AI integration justification report; oral project defence or presentation
2.1	Review of AI test execution report
2.2	Evaluation of AI error/anomaly log
2.3	Assessment of AI bias report
2.4	Inspection of AI test documentation
2.5	Review of AI compliance checklist
3.1	Deployed AI solution demonstration; integration scripts review; architecture diagram evaluation
3.2	AI performance report review; monitoring dashboard evaluation; troubleshooting log analysis
3.3	Updated/retrained AI model verification; workflow documentation review; test result analysis
3.4	Operational manual evaluation; lifecycle documentation review; handover report assessment
3.5	Bias/fairness report evaluation; data privacy compliance review; security assessment evaluation
4.1	Review of submitted AI documentation inventory or reference table; quiz or oral questioning on AI documentation types and template purposes
4.2	Written explanation or short report linking AI documentation types to purposes; scenario-based questions on AI transparency or compliance documents
4.3	Evaluation of completed AI datasheet, compliance checklist, or user guide for accuracy, completeness, and adherence to template
4.4	Inspection of document repository showing correct storage, retrieval, and versioning of AI documentation; submission of log demonstrating updates
4.5	Review of annotated AI documents or verification checklist demonstrating corrected errors and alignment with organizational standards

5.1	Evaluation of AI impact analysis report, including correctness of metrics and operational insights
5.2	Review of AI deployment/versioning plan, with focus on feasibility, completeness, and conflict mitigation
5.3	Assessment of AI ethical assessment report, evaluating fairness, explainability, and bias considerations
5.4	Review of AI coordination documentation, including evidence of team collaboration and adherence to governance/SLAs
5.5	Evaluation of AI post-deployment monitoring report, including detection of model drift or anomalies
5.6	Assessment of AI corrective action report, focusing on clarity, rationale, and practicality of proposed improvements
6.1	Written AI principles report
6.2	Submission of AI monitoring dashboard outputs or screenshots
6.3	Analysis report of AI trends and incident patterns
6.4	AI service evaluation report
6.5	Documented AI corrective action plan or team report

	DEVELOPMENT & OPERATIONS		**[2]**
Profile title	**MLOPS ENGINEER**		**[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: 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. 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 added when translating this profile to a curriculum.		
			Level
Competences	**A.5.**	Architecture Design	e-3
	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.		
Deliverables	• Validated AI Solution • Development Process • AI/ML Security Guidelines • Secure AI/ML Lifecycle • Automating Workflows		

1. PLO Architecture Design [EQF6]	
The learner has demonstrated capability 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 Application Development [EQF6]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability 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	
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 Solution Deployment [EQF6]	
The learner has demonstrated capability 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	
4.1	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.
4.2	Monitor AI solution performance, evaluate operational metrics, and troubleshoot issues affecting deployment in real-time or batch-processing environments.
4.3	Implement updates or retraining processes, or modify system components, to maintain AI solution performance by leveraging automated pipelines or scheduled workflows.
4.4	Produce operational and lifecycle documentation to support handover and continued maintenance of AI solutions in enterprise or production settings.
4.5	Apply ethical and security considerations when deploying and managing AI solutions, such as data privacy compliance, fairness, and bias mitigation practices.

5. PLO Systems Engineering [EQF6]	
The learner has demonstrated capability to…	
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	
5.1	Design AI infrastructure solutions, including cloud-based pipelines and model deployment environments, for specific operational scenarios such as predictive analytics or recommendation systems.
5.2	Integrate AI components and services with existing IT systems using APIs, microservices, or containerization tools to ensure functional reliability.
5.3	Validate AI system performance and security through structured testing procedures such as unit tests, load testing, or penetration testing.
5.4	Apply ethical AI practices, such as bias detection in datasets, privacy safeguards, and explainable AI techniques, when implementing AI systems.
5.5	Evaluate solutions and propose improvements to AI infrastructure systems within team-based projects using performance metrics and user feedback.
5.6	Document AI infrastructure design and implementation processes clearly, using diagrams, code comments, or reports, to support maintainability and knowledge transfer.

6. PLO Change Support [EQF6]	
The learner has demonstrated capability to…	
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	
6.1	Analyse the impact of AI-related changes on operational performance, service continuity, and compliance, using metrics, logs, or simulation results.
6.2	Plan deployment and versioning strategies for AI models and datasets to avoid conflicting updates, in multi-team or production environments.
6.3	Evaluate ethical, fairness, and explainability considerations when implementing AI changes, by reviewing decision-making outputs or bias reports.
6.4	Coordinate with multiple teams to implement AI changes in accordance with organisational AI governance and SLAs, using project management practices or communication tools.
6.5	Apply monitoring techniques to detect AI model drift or unexpected outputs after deployment, in live or staged AI environments.
6.6	Recommend corrective actions or improvements based on performance and compliance assessment, by analysing operational logs, performance metrics, or audit results.

7. PLO Service Delivery [EQF6]	
The learner has demonstrated capability 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	
7.1	Explain AI service delivery principles and their relationship to performance, security, continuity, and compliance in operational or business contexts.
7.2	Apply AI monitoring tools, dashboards, and logs to assess service availability, model performance, and data quality using real-time operational data.
7.3	Analyse trends in AI service performance, incident patterns, and operational metrics to detect risks or deviations by evaluating historical service records.
7.4	Evaluate AI service effectiveness, security and continuity against defined criteria, suggesting improvements in practical operational scenarios.
7.5	Collaborate with multidisciplinary teams to implement corrective measures that enhance AI service reliability and compliance in organizational or cross-functional contexts.

8. PLO Systems Management [EQF6]	
The learner has demonstrated capability to…	
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	
8.1	Explain and relate AI system architectures, including model serving, data pipelines, and integration with IT services, in hybrid and cloud computing environments.
8.2	Apply operational methods to deploy, configure, and scale AI platforms and inference services, using automation, containerization, and orchestration tools.
8.3	Analyse AI system behaviour by examining performance metrics, logs, and operational indicators, to identify bottlenecks, inefficiencies, and anomalies in AI workflows.
8.4	Resolve AI system operational issues by applying incident management and troubleshooting practices, using structured problem-solving approaches and diagnostic tools.
8.5	Evaluate AI system performance, reliability, and operational risks, including degradation and dependency issues, by assessing service-level metrics and potential failure scenarios.
8.6	Apply security, access control, and compliance requirements to ensure secure and compliant AI operations, in accordance with organisational policies and regulatory frameworks.
8.7	Contribute to improvements of AI operational practices by proposing adjustments based on observed system behaviour, through iterative monitoring and feedback in evolving organisational contexts.

9. PLO Process Improvement [EQF6]	
The learner has demonstrated capability to…	
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	
9.1	Design modifications to AI workflows to improve performance and efficiency using practical AI development projects.
9.2	Apply multiple AI process concepts and metrics to identify, analyse, and solve process problems in real-world AI applications.
9.3	Assess operational risks and ethical considerations in AI development and deployment by evaluating AI systems in operational environments.
9.4	Collaborate effectively within a team to implement process improvements in AI project settings.
9.5	Evaluate the outcomes of AI process changes against performance, ethical, and compliance criteria using defined metrics and benchmarks.
9.6	Document AI process modifications and lessons learned for knowledge sharing within the team.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Evaluation of architecture diagrams, Component inventory review
1.2	Grading of AI module code, Review of module documentation
1.3	Assessment of risk checklist, Ethics report evaluation
1.4	Evaluation of integrated prototype, Deployment report review
2.1	AI Model Selection Report, Written Justification
2.2	AI Component Demonstration, Code Submission
2.3	Requirements Analysis Document, Use Case Mapping
2.4	AI Performance Evaluation Report, Metric Analysis
2.5	Technical Documentation, Presentation / Slide Deck
2.6	Test Reports, Unit Test Logs, Debugging Evidence
3.1	AI integration requirements analysis report; comparative system context matrix
3.2	Implemented AI integration solution (code & configuration); AI integration architecture diagram
3.3	Configured AI models and data pipelines; AI API/interface specification
3.4	AI system test results (performance, security, reliability); AI evaluation summary
3.5	Written AI integration justification report; oral project defence or presentation
4.1	Deployed AI solution demonstration; integration scripts review; architecture diagram evaluation
4.2	AI performance report review; monitoring dashboard evaluation; troubleshooting log analysis
4.3	Updated/retrained AI model verification; workflow documentation review; test result analysis
4.4	Operational manual evaluation; lifecycle documentation review; handover report assessment
4.5	Bias/fairness report evaluation; data privacy compliance review; security assessment evaluation
5.1	Evaluation of AI design diagrams, design report submission
5.2	Review of integrated AI module, integration report
5.3	Assessment of AI test report, performance dashboard
5.4	Review of AI bias report, privacy documentation, explainability report
5.5	Evaluation of AI evaluation report, recommendations report
5.6	Review of AI project documentation

6.1	Evaluation of AI impact analysis report, including correctness of metrics and operational insights
6.2	Review of AI deployment/versioning plan, with focus on feasibility, completeness, and conflict mitigation
6.3	Assessment of AI ethical assessment report, evaluating fairness, explainability, and bias considerations
6.4	Review of AI coordination documentation, including evidence of team collaboration and adherence to governance/SLAs
6.5	Evaluation of AI post-deployment monitoring report, including detection of model drift or anomalies
6.6	Assessment of AI corrective action report, focusing on clarity, rationale, and practicality of proposed improvements
7.1	Written AI principles report
7.2	Submission of AI monitoring dashboard outputs or screenshots
7.3	Analysis report of AI trends and incident patterns
7.4	AI service evaluation report
7.5	Documented AI corrective action plan or team report
8.1	AI system architecture diagram review, oral or written explanation of AI architecture
8.2	Evaluation of AI deployment/configuration files, automated deployment simulation check
8.3	AI performance report assessment, data analysis exercises, case study analysis
8.4	AI incident log evaluation, problem-solving case study, practical troubleshooting demonstration
8.5	AI risk & reliability assessment report review, scenario-based evaluation
8.6	AI security & compliance checklist audit, written or practical assessment of compliance procedures
9.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of performance improvements.
9.2	Analysis report submission with metrics calculations; peer review or instructor feedback.
9.3	Risk and ethical assessment report evaluated against a checklist; case study review.
9.4	Team project documentation assessed via contribution logs and peer evaluation.
9.5	Comparative performance report graded against metrics and benchmarks; oral defense or presentation optional.
9.6	Lessons-learned or reflective report reviewed for completeness, clarity, and insightfulness.

	DEVELOPMENT & OPERATIONS		**[2]**
Profile title	**AI RELIABILITY ENGINEER**		**[2.9]**
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI reliability enigeer. 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: Delivers resilient and dependable AI systems by building fault-tolerant architectures, implementing safeguards, and optimizing operational processes, ensuring AI performs reliably under all conditions. 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 added when translating this profile to a curriculum.		
			Level
Competences	**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.		
Deliverables	• Testing and Evaluation • Scalability and Reliability • Evaluation of Quality and Reliability • Test Plan • Test Procedure • Quality Assurance and Auditing		

1. PLO Testing [EQF6]	
The learner has demonstrated capability to…	
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 behavior.

2. PLO Systems Management [EQF6]	
The learner has demonstrated capability to…	
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	
2.1	Explain and relate AI system architectures, including model serving, data pipelines, and integration with IT services, in hybrid and cloud computing environments.
2.2	Apply operational methods to deploy, configure, and scale AI platforms and inference services, using automation, containerization, and orchestration tools.
2.3	Analyse AI system behaviour by examining performance metrics, logs, and operational indicators, to identify bottlenecks, inefficiencies, and anomalies in AI workflows.
2.4	Resolve AI system operational issues by applying incident management and troubleshooting practices, using structured problem-solving approaches and diagnostic tools.
2.5	Evaluate AI system performance, reliability, and operational risks, including degradation and dependency issues, by assessing service-level metrics and potential failure scenarios.
2.6	Apply security, access control, and compliance requirements to ensure secure and compliant AI operations, in accordance with organisational policies and regulatory frameworks.
2.7	Contribute to improvements of AI operational practices by proposing adjustments based on observed system behaviour, through iterative monitoring and feedback in evolving organisational contexts.

3. PLO Risk Management [EQF6]	
The learner has demonstrated capability 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	
3.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
3.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
3.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
3.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
3.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
3.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.

4. PLO ICT Quality Management [EQF6]	
The learner has demonstrated capability 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	
4.1	Select appropriate AI quality metrics and indicators using recognised AI standards and system documentation.
4.2	Combine governance frameworks and monitoring tools for different types of AI systems in operational contexts.
4.3	Analyse AI performance, reliability, fairness, and security data to identify quality risks and improvement opportunities.
4.4	Apply AI quality improvement measures in team-based development or operational AI projects.
4.5	Document and communicate AI quality findings using structured reports or dashboards for stakeholders.
4.6	Evaluate AI system outcomes against business, ethical, and regulatory requirements in organisational settings.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Review of AI evaluation plan
1.2	Assessment of AI analytical report
1.3	Evaluation of AI fairness/compliance report
1.4	Review of AI recommendation report
1.5	Inspection of AI metric/explainability outputs
2.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence; peer-review of contributions.
2.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components; grading rubric based on completeness and accuracy.
2.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs; assessment of clarity, cohesion, and accessibility.
2.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements; submission of compliance verification report.
2.5	Evaluation of customized AI documentation templates and modified project documentation; assessment based on alignment with project-specific requirements and adaptability.
3.1	Written AI risk assessment report evaluated against completeness and methodological correctness
3.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
3.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
3.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
3.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
3.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
3.7	Individual assignment evaluating AI quality metrics selection with written justification
4.1	Case-based exercise analysing governance and monitoring configurations
4.2	Data analysis report on AI performance, fairness, reliability, and security
4.3	Group project with documented implementation of AI quality improvement measures
4.4	Written report or dashboard presenting AI quality findings
4.5	Structured evaluation paper or exam question assessing AI outcomes against business, ethical, and regulatory criteria

	DEVELOPMENT & OPERATIONS		**[2]**
Profile title	**AI OBSERVABILITY & MONITORING SPECIALIST**		**[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: 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. 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 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.		
Deliverables	• Alerting Rules • Anomaly Detection Configurations • Incident Investigation Report		

1. PLO Testing [EQF6]	
The learner has demonstrated capability to…	
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 behavior.

2. PLO Service Delivery [EQF6]	
The learner has demonstrated capability 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 organizational or cross-functional contexts.

3. PLO Problem Management [EQF6]	
The learner has demonstrated capability 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 optimize 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 optimization.
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]	
The learner has demonstrated capability to…	
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 capability 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 capability to…	
Manage AI-related knowledge and information by independently identifying AI-related knowledge needs and systematically organizing, 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 organizational 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 organize, 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Review of AI evaluation plan
1.2	Assessment of AI analytical report
1.3	Evaluation of AI fairness/compliance report
1.4	Review of AI recommendation report
1.5	Inspection of AI metric/explainability outputs
2.1	Written AI principles report
2.2	Submission of AI monitoring dashboard outputs or screenshots
2.3	Analysis report of AI trends and incident patterns
2.4	AI service evaluation report
2.5	Documented AI corrective action plan or team report
3.1	Assessment of AI incident investigation report; depth and accuracy of data analysis
3.2	Evaluation of root cause evaluation; impact analysis review
3.3	Review of mitigation plan; effectiveness of corrective/preventive measures
3.4	Assessment of monitoring/knowledge strategy document; clarity and feasibility of design
3.5	Review of advisory report; quality of recommendations for AI performance and ethical compliance
4.1	AI system architecture diagram review, oral or written explanation of AI architecture
4.2	Evaluation of AI deployment/configuration files, automated deployment simulation check
4.3	AI performance report assessment, data analysis exercises, case study analysis
4.4	AI incident log evaluation, problem-solving case study, practical troubleshooting demonstration
4.5	AI risk & reliability assessment report review, scenario-based evaluation
4.6	AI security & compliance checklist audit, written or practical assessment of compliance procedures
4.7	AI operational improvement proposal review, presentation of recommended improvements
5.1	Evaluation of integrated datasets
5.2	Assessment of analytics report

5.3	Review of predictive model outputs
5.4	Audit of dataset evaluation report
5.5	Assessment of findings presentation
5.6	Evaluation of data storytelling artifacts
6.1	Assessment of an AI knowledge asset inventory and AI asset classification document
6.2	Evaluation of a written AI information needs analysis and AI process–knowledge mapping
6.3	Review of a structured AI knowledge repository with AI documentation templates and version control evidence
6.4	Assessment of an AI knowledge quality checklist and documented AI knowledge governance procedures
6.5	Evaluation of an AI knowledge sharing package with documented AI knowledge reuse evidence

	DEVELOPMENT & OPERATIONS		**[2]**
Profile title	**AI INCIDENT RESPONSE & REPORTING LEAD**		**[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: Ensures safe, reliable, and accountable AI operations by leading incident response, analyzing root causes, and providing clear, actionable reporting to stakeholders and regulators. 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 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.		
Deliverables	• AI Risk Dashboards & Metrics • Regulatory Compliance Submissions • Organisational Risk & Governance Reports		

1. PLO Documentation Production [EQF6]	
The learner has demonstrated capability 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	
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 organizational 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 capability 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 organizational or cross-functional contexts.

3. PLO Problem Management [EQF7]	
The learner has demonstrated capability 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 organizational 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 organizational 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 organizational 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]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
Secure organizational 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 organizational 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 organizational projects.
6.4	Evaluate AI security operations in live organizational environments using compliance and audit frameworks to ensure regulatory and ethical alignment.
6.5	Apply AI governance frameworks across organizational AI systems to optimize operational resilience and trustworthiness.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence; peer-review of contributions
1.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components; grading rubric based on completeness and accuracy
1.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs; assessment of clarity, cohesion, and accessibility
1.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements; submission of compliance verification report
1.5	Evaluation of customized AI documentation templates and modified project documentation; assessment based on alignment with project-specific requirements and adaptability
2.1	Written AI principles report
2.2	Submission of AI monitoring dashboard outputs or screenshots
2.3	Analysis report of AI trends and incident patterns
2.4	AI service evaluation report
2.5	Documented AI corrective action plan or team report
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
4.1	Written AI risk assessment report evaluated against completeness and methodological correctness
4.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
4.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries

4.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
4.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
4.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
5.1	Written stakeholder analysis report, graded on clarity, completeness, and identification of ethical/privacy issues.
5.2	Presentation or recorded team briefing assessed on clarity, relevance, and communication effectiveness.
5.3	Peer evaluation and review of collaborative project documentation; assessment of contribution logs.
5.4	Submission of coordinated project documentation with stakeholder feedback records; rubric-based evaluation.
5.5	Evaluation report or reflective log comparing proposed vs. actual solutions; assessed on analytical reasoning.
5.6	Recommendations report or lessons learned document; assessed on feasibility, clarity, and actionable insights.
6.1	Review of Organizational Security Policy Document, rubric-based evaluation for completeness and regulatory alignment
6.2	Evaluation of Mitigation Implementation Report, evidence of addressing model manipulation, adversarial attacks, and privacy risks
6.3	Review of Team Management Log and project records for execution of AI security and compliance initiatives
6.4	Assessment of Operational Compliance Report, audit-style evaluation for regulatory and ethical adherence
6.5	Review of Governance Application Report evidence embedded in policy, mitigation, and compliance documentation

	DEVELOPMENT & OPERATIONS		**[2]**
Profile title	**AI PLATFORM ENGINEER**		**[2.12]**
Description (Goal and Scope)	This educational profile relates to the AI professional role profile AI platform enigneer. 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: 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. 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 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 EQF7 level.		
Deliverables	• AI Solution in Operation • Operational Guidelines for AI Platform Usage		

1. PLO Component Integration [EQF6]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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	
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 organizational or cross-functional contexts.

5. PLO Systems Management [EQF6]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
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 organizational 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	AI integration requirements analysis report; comparative system context matrix
1.2	Implemented AI integration solution (code & configuration); AI integration architecture diagram
1.3	Configured AI models and data pipelines; AI API/interface specification
1.4	AI system test results (performance, security, reliability); AI evaluation summary
1.5	Written AI integration justification report; oral project defence or presentation
2.1	Review of AI test execution report
2.2	Evaluation of AI error/anomaly log
2.3	Assessment of AI bias report
2.4	Inspection of AI test documentation
2.5	Review of AI compliance checklist
3.1	Evaluation of AI design diagrams, design report submission
3.2	Review of integrated AI module, integration report
3.3	Assessment of AI test report, performance dashboard
3.4	Review of AI bias report, privacy documentation, explainability report
3.5	Evaluation of AI evaluation report, recommendations report
3.6	Review of AI project documentation
4.1	Written AI principles report
4.2	Submission of AI monitoring dashboard outputs or screenshots
4.3	Analysis report of AI trends and incident patterns
4.4	AI service evaluation report
4.5	Documented AI corrective action plan or team report
4.6	AI system architecture diagram review, oral or written explanation of AI architecture
5.1	Evaluation of AI deployment/configuration files, automated deployment simulation check
5.2	AI performance report assessment, data analysis exercises, case study analysis
5.3	AI incident log evaluation, problem-solving case study, practical troubleshooting demonstration
5.4	AI risk & reliability assessment report review, scenario-based evaluation

5.5	AI security & compliance checklist audit, written or practical assessment of compliance procedures
5.6	AI operational improvement proposal review, presentation of recommended improvements
6.1	Written AI risk assessment report evaluated against completeness and methodological correctness
6.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
6.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
6.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
6.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
6.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
7.1	Review of Component Inventory document, oral questioning on AI system components
7.2	Evaluation of Threat Summary Report, short quizzes using real-world AI examples
7.3	Observation of adherence to AI security policies via Monitoring and Incident Log review
7.4	Review of Monitoring and Incident Log entries, instructor evaluation of correct procedure following
7.5	Assessment of documented observations of abnormal AI behaviors within supervised exercises

	SUPPORT & GUIDANCE		**[3]**
Profile title	**AI SECURITY SPECIALIST**		**[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: 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. 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 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
	D.3.	Education and Training Provision	e-3
	E.3.	Risk Management	e-3
	E.8.	Information Security Management	e-4
Complexity	The profile has an EQF7 level.		
Deliverables	• Security Measures against AI/ML-Specific Attacks • Security and Privacy • Critical Business Process Integration Proposal (Security) • Information Security Risk Assessment • AI Security Strategy		

1. PLO Architecture Design [EQF6]	
The learner has demonstrated capability 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 capability 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 capability 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 optimize 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 optimization.
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 capability to…	
Develop and lead AI security strategies across organizational 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 organizational units, services, and systems, using structured risk assessment frameworks such as NIST AI RMF or threat modeling approaches.
4.2	Develop and implement AI security strategies that align with organizational 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 organizational 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 organizational 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 organizational 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 organization, using presentations, briefings, and strategic documentation targeted at executives and teams.

5. PLO Education and Training Provision [EQF6]	
The learner has demonstrated capability to…	
Design and implement AI training programs that integrate organizational 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 organizational AI skill gaps and foster employee AI literacy, using role-specific AI use cases and practical learning scenarios.
5.2	Implement AI training programs 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 programs 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 Risk Management [EQF6]	
The learner has demonstrated capability 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	
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 [EQF7]	
The learner has demonstrated capability to…	
Secure organizational 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	
7.1	Develop AI security policies and operational procedures for real-world organizational AI deployments.
7.2	Implement AI risk mitigation plans addressing model manipulation, adversarial attacks, and privacy concerns in live operational systems.
7.3	Manage multidisciplinary teams to execute AI security and compliance initiatives in organizational projects.
7.4	Evaluate AI security operations in live organizational environments using compliance and audit frameworks to ensure regulatory and ethical alignment.
7.5	Apply AI governance frameworks across organizational AI systems to optimize operational resilience and trustworthiness.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Evaluation of architecture diagrams, Component inventory review
1.2	Grading of AI module code, Review of module documentation
1.3	Assessment of risk checklist, Ethics report evaluation
1.4	Evaluation of integrated prototype, Deployment report review
2.1	Trend analysis report, written assignment with rubric
2.2	Opportunity assessment matrix, graded report or case study analysis
2.3	Integrated opportunity brief, written synthesis evaluated by rubric
2.4	Solution design document, project proposal evaluation
2.5	Validation report, simulation or pilot data review
2.6	Presentation/report, oral defense or stakeholder-style review
3.1	Assessment of AI incident investigation report; depth and accuracy of data analysis
3.2	Evaluation of root cause evaluation; impact analysis review
3.3	Review of mitigation plan; effectiveness of corrective/preventive measures
3.4	Assessment of monitoring/knowledge strategy document; clarity and feasibility of design
3.5	Review of advisory report; quality of recommendations for AI performance and ethical compliance
4.1	AI Risk Assessment Report (written report), case study analysis, scenario-based risk evaluation
4.2	AI Security Strategy Document (strategic report), policy proposal, peer review of strategy alignment
4.3	AI Governance Framework Specification (documented framework), rubric-based evaluation, audit simulation
4.4	AI Implementation Guidance Report (team coordination plan), presentation of AI implementation roadmap, reflective report on team guidance
4.5	AI Strategy Evaluation Report (evaluation report), KPI/metric analysis, compliance review exercises
4.6	AI Security-by-Design Plan (integration plan), lifecycle mapping submission, strategic design checklist evaluation
4.7	AI Threat & Regulation Foresight Brief (foresight report), scenario planning exercise, policy adaptation proposal

4.8	AI Stakeholder Communication Package (presentations, briefings, strategic documents), peer/expert review, communication effectiveness rubric
5.1	Assessment of AI training module design document and AI use-case mapping
5.2	Evaluation of AI training materials and recorded or observed AI training session
5.3	Review of AI learning feedback summary and revised AI training content
5.4	Assessment of AI ethics and governance training materials and applied AI case examples
5.5	Evaluation of documented AI learner support evidence and facilitation notes
5.6	Review of AI instructional design rationale and alignment with learning objectives
6.1	Written AI risk assessment report evaluated against completeness and methodological correctness
6.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
6.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
6.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
6.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
6.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
7.1	Review of Organizational Security Policy Document, rubric-based evaluation for completeness and regulatory alignment
7.2	Evaluation of Mitigation Implementation Report, evidence of addressing model manipulation, adversarial attacks, and privacy risks
7.3	Review of Team Management Log and project records for execution of AI security and compliance initiatives
7.4	Assessment of Operational Compliance Report, audit-style evaluation for regulatory and ethical adherence
7.5	Review of Governance Application Report evidence embedded in policy, mitigation, and compliance documentation

	SUPPORT & GUIDANCE		**[3]**
Profile title	**AI SERVICE SUPPORT SPECIALIST**		**[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 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.		
Deliverables	• Incident and Service Support Reports • Troubleshooting Guides • Continuous Service Improvement Backlog		

1. PLO User Support [EQF5]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability to…	
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.
2.6	Identify key AI service components, including models, data pipelines, inference services, and supporting ICT infrastructure in typical operational environments.

3. PLO Service Delivery [EQF5]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability to…	
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 organizational protocols and reporting chains.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Evaluation of AI system diagrams and written summaries showing AI components, functions, and user interactions
1.2	Review of incident resolution logs and diagnostic reports for routine AI-related issues
1.3	Assessment of documented incident records and escalation reports in line with organisational AI service procedures
1.4	Evaluation of user guidance materials and logged communications explaining AI behaviour, outputs, and limitations
1.5	Review of AI performance monitoring reports and dashboards for accuracy, completeness, and trend analysis
1.6	Assessment of updated support templates, workflow checklists, and improvement logs reflecting adjustments to AI user support practices
2.1	Review of AI system architecture diagram, oral questioning on components and structure
2.2	Practical evaluation of updated AI model/dataset/software in a controlled environment, observation of implementation notes or change log
2.3	Assessment of AI monitoring report, including accuracy and completeness of performance tracking
2.4	Verification of AI compliance checklist, with audit of adherence to security, data protection, and governance policies
2.5	Review of AI rollback/fallback record, including demonstration or documentation of procedure effectiveness
3.1	Written AI service inventory, practical identification exercise
3.2	Short report or presentation of AI service metrics
3.3	Lab submission of AI performance monitoring logs
3.4	Completed AI incident report form
3.5	Updated AI operational documentation review
4.1	Review of AI incident log entries; instructor-verified checklist of detected incidents
4.2	Evaluation of root cause report; rubric-based analysis of troubleshooting steps
4.3	Assessment of corrective action report; comparison with predefined guidelines
4.4	Review of knowledge system entries; completeness and clarity check
4.5	Verification of escalation documentation; audit against organizational protocol

	SUPPORT & GUIDANCE		**[3]**
Profile title	**AI EDUCATOR**		**[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: Provide the knowledge and skills required to ensure that people are able to effectively perform AI related tasks in the workplace. 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 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.		
Deliverables	• Educational Initiatives • Community Engagement • Learning Outcomes • AI Learning Programme/ Training Course • AI Training Policy • AI Literacy Programme		

1. PLO Technology Trend Monitoring [EQF6]	
The learner has demonstrated capability 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	
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 capability 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 organizational 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 capability to…	
Develop, coordinate, and evaluate enterprise-wide AI competence strategies by planning AI literacy and training initiatives that align organizational AI capability with emerging technologies, ethical standards, and strategic business objectives.	
Unit Learning Outcomes	
3.1	Develop enterprise-wide AI training strategies that enhance organizational 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 organizational and multi-disciplinary contexts.
3.3	Evaluate the effectiveness of AI competence programs using performance indicators, organizational 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 organizational goals, in response to evolving technological and regulatory developments.
3.5	Design scalable AI competence development frameworks that support long-term organizational learning, across multiple roles, functions, and levels of AI expertise.
3.6	Advise organizational leadership on AI training priorities and investments, using evidence from competence assessments, risk analyses, and strategic AI roadmaps.

4. PLO Personnel Development [EQF6]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability to…	
Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organizational units by aligning AI knowledge management with organizational 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 organizational, 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 organizational objectives to support innovation, effectiveness, and sustainable use of AI technologies.

6. PLO Needs Identification [EQF6]	
The learner has demonstrated capability to…	
Independently engage with stakeholders to identify and validate needs, translating them into feasible AI and technology solution options, while considering business objectives and organizational 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 organizational 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]	
The learner has demonstrated capability 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Annotated portfolio submission, short written test
1.2	Comparative analysis table, oral explanation or peer review
1.3	Trend mapping report, written report evaluation
1.4	Mini prototype/simulation demonstration, lab report
1.5	Ethics and impact briefing, rubric-based report assessment
1.6	Presentation/dashboard, peer and instructor evaluation
2.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence; peer-review of contributions.
2.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components; grading rubric based on completeness and accuracy.
2.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs; assessment of clarity, cohesion, and accessibility.
2.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements; submission of compliance verification report.
2.5	Evaluation of customized AI documentation templates and modified project documentation; assessment based on alignment with project-specific requirements and adaptability.
3.1	Assessment of enterprise AI training and literacy strategy document
3.2	Evaluation of cross-functional AI training coordination plan and stakeholder alignment evidence
3.3	Review of AI training impact evaluation report and AI competence metrics dashboard
3.4	Assessment of AI governance- and ethics-aligned learning plan addressing emerging AI technologies
3.5	Evaluation of scalable AI competence development framework and role-based AI capability mapping
3.6	Review of executive AI training advisory brief supported by AI competence gap and risk analysis
4.1	Assessment of AI competence analysis report; evaluation of documented AI skill gap findings
4.2	Review of AI skills evaluation matrix; grading based on alignment with organisational objectives
4.3	Evaluation of role-specific AI learning pathway plan; rubric-based assessment of clarity and feasibility

4.4	Assessment of implemented AI learning program documentation; evidence of responsible AI application in tasks
4.5	Review of peer AI coaching portfolio; observation of AI application in decision-making and team collaboration
4.6	Assessment of team-level AI insights report; evaluation of recommendations for problem-solving and collaboration
4.7	Grading of applied AI case study or portfolio; assessment of responsible, context-aware AI use in organisational activities
5.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design
5.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines
5.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment
5.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model
5.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report
6.1	Stakeholder Needs Report – assessed via written report of AI stakeholder needs and validation summary
6.2	Requirement Analysis Matrix – assessed via submitted matrix mapping functional, technical, and business requirements to AI solutions
6.3	AI Solution Options Brief – assessed via presentation or report proposing feasible AI solution options
6.4	AI Data Analysis Summary – assessed via submitted dashboard, data visualization, or short report analyzing data to inform AI solutions
6.5	AI Ethical & Regulatory Assessment – assessed via written document outlining ethical and regulatory considerations in AI solution proposals
7.1	Written stakeholder analysis report, graded on clarity, completeness, and identification of ethical/privacy issues.
7.2	Presentation or recorded team briefing assessed on clarity, relevance, and communication effectiveness.
7.3	Peer evaluation and review of collaborative project documentation; assessment of contribution logs.
7.4	Submission of coordinated project documentation with stakeholder feedback records; rubric-based evaluation.
7.5	Evaluation report or reflective log comparing proposed vs. actual solutions; assessed on analytical reasoning.
7.6	Recommendations report or lessons learned document; assessed on feasibility, clarity, and actionable insights.

	SUPPORT & GUIDANCE		**[3]**
Profile title	**AI ADVISOR**		**[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: 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. 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 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.		
Deliverables	• Knowledge or Information Base (relevant domain) • New AI Solution proposal • Critical Business Process Integration Proposal • Opportunity Memo		

1. PLO IS and Business Strategy Alignment [EQF7]	
The learner has demonstrated capability 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 capability 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 capability to…	
Deliver impactful AI-enabled innovations in professional contexts by leading collaborative development, aligning technical and organizational 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 organizational 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 organizational 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 organizational 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 capability to…	
Leads the end-to-end needs identification process with stakeholders, ensuring AI-driven solution recommendations are strategically aligned with organizational 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 organizational needs.
4.2	Critically assess and ensure that AI-driven solution proposals align with organizational 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-centered design principles, project management tools, or feedback loops.

5. PLO Risk Management [EQF6]	
The learner has demonstrated capability 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 capability to…	
Ensure responsible and inclusive AI decision-making by designing and implementing stakeholder engagement strategies that integrate ethical, cultural, and organizational 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 organizational learning or project audits.

7. PLO Process Improvement [EQF7]	
The learner has demonstrated capability to…	
Optimize 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 optimize 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 organizational 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 capability to…	
Lead AI-driven transformation initiatives by coordinating teams, implementing adaptive change strategies, integrating governance and ethical practices, and monitoring AI performance to optimize adoption and organizational 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 organizational processes.
8.3	Monitor AI performance metrics to optimize 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 organizational settings by addressing technical, human, or process-related issues.
8.5	Evaluate the impact of AI adoption on team performance and organizational processes using qualitative and quantitative indicators.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Written Report, Case Study Analysis, Data-Driven Mapping
1.2	Alignment Assessment Report, Portfolio Review, Gap Analysis Presentation
1.3	Governance Assessment Report, Compliance Checklist Submission
1.4	IS/Architecture Design Diagrams, Modelling Artefact Review
1.5	AI/Data Solution Prototype, Demonstration, Performance Metrics Report
1.6	Organisational Impact Report, Value-Creation Analysis, Oral Defence/Presentation
2.1	Annotated portfolio submission, short written test
2.2	Comparative analysis table, oral explanation or peer review
2.3	Trend mapping report, written report evaluation
2.4	Mini prototype/simulation demonstration, lab report
2.5	Ethics and impact briefing, rubric-based report assessment
2.6	Presentation/dashboard, peer and instructor evaluation
3.1	Team collaboration report documenting AI solution design efforts
3.2	Architecture/integration report for AI solution
3.3	Deployed AI solution demonstration or portfolio submission
3.4	Evaluation report measuring real-world AI solution effectiveness
3.5	Risk/trade-off analysis report for AI innovation projects
3.6	Stakeholder communication materials (presentations, briefs) for AI innovations
4.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs for AI needs identification
4.2	AI Solution Alignment Report – assessed via written report analyzing AI solutions against strategic, regulatory, and value alignment
4.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results
4.4	AI Implementation & Enhancement Plan – assessed via documented implementation roadmap with iterative improvement strategy for AI solutions
5.1	Written AI risk assessment report evaluated against completeness and methodological correctness
5.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
5.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries

5.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
5.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
5.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
6.1	Stakeholder engagement strategy document; assessed with rubric for strategic depth, integration of ethical/cultural factors, and completeness.
6.2	Workshop artifacts, collaboration logs, or team alignment reports; evaluated for effectiveness of facilitation and team outcomes.
6.3	Workshop or meeting minutes documenting conflict resolution and consensus; evaluated on mediation quality and decision outcomes.
6.4	Impact assessment report; assessed on use of data, metrics, and evidence of stakeholder alignment.
6.5	Updated engagement plan or pilot project report; assessed on adaptability and responsiveness to emerging challenges.
6.6	Guidelines, training materials, or briefing reports; assessed on clarity, ethical rigor, and cultural sensitivity.
6.7	Final stakeholder engagement report; assessed for completeness, documentation quality, and suitability for audits.
7.1	Evaluation report assessed for completeness, accuracy, and integration of metrics and governance.
7.2	Consolidated workflow documentation or project plan graded on clarity, coordination, and integration.
7.3	Optimized workflow diagrams or implementation logs evaluated for measurable efficiency improvements.
7.4	Compliance checklist or audit report reviewed for thoroughness and adherence to standards.
7.5	KPI analysis report or dashboards graded on validity of analysis and conclusions.
7.6	Knowledge repository, workshop materials, or presentations assessed for clarity, usefulness, and dissemination quality.
7.7	Innovation proposal evaluated on originality, feasibility, and alignment with AI trends.
8.1	AI Transformation Leadership Plan, Team Coordination Documentation
8.2	Adaptive Adoption Strategy Report, Compliance Checklist
8.3	AI Performance Metrics Report, KPI Dashboard
8.4	Problem-Solving Case Documentation, Analytical Report of Resolved Issues
8.5	Impact Evaluation Report, Performance Metrics Analysis, Comparative Tables

	SUPPORT & GUIDANCE		**[3]**
Profile title	**AI SAFETY SPECIALIST**		**[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: 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. 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 added when translating this profile to a curriculum.		
			Level
Competences	**A.5.**	Architecture Design	e-3
	A.7.	Technology Trend Monitoring	e-3
	A.8.	Sustainability Management	e-3
	A.9.	Innovating	e-4
	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-4
Complexity	The profile has an EQF7 level.		
Deliverables	• Safety Plans • Legal, Ethical and Safety Standards • AI Compliance Risk Mitigation Plan		

1. PLO Architecture Design [EQF6]	
The learner has demonstrated capability 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 [EQF6]	
The learner has demonstrated capability 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 [EQF6]	
The learner has demonstrated capability 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	
3.1	Analyse the environmental, social, and economic performance of AI systems in applied project settings, such as optimizing machine-learning workflows for energy efficiency.
3.2	Evaluate alternative AI implementation strategies for their sustainability impact by comparing model, data, or infrastructure choices, and propose feasible improvements.
3.3	Apply sustainability assessment tools and methods to AI projects using established frameworks or metrics, under minimal supervision.
3.4	Report findings and recommendations to team members and stakeholders in professional project documentation or presentations, for improving AI practices.
3.5	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.
3.6	Reflect on personal and team responsibilities in applying sustainable AI practices within supervised professional or educational projects.

4. PLO Innovating [EQF7]	
The learner has demonstrated capability to…	
Deliver impactful AI-enabled innovations in professional contexts by leading collaborative development, aligning technical and organizational 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 organizational 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 organizational 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 organizational 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 Testing [EQF6]	
The learner has demonstrated capability to…	
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 behavior.

6. PLO Education and Training Provision [EQF6]	
The learner has demonstrated capability to…	
Design and implement AI training programs that integrate organizational AI strategy and employee AI literacy, using evaluation tools to monitor effectiveness and adjust content for improving team AI competence.	
Unit Learning Outcomes	
6.1	Design AI training modules that address organizational AI skill gaps and foster employee AI literacy, using role-specific AI use cases and practical learning scenarios.
6.2	Implement AI training programs by delivering sessions and applying AI tools or simulations to illustrate AI concepts, in workplace-based learning and training environments.
6.3	Monitor and adjust AI learning programs using feedback and performance data to improve team-level AI competence, by analysing learning analytics and training outcomes.
6.4	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.
6.5	Support learners during AI training activities by explaining concepts, facilitating discussions, and responding to questions, in guided and instructor-led training settings.
6.6	Apply basic instructional design principles to structure AI learning content and activities, using established training frameworks and learning objectives.

7. PLO Risk Management [EQF6]	
The learner has demonstrated capability 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 [EQF7]	
The learner has demonstrated capability to…	
Secure organizational 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 organizational 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 organizational projects.
8.4	Evaluate AI security operations in live organizational environments using compliance and audit frameworks to ensure regulatory and ethical alignment.
8.5	Apply AI governance frameworks across organizational AI systems to optimize operational resilience and trustworthiness.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Evaluation of architecture diagrams, Component inventory review
1.2	Grading of AI module code, Review of module documentation
1.3	Assessment of risk checklist, Ethics report evaluation
1.4	Evaluation of integrated prototype, Deployment report review
2.1	Annotated portfolio submission, short written test
2.2	Comparative analysis table, oral explanation or peer review
2.3	Trend mapping report, written report evaluation
2.4	Mini prototype/simulation demonstration, lab report
2.5	Ethics and impact briefing, rubric-based report assessment
2.6	Presentation/dashboard, peer and instructor evaluation
3.1	Sustainability analysis report of an AI system
3.2	Comparative evaluation matrix with written improvement proposal
3.3	Completed sustainability assessment framework applied to an AI project
3.4	Project presentation or written project memo
3.5	Sustainability risk and trade-off identification document
3.6	Structured reflective statement on sustainable AI practice
4.1	Team collaboration report documenting AI solution design efforts
4.2	Architecture/integration report for AI solution
4.3	Deployed AI solution demonstration or portfolio submission
4.4	Evaluation report measuring real-world AI solution effectiveness
4.5	Risk/trade-off analysis report for AI innovation projects
4.6	Stakeholder communication materials (presentations, briefs) for AI innovations
5.1	Review of AI evaluation plan
5.2	Assessment of AI analytical report
5.3	Evaluation of AI fairness/compliance report
5.4	Review of AI recommendation report
5.5	Inspection of AI metric/explainability outputs

6.1	Assessment of AI training module design document and AI use-case mapping
6.2	Evaluation of AI training materials and recorded or observed AI training session
6.3	Review of AI learning feedback summary and revised AI training content
6.4	Assessment of AI ethics and governance training materials and applied AI case examples
6.5	Evaluation of documented AI learner support evidence and facilitation notes
6.6	Review of AI instructional design rationale and alignment with learning objectives
7.1	Written AI risk assessment report evaluated against completeness and methodological correctness
7.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
7.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
7.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
7.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
7.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
8.1	Review of Organizational Security Policy Document, rubric-based evaluation for completeness and regulatory alignment
8.2	Evaluation of Mitigation Implementation Report, evidence of addressing model manipulation, adversarial attacks, and privacy risks
8.3	Review of Team Management Log and project records for execution of AI security and compliance initiatives
8.4	Assessment of Operational Compliance Report, audit-style evaluation for regulatory and ethical adherence
8.5	Review of Governance Application Report evidence embedded in policy, mitigation, and compliance documentation

	SUPPORT & GUIDANCE		**[3]**
Profile title	**RESPONSIBLE AI OFFICER**		**[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: 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. 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 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.3.	Risk Management	e-3
	E.5.	Process Improvement	e-4
	E.6.	ICT Quality Management	e-4
	E.9.	IS Governance	e-4
Complexity	The profile has an EQF7 level.		
Deliverables	• Guidelines, Recommendations and Regulations regarding AI • Legal and Ethical Considerations • AI Ethics KPI's • AI Ethics Policy • Fundamental Rights Impact Assessment (FRIA)		

1. PLO Technology Trend Monitoring [EQF6]	
The learner has demonstrated capability 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	
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 capability 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 optimizing 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 capability 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 organizational 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]	
The learner has demonstrated capability to…	
Define, evaluate, coordinate, and optimize AI quality strategies by integrating ethical, resilience, and performance considerations across AI systems, using relevant frameworks and monitoring to address complex problems and enhance organizational 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 organizational goals, using AI performance metrics, KPIs, and benchmarking tools.
4.3	Coordinate cross-functional activities to implement AI quality strategies and ensure alignment with organizational objectives.
4.4	Optimize 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 organizational decision-making.

5. PLO Education and Training Provision [EQF6]	
The learner has demonstrated capability to…	
Design and implement AI training programs that integrate organizational 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 organizational AI skill gaps and foster employee AI literacy, using role-specific AI use cases and practical learning scenarios.
5.2	Implement AI training programs 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 programs 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 Risk Management [EQF6]	
The learner has demonstrated capability 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	
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 [EQF7]	
The learner has demonstrated capability to…	
Optimize 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 optimize 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 organizational 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 ICT Quality Management [EQF7]	
The learner has demonstrated capability to…	
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	
8.1	Design AI quality management frameworks by integrating governance mechanisms, metrics, and ethical principles.
8.2	Adapt AI quality approaches to complex organisational contexts involving multiple AI systems and stakeholders.
8.3	Evaluate the effectiveness of AI quality controls using performance, risk, and compliance evidence.
8.4	Assess AI-related risks and uncertainties in relation to trustworthiness, fairness, and system robustness.
8.5	Manage the implementation of AI quality assurance activities within organisational or cross-functional projects.
8.6	Interpret AI quality outcomes to inform strategic decisions on AI deployment, scaling, or modification.
8.7	Critically reflect on limitations of AI quality practices in light of evolving technological, ethical, or regulatory conditions.

9. PLO IS Governance [EQF7]	
The learner has demonstrated capability to…	
Design, apply, and evaluate AI governance frameworks and lifecycle controls, by integrating regulatory requirements, ethical principles, organizational risk appetite, and business objectives to guide responsible AI deployment, manage AI-specific risks, and support accountable decision-making in organizational 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Annotated portfolio submission, short written test
1.2	Comparative analysis table, oral explanation or peer review
1.3	Trend mapping report, written report evaluation
1.4	Mini prototype/simulation demonstration, lab report
1.5	Ethics and impact briefing, rubric-based report assessment
1.6	Presentation/dashboard, peer and instructor evaluation
2.1	Sustainability analysis report of an AI system
2.2	Comparative evaluation matrix with written improvement proposal
2.3	Completed sustainability assessment framework applied to an AI project
2.4	Project presentation or written project memo
2.5	Sustainability risk and trade-off identification document
2.6	Structured reflective statement on sustainable AI practice
3.1	Evaluation of AI documentation repository for organization, 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.
4.1	AI strategy document submission, Strategy alignment matrix review, Risk brief presentation
4.2	AI evaluation report analysis, KPI framework submission, Benchmarking report review
4.3	Coordination plan review, Stakeholder map submission, Executive summary presentation
4.4	AI optimization plan submission, Monitoring framework evaluation, Recommendation report review

4.5	Problem-solving case study submission, Decision log analysis, Scenario planning report presentation
4.6	AI quality report submission, Executive slides presentation, Visual dashboard demonstration
5.1	Assessment of AI training module design document and AI use-case mapping
5.2	Evaluation of AI training materials and recorded or observed AI training session
5.3	Review of AI learning feedback summary and revised AI training content
5.4	Assessment of AI ethics and governance training materials and applied AI case examples
5.5	Evaluation of documented AI learner support evidence and facilitation notes
5.6	Review of AI instructional design rationale and alignment with learning objectives
6.1	Written AI risk assessment report evaluated against completeness and methodological correctness
6.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
6.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
6.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
6.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
6.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
7.1	Evaluation report assessed for completeness, accuracy, and integration of metrics and governance.
7.2	Consolidated workflow documentation or project plan graded on clarity, coordination, and integration.
7.3	Optimized workflow diagrams or implementation logs evaluated for measurable efficiency improvements.
7.4	Compliance checklist or audit report reviewed for thoroughness and adherence to standards.
7.5	KPI analysis report or dashboards graded on validity of analysis and conclusions.
7.6	Knowledge repository, workshop materials, or presentations assessed for clarity, usefulness, and dissemination quality.
7.7	Innovation proposal evaluated on originality, feasibility, and alignment with AI trends.
8.1	Case study analysis justifying adaptation of AI quality approaches to complex organisational contexts

8.2	Evaluation report assessing effectiveness of AI quality and risk controls
8.3	Risk assessment document analysing trustworthiness and uncertainty in AI systems
8.4	Project-based assessment with an AI quality assurance implementation plan
8.5	Strategic decision brief based on interpreted AI quality evidence
8.6	Critical reflective essay on limitations of AI quality management practices
9.1	Applied AI Governance Framework submission, assessed for alignment with business objectives and risk appetite.
9.2	Governance Effectiveness Report evaluated against performance metrics, compliance outcomes, and incident handling.
9.3	Stakeholder Coordination Plan assessed for clarity of roles, responsibilities, and collaboration mechanisms.
9.4	Risk Mitigation Register graded for completeness, accuracy, and suitability of mitigation strategies.
9.5	Improvement Recommendations Report evaluated for practicality, regulatory alignment, and ethical soundness.
9.6	Governance Communication Brief assessed for clarity, persuasiveness, and suitability for target stakeholders.

	SUPPORT & GUIDANCE		**[3]**
Profile title	**SUSTAINABLE AI LEAD**		**[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: Minimises the environmental footprint and long-term societal impact of AI by guiding responsible resource use, lifecycle management, and sustainability-aligned decision-making. 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 added when translating this profile to a curriculum.		
			Level
Competences	**A.1.**	IS and Business Strategy Alignment	e-4
	A.5.	Architecture Design	e-3
	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.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.		
Deliverables	• Sustainable AI Policy • AI Environmental Impact Assessments • AI Lifecycle Sustainability Plans • Internal Guidance and Playbooks for Sustainable AI Development		

1. PLO IS and Business Strategy Alignment [EQF7]	
The learner has demonstrated capability 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 Architecture Design [EQF6]	
The learner has demonstrated capability 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	
2.1	Identify and describe core AI architecture components, such as hardware accelerators, cloud AI services, and data pipelines, in enterprise AI systems.
2.2	Apply standard AI design patterns and implement AI modules using Python frameworks, pre-trained models, or microservices architectures in guided projects.
2.3	Evaluate AI risks, ethical considerations, and adherence to policies by applying standardized checklists and reflection exercises in lab or project scenarios.
2.4	Integrate AI components into simple enterprise systems using APIs, cloud services, or modular pipelines in partially unpredictable business contexts.

3. PLO Technology Trend Monitoring [EQF6]	
The learner has demonstrated capability 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	
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 Sustainability Management [EQF7]	
The learner has demonstrated capability to…	
Design and orchestrate sustainable AI strategies across multiple organizational 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 optimize environmental, social, and economic outcomes across organizational projects, such as portfolio-level AI planning.
4.2	Coordinate cross-functional teams to implement sustainable AI practices in professional or organizational environments, including technical and non-technical roles.
4.3	Assess the long-term impacts of AI initiatives on organizational 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 prioritize sustainability interventions for AI systems using organizational constraints and strategic goals, to support informed decision-making.
4.6	Translate organizational sustainability policies into AI-related requirements within project or program planning processes.

5. PLO Purchasing [EQF6]	
The learner has demonstrated capability 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	
5.1	Analyse organisational AI needs by identifying functional and non-functional requirements, such as performance, explainability, robustness, and retraining obligations.
5.2	Evaluate AI suppliers' capabilities, ethical practices, and risk profiles using multi-criteria assessment methods, such as cost, compliance, sustainability, and governance factors.
5.3	Interpret legal, regulatory, and organisational standards applicable to AI procurement and deployment, such as data protection, bias mitigation, and accountability requirements.
5.4	Design or recommend AI acquisition strategies that balance cost, compliance, sustainability, and business value in organisational decision-making.
5.5	Apply analytical reasoning and ethical judgment when assessing trade-offs between supplier offerings, contract terms, and technical solution characteristics.
5.6	Demonstrate initiative and collaborative behaviour in moderately complex AI procurement tasks, such as cross-functional evaluation or supplier negotiation scenarios.

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

7. PLO Risk Management [EQF6]	
The learner has demonstrated capability 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 Relationship Management [EQF6]	
The learner has demonstrated capability 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	
8.1	Analyse stakeholder expectations and concerns in AI projects, including ethical and privacy issues, using case studies, surveys, or system documentation.
8.2	Apply communication techniques to address AI adoption challenges, such as team discussions, presentations, or messaging platforms.
8.3	Collaborate effectively with peers in AI projects by participating in group tasks and using digital collaboration tools.
8.4	Coordinate stakeholder interactions using project documentation and digital platforms, in contexts such as shared repositories or feedback loops.
8.5	Evaluate the effectiveness of proposed solutions for AI-related stakeholder issues by reviewing outcomes, feedback, or implementation results.
8.6	Suggest improvements to stakeholder engagement strategies using lessons learned from project simulations or peer review exercises.

9. PLO Business Change Management [EQF6]	
The learner has demonstrated capability to…	
Evaluate AI adoption opportunities and design change strategies for organizational 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	
3.1	Evaluate AI adoption opportunities and determine potential organizational benefits using case studies or business process analyses.
3.2	Design change strategies for teams and processes that address AI-specific risks such as bias, drift, or cybersecurity in operational settings.
3.3	Implement stakeholder engagement activities to promote AI adoption through workshops, meetings, or training programs.
3.4	Monitor and interpret AI performance metrics to guide adjustments in adoption strategies using dashboards, reports, or KPIs.
3.5	Identify and document potential challenges and limitations of AI adoption in real-world organizational contexts.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Written Report, Case Study Analysis, Data-Driven Mapping
1.2	Alignment Assessment Report, Portfolio Review, Gap Analysis Presentation
1.3	Governance Assessment Report, Compliance Checklist Submission
1.4	IS/Architecture Design Diagrams, Modelling Artefact Review
1.5	AI/Data Solution Prototype, Demonstration, Performance Metrics Report
1.6	Organisational Impact Report, Value-Creation Analysis, Oral Defence/Presentation
2.1	Evaluation of architecture diagrams, Component inventory review
2.2	Grading of AI module code, Review of module documentation
2.3	Assessment of risk checklist, Ethics report evaluation
2.4	Evaluation of integrated prototype, Deployment report review
3.1	Annotated portfolio submission, short written test
3.2	Comparative analysis table, oral explanation or peer review
3.3	Trend mapping report, written report evaluation
3.4	Mini prototype/simulation demonstration, lab report
3.5	Ethics and impact briefing, rubric-based report assessment
3.6	Presentation/dashboard, peer and instructor evaluation
4.1	Sustainable AI strategy document
4.2	Cross-functional coordination plan with role and process definition
4.3	Long-term AI sustainability impact assessment report
4.4	Responsible AI advisory brief for stakeholders
4.5	Sustainability intervention prioritization framework
4.6	Policy-to-AI requirement mapping document
5.1	Assessment of AI requirements specification and AI gap analysis report (written submission, rubric-based evaluation)
5.2	Assessment of AI supplier evaluation matrix and AI risk assessment (case study analysis, structured report, rubric)
5.3	Assessment of AI compliance mapping and AI standards checklist (written assignment, compliance mapping exercise, peer review)

5.4	Assessment of AI procurement recommendation and AI contract framework (project report, scenario-based evaluation, rubric)
5.5	Assessment of AI decision rationale and AI ethical impact assessment (reflective report, structured decision log, rubric)
5.6	Assessment of AI cross-functional consultation outputs and AI integrated procurement dossier (portfolio submission, presentation, peer and instructor evaluation)
6.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design
6.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines
6.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment
6.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model
6.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report
7.1	Written AI risk assessment report evaluated against completeness and methodological correctness
7.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
7.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
7.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
7.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
7.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
8.1	Written stakeholder analysis report, graded on clarity, completeness, and identification of ethical/privacy issues.
8.2	Presentation or recorded team briefing assessed on clarity, relevance, and communication effectiveness.
8.3	Peer evaluation and review of collaborative project documentation; assessment of contribution logs.
8.4	Submission of coordinated project documentation with stakeholder feedback records; rubric-based evaluation.
8.5	Evaluation report or reflective log comparing proposed vs. actual solutions; assessed on analytical reasoning.
8.6	Recommendations report or lessons learned document; assessed on feasibility, clarity, and actionable insights.

9.1	AI Adoption Assessment Report, Case Study Analysis
9.2	Change Strategy Plan Document, Written Justification
9.3	Stakeholder Engagement Record, Reflection Notes, Training/Workshop Feedback
9.4	AI Performance Monitoring Dashboard, KPI Reports
9.5	Adoption Challenges Log (if used), Summary Table or Annotated Notes

	SUPPORT & GUIDANCE		**[3]**
Profile title	**HUMAN-AI INTERACTION LEAD**		**[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: 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. 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 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
	C.4.	Problem Management	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 EQFX level.		
Deliverables	• Human Oversight Instructions • Human Rating Guideline Adherence • UX Design • AI Ethics Policy		

1. PLO Application Design [EQF6]	
The learner has demonstrated capability 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	
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 capability 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 capability 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]	
The learner has demonstrated capability to…	
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 behavior.

5. PLO Problem Management [EQF6]	
The learner has demonstrated capability 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 optimize system and AI performance, in situations with varying and partially undefined problems.	
Unit Learning Outcomes	
5.1	Investigate complex ICT and AI incidents, including subtle system failures, AI model drift, and emerging bias patterns, using diagnostic tools and historical performance data.
5.2	Evaluate root causes of incidents and their impact on system and AI performance through structured analysis and impact assessment methods.
5.3	Apply corrective and preventive measures to mitigate incidents in less predictable operational situations.
5.4	Design monitoring strategies or knowledge management practices to track recurring AI failures and support system optimization.
5.5	Advise or collaborate with team members by sharing findings and recommending improvements in AI system performance and ethical compliance.

6. PLO Education and Training Provision [EQF6]	
The learner has demonstrated capability to…	
Design and implement AI training programs that integrate organizational AI strategy and employee AI literacy, using evaluation tools to monitor effectiveness and adjust content for improving team AI competence.	
Unit Learning Outcomes	
6.1	Design AI training modules that address organizational AI skill gaps and foster employee AI literacy, using role-specific AI use cases and practical learning scenarios.
6.2	Implement AI training programs by delivering sessions and applying AI tools or simulations to illustrate AI concepts, in workplace-based learning and training environments.
6.3	Monitor and adjust AI learning programs using feedback and performance data to improve team-level AI competence, by analysing learning analytics and training outcomes.
6.4	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.
6.5	Support learners during AI training activities by explaining concepts, facilitating discussions, and responding to questions, in guided and instructor-led training settings.
6.6	Apply basic instructional design principles to structure AI learning content and activities, using established training frameworks and learning objectives.

7. PLO Needs Identification [EQF7]	
The learner has demonstrated capability to…	
Leads the end-to-end needs identification process with stakeholders, ensuring AI-driven solution recommendations are strategically aligned with organizational goals, regulatory requirements, and value creation objectives, and ensures the effective implementation, adoption, and iterative enhancement of implemented solutions.	
Unit Learning Outcomes	
7.1	Lead cross-functional teams in stakeholder engagement by coordinating workshops, co-creation sessions, or advisory meetings to define and validate complex organizational needs.
7.2	Critically assess and ensure that AI-driven solution proposals align with organizational strategy, regulatory requirements, and long-term value creation objectives, using strategic planning frameworks or business model analysis.
7.3	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.
7.4	Ensure the effective implementation, adoption, and iterative enhancement of AI solutions, using human-centered design principles, project management tools, or feedback loops.

8. PLO Risk Management [EQF6]	
The learner has demonstrated capability 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	
8.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
8.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
8.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
8.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
8.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
8.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.

9. PLO Process Improvement [EQF6]	
The learner has demonstrated capability to…	
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	
9.1	Design modifications to AI workflows to improve performance and efficiency using practical AI development projects.
9.2	Apply multiple AI process concepts and metrics to identify, analyse, and solve process problems in real-world AI applications.
9.3	Assess operational risks and ethical considerations in AI development and deployment by evaluating AI systems in operational environments.
9.4	Collaborate effectively within a team to implement process improvements in AI project settings.
9.5	Evaluate the outcomes of AI process changes against performance, ethical, and compliance criteria using defined metrics and benchmarks.
9.6	Document AI process modifications and lessons learned for knowledge sharing within the team.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Review of AI requirement specification document, oral questioning on requirement analysis
1.2	Evaluation of AI design document and workflow diagrams, design critique sessions
1.3	Assessment of AI technology selection report, including justification of choices against constraints
1.4	Analysis of AI integration assessment report, peer or instructor review
1.5	Assessment of AI usability report, including demonstration of prototype and user feedback summary
1.6	Review of AI validation report with test results, automated model evaluation, and instructor feedback
2.1	Annotated portfolio submission, short written test
2.2	Comparative analysis table, oral explanation or peer review
2.3	Trend mapping report, written report evaluation
2.4	Mini prototype/simulation demonstration, lab report
2.5	Ethics and impact briefing, rubric-based report assessment
2.6	Presentation/dashboard, peer and instructor evaluation
3.1	AI requirements analysis document, submission and review by instructor/stakeholders
3.2	Multidisciplinary AI UX package, team project deliverables, portfolio evaluation
3.3	AI standards compliance report, rubric-based assessment, audit of artefacts
3.4	AI UX risk assessment report, scenario analysis, case study evaluation
3.5	AI stakeholder recommendation report, presentation to stakeholders, written justification
3.6	AI implementation feedback log, reflective report, evidence of iterative improvement
4.1	Review of AI evaluation plan
4.2	Assessment of AI analytical report
4.3	Evaluation of AI fairness/compliance report
4.4	Review of AI recommendation report
4.5	Inspection of AI metric/explainability outputs
5.1	Assessment of AI incident investigation report; depth and accuracy of data analysis
5.2	Evaluation of root cause evaluation; impact analysis review
5.3	Review of mitigation plan; effectiveness of corrective/preventive measures
5.4	Assessment of monitoring/knowledge strategy document; clarity and feasibility of design

5.5	Review of advisory report; quality of recommendations for AI performance and ethical compliance
6.1	Assessment of AI training module design document and AI use-case mapping
6.2	Evaluation of AI training materials and recorded or observed AI training session
6.3	Review of AI learning feedback summary and revised AI training content
6.4	Assessment of AI ethics and governance training materials and applied AI case examples
6.5	Evaluation of documented AI learner support evidence and facilitation notes
6.6	Review of AI instructional design rationale and alignment with learning objectives
7.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs for AI needs identification
7.2	AI Solution Alignment Report – assessed via written report analyzing AI solutions against strategic, regulatory, and value alignment
7.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results
7.4	AI Implementation & Enhancement Plan – assessed via documented implementation roadmap with iterative improvement strategy for AI solutions
8.1	Written AI risk assessment report evaluated against completeness and methodological correctness
8.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
8.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
8.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
8.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
8.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
9.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of performance improvements.
9.2	Analysis report submission with metrics calculations; peer review or instructor feedback.
9.3	Risk and ethical assessment report evaluated against a checklist; case study review.
9.4	Team project documentation assessed via contribution logs and peer evaluation.
9.5	Comparative performance report graded against metrics and benchmarks; oral defense or presentation optional.
9.6	Lessons-learned or reflective report reviewed for completeness, clarity, and insightfulness.

	MANAGEMENT		**[4]**
Profile title	**AI TRANSFORMATION LEAD**		**[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: Drives cultural change and builds digital capability to deliver innovative AI-based business models, products, services, and processes. 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 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.		
Deliverables	• AI Transformation Roadmap • AI Transformation Strategy • AI Strategy & Implementation • AI Transformation KPIs		

1. PLO IS and Business Strategy Alignment [EQF8]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability to…	
Lead the formulation and defense 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 organizational 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 organizational or societal impact under conditions of uncertainty.

3. PLO Architecture Design [EQF7]	
The learner has demonstrated capability 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	Optimize 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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability to…	
Design and orchestrate sustainable AI strategies across multiple organizational 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 optimize environmental, social, and economic outcomes across organizational projects, such as portfolio-level AI planning.
5.2	Coordinate cross-functional teams to implement sustainable AI practices in professional or organizational environments, including technical and non-technical roles.
5.3	Assess the long-term impacts of AI initiatives on organizational 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 prioritize sustainability interventions for AI systems using organizational constraints and strategic goals, to support informed decision-making.
5.6	Translate organizational sustainability policies into AI-related requirements within project or program planning processes.

6. PLO Innovating [EQF8]	
The learner has demonstrated capability to…	
Formulate and direct the strategic orientation for AI-driven innovation by envisioning and realising transformative AI applications that generate new organizational 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 organizational or societal contexts.
6.2	Envision and conceptualize transformative AI applications that create new markets, services, organizational capabilities, or societal value.
6.3	Lead and influence multidisciplinary teams and stakeholders in the realization of AI-enabled innovation initiatives at organizational 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]	
The learner has demonstrated capability to…	
Lead AI-driven transformation at the highest organizational and ecosystem level by creating innovative strategies, establishing ethical and sustainable practices, and optimizing 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 organizational policies and decision-making.
7.3	Optimize organizational performance and resilience through AI-driven change by applying AI monitoring, modeling, and process optimization.
7.4	Guide decision-making across organizational units using systemic and forward-looking approaches with scenario analysis and enterprise-wide planning.
7.5	Integrate AI-driven initiatives across multiple organizational levels ensuring alignment with long-term strategic objectives.
7.6	Assess risks and unintended consequences of AI adoption using organizational risk management tools and ethical guidelines.

8. PLO IS Governance [EQF8]	
The learner has demonstrated capability 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 organizations 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, organizational, 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Innovation Opportunity Report, SWOT/Gap Analysis, Presentation to Stakeholders
1.2	Original IS/AI Strategy Document, Technology Roadmap, Executive Briefing Submission
1.3	Risk/Governance Assessment Report, Scenario/Regulatory Documentation, Case-Based Evaluation
1.4	Novel Enterprise Architecture Design, Prototype/Simulation, Design Review
1.5	Stakeholder Alignment Plan, Leadership Portfolio, Workshop Facilitation Assessment
1.6	Executive Insight Report, Dashboard/Business Intelligence Report, Strategic Briefing Presentation
2.1	Strategic business/investment plan, evaluated for originality and innovation
2.2	Critical evaluation report, peer/expert review for rigor and depth
2.3	Validated solution artifacts, assessed for evidence, testing, or reproducibility
2.4	Integration report, assessed for inclusion of technological, economic, regulatory, ethical, societal factors
2.5	Defense documentation, oral defense or written justification evaluated by expert panel
2.6	Leadership accountability evidence, assessed via documentation of strategic decisions and long-term impact considerations
3.1	Review of dependency diagrams, Analysis report evaluation
3.2	Assessment of architecture blueprint, Design document grading, Prototype/simulation evaluation
3.3	Evaluation of team deployment plan, Observation of deployment report outcomes
3.4	Assessment of risk & bias report, Ethics evaluation report review
3.5	Grading of technical documentation, Presentation slides review
3.6	Evaluation of performance report, Review of optimized system documentation
4.1	Trend analysis report, written assignment with rubric
4.2	Opportunity assessment matrix, graded report or case study analysis
4.3	Integrated opportunity brief, written synthesis evaluated by rubric
4.4	Solution design document, project proposal evaluation
4.5	Validation report, simulation or pilot data review
4.6	Presentation/report, oral defense or stakeholder-style review
5.1	Sustainable AI strategy document
5.2	Cross-functional coordination plan with role and process definition
5.3	Long-term AI sustainability impact assessment report

5.4	Responsible AI advisory brief for stakeholders
5.5	Sustainability intervention prioritization framework
5.6	Policy-to-AI requirement mapping document
6.1	Assessment of an AI strategic priority framework and AI contextual analysis report, supported by a written strategic justification.
6.2	Evaluation of a transformative AI application concept dossier and AI market or ecosystem model, assessed through a vision paper review.
6.3	Assessment of an AI innovation governance model and AI stakeholder strategy, supported by documented AI leadership decisions and a reflective leadership narrative.
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.
6.5	Evaluation of an AI-enabled business or operating model and AI scalability and feasibility analysis, assessed through a written innovation case.
6.6	Assessment of an AI innovation evaluation framework and AI impact assessment report, supported by evidence-based performance analysis.
6.7	Evaluation of a responsible AI governance framework and AI ethical, legal, and risk assessment, assessed through a policy or governance review.
6.8	Examination of a doctoral-level AI practice-based research report and original AI innovation contribution, including defence or viva.
6.9	Assessment of an AI reflective strategy portfolio and revised AI innovation strategy, evaluated through critical reflection and adaptive reasoning.
7.1	Enterprise-Wide AI Strategy Report, Strategic Plan Documentation
7.2	Ethical AI Adoption Guidelines Document, Policy Drafts
7.3	Organizational Performance Optimization Report, Metrics Dashboard and Analytical Summary
7.4	Decision-Making Guidance Portfolio, Scenario Analyses or Planning Documents
7.5	AI Integration Alignment Report, Organizational Mapping (if used)
7.6	Risk and Impact Assessment Report, Risk Matrices or Ethical Compliance Tables
8.1	Critical Governance Evaluation Report assessed for depth of critical analysis and alignment with emerging AI trends.
8.2	Advanced Governance Strategy Document graded for integration of regulatory, ethical, organizational, and technical considerations.
8.3	Impact Assessment Report assessed for thoroughness, methodology, and evaluation of systemic and sustainability implications.
8.4	Strategic Recommendation Dossier graded on evidence support, feasibility, and clarity of recommendations.
8.5	Governance Defense Brief evaluated via oral presentation or written defense, assessed for argumentation and justification quality.

	MANAGEMENT		**[4]**
Profile title	**CHIEF AI OFFICER (CAIO)**		**[4.2]**
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: 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. 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 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 EQFX level.		
Deliverables	• Ethics Board • AI Strategy and Implementation • AI Governance Policy		

1. PLO IS and Business Strategy Alignment [EQF8]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability to…	
Lead the formulation and defense 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 organizational 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 organizational or societal impact under conditions of uncertainty.

3. PLO Technology Trend Monitoring [EQF8]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability to…	
Design and orchestrate sustainable AI strategies across multiple organizational 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 optimize environmental, social, and economic outcomes across organizational projects, such as portfolio-level AI planning.
4.2	Coordinate cross-functional teams to implement sustainable AI practices in professional or organizational environments, including technical and non-technical roles.
4.3	Assess the long-term impacts of AI initiatives on organizational 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 prioritize sustainability interventions for AI systems using organizational constraints and strategic goals, to support informed decision-making.
4.6	Translate organizational sustainability policies into AI-related requirements within project or program planning processes.

5. PLO Innovating [EQF8]	
The learner has demonstrated capability to…	
Formulate and direct the strategic orientation for AI-driven innovation by envisioning and realising transformative AI applications that generate new organizational 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 organizational or societal contexts.
5.2	Envision and conceptualize transformative AI applications that create new markets, services, organizational capabilities, or societal value.
5.3	Lead and influence multidisciplinary teams and stakeholders in the realization of AI-enabled innovation initiatives at organizational 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]	
The learner has demonstrated capability to…	
Develop and implement strategic AI project and portfolio management strategies by creating organizational 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 organizational 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 organizational 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 organizational priorities.
6.5	Foster organizational learning, AI capability development, and continuous improvement through mentoring, training programs, and iterative process evaluation.

7. PLO Risk Management [EQF7]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
Ensure responsible and inclusive AI decision-making by designing and implementing stakeholder engagement strategies that integrate ethical, cultural, and organizational 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 organizational learning or project audits.

9. PLO IS Governance [EQF8]	
The learner has demonstrated capability 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 organizations 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, organizational, 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Innovation Opportunity Report, SWOT/Gap Analysis, Presentation to Stakeholders
1.2	Original IS/AI Strategy Document, Technology Roadmap, Executive Briefing Submission
1.3	Risk/Governance Assessment Report, Scenario/Regulatory Documentation, Case-Based Evaluation
1.4	Novel Enterprise Architecture Design, Prototype/Simulation, Design Review
1.5	Stakeholder Alignment Plan, Leadership Portfolio, Workshop Facilitation Assessment
1.6	Executive Insight Report, Dashboard/Business Intelligence Report, Strategic Briefing Presentation
2.1	Strategic business/investment plan, evaluated for originality and innovation
2.2	Critical evaluation report, peer/expert review for rigor and depth
2.3	Validated solution artifacts, assessed for evidence, testing, or reproducibility
2.4	Integration report, assessed for inclusion of technological, economic, regulatory, ethical, societal factors
2.5	Defense documentation, oral defense or written justification evaluated by expert panel
2.6	Leadership accountability evidence, assessed via documentation of strategic decisions and long-term impact considerations
3.1	Evaluation of AI trend reports, critical review of AI comparative analyses, annotated AI bibliographies
3.2	Assessment of AI innovation proposals, review of AI frameworks, evaluation of AI strategy papers
3.3	Assessment of AI transformation plans, review of AI governance frameworks, case study evaluation of AI interventions
3.4	Evaluation of AI ethical assessments, review of AI compliance reports, assessment of AI sustainability matrices
3.5	Assessment of AI evaluation reports, review of AI decision matrices, evaluation of AI risk management plans
3.6	Assessment of AI executive briefings, review of AI policy reports, evaluation of AI white papers
3.7	Evaluation of AI leadership reflections, review of AI change case studies, assessment of AI governance documentation
4.1	Sustainable AI strategy document
4.2	Cross-functional coordination plan with role and process definition

4.3	Long-term AI sustainability impact assessment report
4.4	Responsible AI advisory brief for stakeholders
4.5	Sustainability intervention prioritization framework
4.6	Policy-to-AI requirement mapping document
5.1	Assessment of an AI strategic priority framework and AI contextual analysis report, supported by a written strategic justification.
5.2	Evaluation of a transformative AI application concept dossier and AI market or ecosystem model, assessed through a vision paper review.
5.3	Assessment of an AI innovation governance model and AI stakeholder strategy, supported by documented AI leadership decisions and a reflective leadership narrative.
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.
5.5	Evaluation of an AI-enabled business or operating model and AI scalability and feasibility analysis, assessed through a written innovation case.
5.6	Assessment of an AI innovation evaluation framework and AI impact assessment report, supported by evidence-based performance analysis.
5.7	Evaluation of a responsible AI governance framework and AI ethical, legal, and risk assessment, assessed through a policy or governance review.
5.8	Examination of a doctoral-level AI practice-based research report and original AI innovation contribution, including defence or viva.
5.9	Assessment of an AI strategic priority framework and AI contextual analysis report, supported by a written strategic justification.
6.1	Strategic management strategy document; assessed for alignment with organizational objectives and innovation potential.
6.2	Governance and risk mitigation documentation; evaluated for regulatory compliance and practical applicability.
6.3	Executive advisory reports; assessed via simulation exercises or peer/expert review of strategic guidance.
6.4	Innovation roadmap package; graded for feasibility, clarity, and innovation alignment.
6.5	Learning artifacts (training programs, mentoring logs); assessed for effectiveness and contribution to capability development.
7.1	Comprehensive AI risk evaluation report graded for depth, multi-dimensional coverage, and contextual reasoning
7.2	Submission of AI governance framework design, evaluated for process completeness, scalability, and alignment with organisational needs
7.3	Strategic recommendations document assessed for practicality, impact, and contribution to compliance and resilience

7.4	Cross-functional coordination report evaluated for documentation of collaborative activities and consistency in risk management practices
7.5	Policy alignment analysis assessed for clarity, alignment with regulations, and integration with organisational strategy
8.1	Stakeholder engagement strategy document; assessed with rubric for strategic depth, integration of ethical/cultural factors, and completeness.
8.2	Workshop artifacts, collaboration logs, or team alignment reports; evaluated for effectiveness of facilitation and team outcomes.
8.3	Workshop or meeting minutes documenting conflict resolution and consensus; evaluated on mediation quality and decision outcomes.
8.4	Impact assessment report; assessed on use of data, metrics, and evidence of stakeholder alignment.
8.5	Updated engagement plan or pilot project report; assessed on adaptability and responsiveness to emerging challenges.
8.6	Guidelines, training materials, or briefing reports; assessed on clarity, ethical rigor, and cultural sensitivity.
9.1	Critical Governance Evaluation Report assessed for depth of critical analysis and alignment with emerging AI trends.
9.2	Advanced Governance Strategy Document graded for integration of regulatory, ethical, organizational, and technical considerations.
9.3	Impact Assessment Report assessed for thoroughness, methodology, and evaluation of systemic and sustainability implications.
9.4	Strategic Recommendation Dossier graded on evidence support, feasibility, and clarity of recommendations.
9.5	Governance Defense Brief evaluated via oral presentation or written defense, assessed for argumentation and justification quality.

	MANAGEMENT		**[4]**
Profile title	**AI TECH LEAD**		**[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: Ensures AI systems are technically sound, scalable, and maintainable by setting standards, mentoring teams, and translating requirements into robust AI architectures. 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 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.		
Deliverables	• Model Training and Evaluation Pipelines • Code Quality and Engineering Standards for AI Projects • AI Tool Portfolio • Development Process		

3. PLO Architecture Design [EQF7]	
The learner has demonstrated capability 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	Optimize 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 capability 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, optimizing 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 capability 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]	
The learner has demonstrated capability to…	
Develop, optimize, 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 organizational contexts, such as automated decision-making systems or AI-driven platforms.
4.2	Optimize 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]	
The learner has demonstrated capability 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, organizational, or research contexts.	
Unit Learning Outcomes	
5.1	Design AI-augmented analytics workflows and solutions for complex, multi-factor problems in organizational 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 organizational projects.
5.4	Generate actionable insights and recommendations to improve decision-making and outcomes in business, organizational, 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]	
The learner has demonstrated capability to…	
Deliver optimized AI project portfolios that create measurable organizational 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 organizational objectives by integrating business requirements and AI system capabilities.
6.2	Evaluate interdependencies, resource allocations, and AI performance metrics to optimize 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 optimizations.

7. PLO Relationship Management [EQF6]	
The learner has demonstrated capability 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 [EQF6]	
The learner has demonstrated capability to…	
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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Review of dependency diagrams, Analysis report evaluation
1.2	Assessment of architecture blueprint, Design document grading, Prototype/simulation evaluation
1.3	Evaluation of team deployment plan, Observation of deployment report outcomes
1.4	Assessment of risk & bias report, Ethics evaluation report review
1.5	Grading of technical documentation, Presentation slides review
1.6	Evaluation of performance report, Review of optimized system documentation
2.1	Review of AI architecture specification, presentation of system design to stakeholders or instructors
2.2	Assessment of AI system design artifacts, including pipeline diagrams, models, and workflows
2.3	Evaluation of AI design trade-off report, oral defense or stakeholder advisory simulation
2.4	Review of AI ethical compliance documentation, including compliance checklist and reflection report
2.5	Assessment of AI system integration report, demonstration of deployed AI components
2.6	Review of AI evaluation report including benchmarking results, pilot feedback, and iterative improvements
3.1	Trend analysis report, written assignment with rubric
3.2	Opportunity assessment matrix, graded report or case study analysis
3.3	Integrated opportunity brief, written synthesis evaluated by rubric
3.4	Solution design document, project proposal evaluation
3.5	Validation report, simulation or pilot data review
3.6	Presentation/report, oral defense or stakeholder-style review
4.1	Review of deployed AI system, deployment documentation
4.2	Assessment of AI monitoring dashboard, optimization report
4.3	Evaluation of AI team coordination report, meeting logs
4.4	Review of AI compliance report, audit trail
4.5	Assessment of AI KPI report, recommendation report
4.6	Evaluation of AI training materials, mentorship documentation
4.7	Assessment of AI continuous improvement plan, monitoring dashboard
5.1	Review of AI workflow documentation
5.2	Evaluation of analytical model outputs

5.3	Assessment of data integrity & ethics report
5.4	Evaluation of insights & recommendations report
5.5	Review of team coordination documentation
5.6	Assessment of performance & risk framework
5.7	Evaluation of reproducible AI pipelines
6.1	Portfolio design submission including diagrams and alignment analysis; graded for strategic coherence and AI relevance.
6.2	Interdependency/resource evaluation report; assessed for accuracy, optimization reasoning, and analytical depth.
6.3	Risk mitigation strategy document; evaluated against ethical, technical, and regulatory criteria.
6.4	Team leadership evidence package (meeting minutes, decision logs); peer and instructor assessment of leadership effectiveness.
6.5	Innovation improvement plan submission; assessed for creativity, feasibility, and process enhancement impact.
7.1	Written stakeholder analysis report, graded on clarity, completeness, and identification of ethical/privacy issues.
7.2	Presentation or recorded team briefing assessed on clarity, relevance, and communication effectiveness.
7.3	Peer evaluation and review of collaborative project documentation; assessment of contribution logs.
7.4	Submission of coordinated project documentation with stakeholder feedback records; rubric-based evaluation.
7.5	Evaluation report or reflective log comparing proposed vs. actual solutions; assessed on analytical reasoning.
7.6	Recommendations report or lessons learned document; assessed on feasibility, clarity, and actionable insights.
8.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of performance improvements.
8.2	Analysis report submission with metrics calculations; peer review or instructor feedback.
8.3	Risk and ethical assessment report evaluated against a checklist; case study review.
8.4	Team project documentation assessed via contribution logs and peer evaluation.
8.5	Comparative performance report graded against metrics and benchmarks; oral defense or presentation optional.
8.6	Lessons-learned or reflective report reviewed for completeness, clarity, and insightfulness.

	MANAGEMENT		**[4]**
Profile title	**AI MANAGER**		**[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: Builds, leads, and grows a high-performing AI team that delivers impactful solutions, balancing talent development, team productivity, and alignment with business goals. 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 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
	E.9.	IS Governance	e-4
Complexity	The profile has an EQF7 level.		
Deliverables	• AI Talent Development Programs • Reports on Team Achievements and Challenges • Coalitions in the AI Ecosystem • Budget Plan		

1. PLO Personnel Development [EQF7]	
The learner has demonstrated capability to…	
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 capability to…	
Leads the end-to-end needs identification process with stakeholders, ensuring AI-driven solution recommendations are strategically aligned with organizational 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 organizational needs.
2.2	Critically assess and ensure that AI-driven solution proposals align with organizational 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-centered design principles, project management tools, or feedback loops.

3. PLO Project and Portfolio Management [EQF7]	
The learner has demonstrated capability to…	
Deliver optimized AI project portfolios that create measurable organizational 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 organizational objectives by integrating business requirements and AI system capabilities.
3.2	Evaluate interdependencies, resource allocations, and AI performance metrics to optimize 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 optimizations.

4. PLO Risk Management [EQF6]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
Ensure responsible and inclusive AI decision-making by designing and implementing stakeholder engagement strategies that integrate ethical, cultural, and organizational 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 organizational learning or project audits.

6. PLO IS Governance [EQF7]	
The learner has demonstrated capability to…	
Design, apply, and evaluate AI governance frameworks and lifecycle controls, by integrating regulatory requirements, ethical principles, organizational risk appetite, and business objectives to guide responsible AI deployment, manage AI-specific risks, and support accountable decision-making in organizational and sectoral contexts.	
Unit Learning Outcomes	
6.1	Design and apply AI governance frameworks to guide real-world AI deployment, aligning governance controls with business objectives and risk appetite.
6.2	Evaluate the effectiveness of AI governance practices, reviewing AI system performance, compliance outcomes, and incident handling.
6.3	Coordinate AI governance activities across stakeholders, including technical, legal, and business roles, to ensure accountable AI use.
6.4	Identify and manage operational and regulatory risks in AI initiatives, implementing mitigations and reporting mechanisms.
6.5	Recommend actionable improvements to AI governance, balancing regulatory obligations, ethical principles, and operational feasibility.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Evaluation of organisational AI competence assessment report; quality of technical, ethical, and human–AI analysis
1.2	Review of integrated AI knowledge framework; assessment of coherence and strategic alignment
1.3	Grading of strategic AI competence development plan; alignment with organisational objectives and workforce needs
1.4	Assessment of advanced AI learning initiative design dossier; quality and feasibility of addressing skill gaps
1.5	Evaluation of implemented AI programme portfolio; evidence of workforce-wide AI competence development
1.6	Review of continuous AI learning culture report; assessment of structured processes and ethical embedding
1.7	Assessment of AI learning impact report; analysis of measurable performance improvements and capability development
1.8	Evaluation of organisational AI competence process documentation; quality of process design for ongoing workforce development
2.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs for AI needs identification
2.2	AI Solution Alignment Report – assessed via written report analyzing AI solutions against strategic, regulatory, and value alignment
2.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results
2.4	AI Implementation & Enhancement Plan – assessed via documented implementation roadmap with iterative improvement strategy for AI solutions
3.1	Portfolio design submission including diagrams and alignment analysis; graded for strategic coherence and AI relevance.
3.2	Interdependency/resource evaluation report; assessed for accuracy, optimization reasoning, and analytical depth.
3.3	Risk mitigation strategy document; evaluated against ethical, technical, and regulatory criteria.
3.4	Team leadership evidence package (meeting minutes, decision logs); peer and instructor assessment of leadership effectiveness.
3.5	Innovation improvement plan submission; assessed for creativity, feasibility, and process enhancement impact.

4.1	Written AI risk assessment report evaluated against completeness and methodological correctness
4.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
4.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
4.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
4.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
4.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
5.1	Stakeholder engagement strategy document; assessed with rubric for strategic depth, integration of ethical/cultural factors, and completeness.
5.2	Workshop artifacts, collaboration logs, or team alignment reports; evaluated for effectiveness of facilitation and team outcomes.
5.3	Workshop or meeting minutes documenting conflict resolution and consensus; evaluated on mediation quality and decision outcomes.
5.4	Impact assessment report; assessed on use of data, metrics, and evidence of stakeholder alignment.
5.5	Updated engagement plan or pilot project report; assessed on adaptability and responsiveness to emerging challenges.
5.6	Guidelines, training materials, or briefing reports; assessed on clarity, ethical rigor, and cultural sensitivity.
5.7	Final stakeholder engagement report; assessed for completeness, documentation quality, and suitability for audits.
6.1	Applied AI Governance Framework submission, assessed for alignment with business objectives and risk appetite.
6.2	Governance Effectiveness Report evaluated against performance metrics, compliance outcomes, and incident handling.
6.3	Stakeholder Coordination Plan assessed for clarity of roles, responsibilities, and collaboration mechanisms.
6.4	Risk Mitigation Register graded for completeness, accuracy, and suitability of mitigation strategies.
6.5	Improvement Recommendations Report evaluated for practicality, regulatory alignment, and ethical soundness.
6.6	Governance Communication Brief assessed for clarity, persuasiveness, and suitability for target stakeholders.

	MANAGEMENT		**[4]**
Profile title	**AI PRODUCT MANAGER**		**[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: 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. 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 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.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.11	Needs Identification	e-4
	E.2.	Project and Portfolio Management	e-4
	E.3.	Risk Management	e-3
Complexity	The profile has an EQF7 level.		
Deliverables	• AI Solution Requirements • AI Release Plan • AI Act Compliance Assessment Report • User stories for AI Initiatives		

1. PLO IS and Business Strategy Alignment [EQF7]	
The learner has demonstrated capability 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 Business Plan Development [EQF6]	
The learner has demonstrated capability 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 organizational 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 Product/Service Planning [EQF7]	
The learner has demonstrated capability to…	
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	
3.1	Critically analyse and compare complex product or service scenarios, including AI-enabled solutions, using scenario simulations, multi-factor models, or cross-domain case studies.
3.2	Evaluate and judge AI-related value, risks, governance, and compliance implications by assessing technical performance, organisational processes, and regulatory requirements.
3.3	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.
3.4	Ensure sustainable portfolio management, change control, AI-specific documentation, and regulatory compliance by implementing governance processes, version tracking, and compliance audits across AI initiatives.
3.5	Integrate emerging AI technologies and methodologies into strategic planning and service design by evaluating innovation potential and applicability in real-world contexts.
3.6	Mentor or guide team members and stakeholders in AI project execution and decision-making, fostering collaborative problem-solving in multidisciplinary environments.

4. PLO Technology Trend Monitoring [EQF6]	
The learner has demonstrated capability 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	
4.1	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.
4.2	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.
4.3	Investigate and classify internal and external sources of AI innovation by reviewing trend reports, patents, newsfeeds, and academic publications.
4.4	Apply basic methods and tools to explore AI-enabled use cases by prototyping or simulating scenarios using trending technologies.
4.5	Describe and consider fundamental ethical, data protection, and organisational issues related to AI adoption in the context of emerging technologies and current AI applications.
4.6	Present and justify observations and insights about AI trends through short reports, presentations, or dashboards summarising technology developments.

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

6. PLO User Experience [EQF6]	
The learner has demonstrated capability to…	
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	
6.1	Analyse user needs, goals, and behaviour in AI-supported applications, such as recommendation or automation systems.
6.2	Apply and adapt UX and HCI methods using AI design tools and frameworks to design user interactions for AI-enabled products and services.
6.3	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.
6.4	Assess ethical implications of AI-driven user experiences by considering issues such as bias, fairness, and transparency.

7. PLO Needs Identification [EQF6]	
The learner has demonstrated capability to…	
Independently engage with stakeholders to identify and validate needs, translating them into feasible AI and technology solution options, while considering business objectives and organizational 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 organizational 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]	
The learner has demonstrated capability to…	
Deliver optimized AI project portfolios that create measurable organizational 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 organizational objectives by integrating business requirements and AI system capabilities.
8.2	Evaluate interdependencies, resource allocations, and AI performance metrics to optimize 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 optimizations.

9. PLO Risk Management [EQF6]	
The learner has demonstrated capability 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	
9.1	Analyse AI systems for potential technical, operational, ethical, and regulatory risks using structured risk assessment methods in project or service contexts.
9.2	Assess the impact and likelihood of AI risks by considering organisational objectives and the operational environment of AI deployments.
9.3	Propose mitigation measures and apply them to reduce AI-related risks within defined projects, products, or service boundaries.
9.4	Communicate AI risk findings and mitigation plans effectively to team members and stakeholders in project or organisational settings.
9.5	Monitor AI system performance to detect emerging risks such as model drift or data anomalies.
9.6	Review and update risk documentation in line with organisational policies and lessons learned from previous incidents.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Written Report, Case Study Analysis, Data-Driven Mapping
1.2	Alignment Assessment Report, Portfolio Review, Gap Analysis Presentation
1.3	Governance Assessment Report, Compliance Checklist Submission
1.4	IS/Architecture Design Diagrams, Modelling Artefact Review
1.5	AI/Data Solution Prototype, Demonstration, Performance Metrics Report
1.6	Organisational Impact Report, Value-Creation Analysis, Oral Defence / Presentation
2.1	Evaluation of business plan document, written report review
2.2	Alternatives comparison matrix, case study analysis
2.3	Cost–benefit analysis report, calculations checked against data
2.4	Feasibility summary, rubric-based evaluation of clarity and alignment
2.5	Team contribution evidence, peer evaluation, observation of group work
2.6	Presentation or report, assessed with communication rubric
3.1	Review of comparative scenario analysis report, scenario-based case study evaluation, oral defense
3.2	Assessment of evaluation and governance report, rubric-based scoring, peer and expert review
3.3	Evaluation of integrated planning framework, submission review, adaptive planning scenario exercises
3.4	Review of portfolio and compliance documentation, audit simulation, compliance checklist evaluation
3.5	Assessment of innovation integration report, rubric-based scoring, case study analysis of technology integration
3.6	Assessment of mentoring/knowledge transfer record, feedback from mentees, documentation review, reflective report
4.1	Annotated portfolio submission, short written test
4.2	Comparative analysis table, oral explanation or peer review
4.3	Trend mapping report, written report evaluation
4.4	Mini prototype/simulation demonstration, lab report
4.5	Ethics and impact briefing, rubric-based report assessment
4.6	Presentation/dashboard, peer and instructor evaluation
5.1	Team collaboration report documenting AI solution design efforts
5.2	Architecture/integration report for AI solution
5.3	Deployed AI solution demonstration or portfolio submission

5.4	Evaluation report measuring real-world AI solution effectiveness
5.5	Risk/trade-off analysis report for AI innovation projects
5.6	Stakeholder communication materials (presentations, briefs) for AI innovations
6.1	AI user research report, submission and review, practical observation of research artefacts
6.2	AI UX prototype evaluation, practical design assignment, rubric-based assessment
6.3	AI interface mockups, heuristic evaluation report, peer and instructor review
6.4	AI ethics assessment report, written case analysis, ethical decision reflection
7.1	Strategic Stakeholder Engagement Plan – assessed via documented engagement plan and workshop/co-creation outputs for AI needs identification
7.2	AI Solution Alignment Report – assessed via written report analyzing AI solutions against strategic, regulatory, and value alignment
7.3	AI Solution Evaluation Portfolio – assessed via portfolio submission including feasibility studies, comparative analysis, and AI prototyping results
7.4	AI Implementation & Enhancement Plan – assessed via documented implementation roadmap with iterative improvement strategy for AI solutions
8.1	Portfolio design submission including diagrams and alignment analysis; graded for strategic coherence and AI relevance.
8.2	Interdependency/resource evaluation report; assessed for accuracy, optimization reasoning, and analytical depth.
8.3	Risk mitigation strategy document; evaluated against ethical, technical, and regulatory criteria.
8.4	Team leadership evidence package (meeting minutes, decision logs); peer and instructor assessment of leadership effectiveness.
8.5	Innovation improvement plan submission; assessed for creativity, feasibility, and process enhancement impact.
9.1	Written AI risk assessment report evaluated against completeness and methodological correctness
9.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
9.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
9.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
9.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
9.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards

	MANAGEMENT		**[4]**
Profile title	**AI OPERATIONS MANAGER**		**[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: 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. 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 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.		
Deliverables	• CI/CD Pipelines for AI Models • Monitoring and Alerting Reports • Operational Process Documentation • Incidents Database • Solved Incident • HR Development Plan		

1. PLO Change Support [EQF6]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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 organizational or cross-functional contexts.

3. PLO Problem Management [EQF6]	
The learner has demonstrated capability 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 optimize 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 optimization.
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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
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 capability 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 capability 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Evaluation of AI impact analysis report, including correctness of metrics and operational insights
1.2	Review of AI deployment/versioning plan, with focus on feasibility, completeness, and conflict mitigation
1.3	Assessment of AI ethical assessment report, evaluating fairness, explainability, and bias considerations
1.4	Review of AI coordination documentation, including evidence of team collaboration and adherence to governance/SLAs
1.5	Evaluation of AI post-deployment monitoring report, including detection of model drift or anomalies
1.6	Assessment of AI corrective action report, focusing on clarity, rationale, and practicality of proposed improvements
2.1	Written AI principles report
2.2	Submission of AI monitoring dashboard outputs or screenshots
2.3	Analysis report of AI trends and incident patterns
2.4	AI service evaluation report
2.5	Documented AI corrective action plan or team report
3.1	Assessment of AI incident investigation report; depth and accuracy of data analysis
3.2	Evaluation of root cause evaluation; impact analysis review
3.3	Review of mitigation plan; effectiveness of corrective/preventive measures
3.4	Assessment of monitoring/knowledge strategy document; clarity and feasibility of design
3.5	Review of advisory report; quality of recommendations for AI performance and ethical compliance
4.1	AI system architecture diagram review, oral or written explanation of AI architecture
4.2	Evaluation of AI deployment/configuration files, automated deployment simulation check
4.3	AI performance report assessment, data analysis exercises, case study analysis
4.4	AI incident log evaluation, problem-solving case study, practical troubleshooting demonstration
4.5	AI risk & reliability assessment report review, scenario-based evaluation

4.6	AI security & compliance checklist audit, written or practical assessment of compliance procedures
4.7	AI operational improvement proposal review, presentation of recommended improvements
5.1	Assessment of AI competence analysis report; evaluation of documented AI skill gap findings
5.2	Review of AI skills evaluation matrix; grading based on alignment with organisational objectives
5.3	Evaluation of role-specific AI learning pathway plan; rubric-based assessment of clarity and feasibility
5.4	Assessment of implemented AI learning program documentation; evidence of responsible AI application in tasks
5.5	Review of peer AI coaching portfolio; observation of AI application in decision-making and team collaboration
5.6	Assessment of team-level AI insights report; evaluation of recommendations for problem-solving and collaboration
5.7	Grading of applied AI case study or portfolio; assessment of responsible, context-aware AI use in organisational activities
6.1	Written AI risk assessment report evaluated against completeness and methodological correctness
6.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
6.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
6.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
6.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
6.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
7.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of performance improvements.
7.2	Analysis report submission with metrics calculations; peer review or instructor feedback.
7.3	Risk and ethical assessment report evaluated against a checklist; case study review.
7.4	Team project documentation assessed via contribution logs and peer evaluation.
7.5	Comparative performance report graded against metrics and benchmarks; oral defense or presentation optional.

7.6	Lessons-learned or reflective report reviewed for completeness, clarity, and insightfulness.
8.1	Individual assignment evaluating AI quality metrics selection with written justification
8.2	Case-based exercise analysing governance and monitoring configurations
8.3	Data analysis report on AI performance, fairness, reliability, and security
8.4	Group project with documented implementation of AI quality improvement measures
8.5	Written report or dashboard presenting AI quality findings
8.6	Structured evaluation paper or exam question assessing AI outcomes against business, ethical, and regulatory criteria
9.1	Evaluation of Vulnerability Analysis Report detailing AI components and workflow weaknesses
9.2	Review of Risk Assessment Matrix, including severity and mitigation measures, using rubric
9.3	Assessment of Secure Development Implementation Plan, evidence of applied DevSecMLOps practices
9.4	Observation and review of Monitoring Dashboard or Log outputs during lab exercises
9.5	Assessment of Team Project Security Plan documentation, peer and instructor evaluation of collaboration and security planning

	MANAGEMENT		**[4]**
Profile title	**AI PROJECT MANAGER**		**[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: 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. 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 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.5.	Process Improvement	e-3
	E.7.	Business Change Management	e-3
Complexity	The profile has an EQF7 level.		
Deliverables	• AI Solution Choice • AI Project Plan • Quality Plan • Quality Assurance • Validated AI Solution • Change Management Plan		

1. PLO Product/Service Planning [EQF7]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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 organizational 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]	
The learner has demonstrated capability to…	
Independently engage with stakeholders to identify and validate needs, translating them into feasible AI and technology solution options, while considering business objectives and organizational 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 organizational 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]	
The learner has demonstrated capability to…	
Deliver optimized AI project portfolios that create measurable organizational 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 organizational objectives by integrating business requirements and AI system capabilities.
4.2	Evaluate interdependencies, resource allocations, and AI performance metrics to optimize 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 optimizations.

5. PLO Risk Management [EQF6]	
The learner has demonstrated capability 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 [EQF6]	
The learner has demonstrated capability 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.

7. PLO Process Improvement [EQF6]	
The learner has demonstrated capability to…	
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 Business Change Management [EQF6]	
The learner has demonstrated capability to…	
Evaluate AI adoption opportunities and design change strategies for organizational 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	
8.1	Evaluate AI adoption opportunities and determine potential organizational benefits using case studies or business process analyses.
8.2	Design change strategies for teams and processes that address AI-specific risks such as bias, drift, or cybersecurity in operational settings.
8.3	Implement stakeholder engagement activities to promote AI adoption through workshops, meetings, or training programs.
8.4	Monitor and interpret AI performance metrics to guide adjustments in adoption strategies using dashboards, reports, or KPIs.
8.5	Identify and document potential challenges and limitations of AI adoption in real-world organizational contexts.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Review of comparative scenario analysis report, scenario-based case study evaluation, oral defense
1.2	Assessment of evaluation and governance report, rubric-based scoring, peer and expert review
1.3	Evaluation of integrated planning framework, submission review, adaptive planning scenario exercises
1.4	Review of portfolio and compliance documentation, audit simulation, compliance checklist evaluation
1.5	Assessment of innovation integration report, rubric-based scoring, case study analysis of technology integration
1.6	Assessment of mentoring/knowledge transfer record, feedback from mentees, documentation review, reflective report
2.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence; peer-review of contributions
2.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components; grading rubric based on completeness and accuracy
2.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs; assessment of clarity, cohesion, and accessibility
2.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements; submission of compliance verification report
2.5	Evaluation of customized AI documentation templates and modified project documentation; assessment based on alignment with project-specific requirements and adaptability
3.1	Stakeholder Needs Report – assessed via written report of AI stakeholder needs and validation summary
3.2	Requirement Analysis Matrix – assessed via submitted matrix mapping functional, technical, and business requirements to AI solutions
3.3	AI Solution Options Brief – assessed via presentation or report proposing feasible AI solution options
3.4	AI Data Analysis Summary – assessed via submitted dashboard, data visualization, or short report analyzing data to inform AI solutions
3.5	AI Ethical & Regulatory Assessment – assessed via written document outlining ethical and regulatory considerations in AI solution proposals

4.1	Portfolio design submission including diagrams and alignment analysis; graded for strategic coherence and AI relevance
4.2	Interdependency/resource evaluation report; assessed for accuracy, optimization reasoning, and analytical depth
4.3	Risk mitigation strategy document; evaluated against ethical, technical, and regulatory criteria
4.4	Team leadership evidence package (meeting minutes, decision logs); peer and instructor assessment of leadership effectiveness
4.5	Innovation improvement plan submission; assessed for creativity, feasibility, and process enhancement impact
5.1	Written AI risk assessment report evaluated against completeness and methodological correctness
5.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
5.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
5.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
5.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
5.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
6.1	Written stakeholder analysis report, graded on clarity, completeness, and identification of ethical/privacy issues
6.2	Presentation or recorded team briefing assessed on clarity, relevance, and communication effectiveness
6.3	Peer evaluation and review of collaborative project documentation; assessment of contribution logs
6.4	Submission of coordinated project documentation with stakeholder feedback records; rubric-based evaluation
6.5	Evaluation report or reflective log comparing proposed vs. actual solutions; assessed on analytical reasoning.
6.6	Recommendations report or lessons learned document; assessed on feasibility, clarity, and actionable insights.
7.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of performance improvements
7.2	Analysis report submission with metrics calculations; peer review or instructor feedback
7.3	Risk and ethical assessment report evaluated against a checklist; case study review

7.4	Team project documentation assessed via contribution logs and peer evaluation
7.5	Comparative performance report graded against metrics and benchmarks; oral defense or presentation optional
8.1	AI Adoption Assessment Report, Case Study Analysis
8.2	Change Strategy Plan Document, Written Justification
8.3	Stakeholder Engagement Record, Reflection Notes, Training/Workshop Feedback
8.4	AI Performance Monitoring Dashboard, KPI Reports
8.5	Adoption Challenges Log (if used), Summary Table or Annotated Notes

	GOVERNANCE		**[5]**
Profile title	**AI GOVERNANCE OFFICER**		**[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: 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. 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 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.5.	Process Improvement	e-3
	E.9.	IS Governance	e-5
Complexity	The profile has an EQF8 level.		
Deliverables	• Governance Committees or Boards • Approval of Workflows for AI Projects • Governance Maturity Assessments • Legal, Ethical and Safety Compliance Documentation		

1. PLO IS and Business Strategy Alignment [EQF7]	
The learner has demonstrated capability 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 capability 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 capability to…	
Develop and lead AI security strategies across organizational 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 organizational units, services, and systems, using structured risk assessment frameworks such as NIST AI RMF or threat modeling approaches.
3.2	Develop and implement AI security strategies that align with organizational 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 organizational 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 organizational 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 organizational 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 organization, using presentations, briefings, and strategic documentation targeted at executives and teams.

4. PLO ICT Quality Strategy Development [EQF7]	
The learner has demonstrated capability to…	
Define, evaluate, coordinate, and optimize AI quality strategies by integrating ethical, resilience, and performance considerations across AI systems, using relevant frameworks and monitoring to address complex problems and enhance organizational 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 organizational goals, using AI performance metrics, KPIs, and benchmarking tools.
4.3	Coordinate cross-functional activities to implement AI quality strategies and ensure alignment with organizational objectives.
4.4	Optimize 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 organizational decision-making.

5. PLO Information and Knowledge Management [EQF7]	
The learner has demonstrated capability to…	
Design, govern, and continuously improve AI knowledge structures and lifecycle practices across teams and organizational units by aligning AI knowledge management with organizational 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 organizational, 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 organizational objectives to support innovation, effectiveness, and sustainable use of AI technologies.

6. PLO Risk Management [EQF7]	
The learner has demonstrated capability 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 capability to…	
Ensure responsible and inclusive AI decision-making by designing and implementing stakeholder engagement strategies that integrate ethical, cultural, and organizational 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 organizational learning or project audits.

8. PLO Process Improvement [EQF6]	
The learner has demonstrated capability to…	
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.

9. PLO IS Governance [EQF8]	
The learner has demonstrated capability 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 organizations 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, organizational, 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Written Report, Case Study Analysis, Data-Driven Mapping
1.2	Alignment Assessment Report, Portfolio Review, Gap Analysis Presentation
1.3	Governance Assessment Report, Compliance Checklist Submission
1.4	IS/Architecture Design Diagrams, Modelling Artefact Review
1.5	AI/Data Solution Prototype, Demonstration, Performance Metrics Report
1.6	Organisational Impact Report, Value-Creation Analysis, Oral Defence/Presentation
2.1	Annotated portfolio submission, short written test
2.2	Comparative analysis table, oral explanation or peer review
2.3	Trend mapping report, written report evaluation
2.4	Mini prototype/simulation demonstration, lab report
2.5	Ethics and impact briefing, rubric-based report assessment
2.6	Presentation/dashboard, peer and instructor evaluation
3.1	AI strategy document submission, Strategy alignment matrix review, Risk brief presentation
3.2	AI Risk Assessment Report (written report), case study analysis, scenario-based risk evaluation
3.3	AI Security Strategy Document (strategic report), policy proposal, peer review of strategy alignment
3.4	AI Governance Framework Specification (documented framework), rubric-based evaluation, audit simulation
3.5	AI Implementation Guidance Report (team coordination plan), presentation of AI implementation roadmap, reflective report on team guidance
3.6	AI Strategy Evaluation Report (evaluation report), KPI/metric analysis, compliance review exercises
3.7	AI Security-by-Design Plan (integration plan), lifecycle mapping submission, strategic design checklist evaluation
3.8	AI Threat & Regulation Foresight Brief (foresight report), scenario planning exercise, policy adaptation proposal
3.9	AI Stakeholder Communication Package (presentations, briefings, strategic documents), peer/expert review, communication effectiveness rubric
4.1	AI evaluation report analysis, KPI framework submission, Benchmarking report review

4.2	Coordination plan review, Stakeholder map submission, Executive summary presentation
4.3	AI optimization plan submission, Monitoring framework evaluation, Recommendation report review
4.4	Problem-solving case study submission, Decision log analysis, Scenario planning report presentation
4.5	AI quality report submission, Executive slides presentation, Visual dashboard demonstration
5.1	Evaluation of an AI knowledge management architecture and AI knowledge structure design
5.2	Assessment of an advisory AI knowledge lifecycle framework and AI lifecycle guidelines
5.3	Review of an AI knowledge governance framework and AI knowledge risk and compliance assessment
5.4	Evaluation of an AI knowledge sharing strategy and AI collaboration model
5.5	Assessment of an AI knowledge management strategy and strategic AI knowledge alignment report
6.1	Comprehensive AI risk evaluation report graded for depth, multi-dimensional coverage, and contextual reasoning
6.2	Submission of AI governance framework design, evaluated for process completeness, scalability, and alignment with organisational needs
6.3	Strategic recommendations document assessed for practicality, impact, and contribution to compliance and resilience
6.4	Cross-functional coordination report evaluated for documentation of collaborative activities and consistency in risk management practices
6.5	Policy alignment analysis assessed for clarity, alignment with regulations, and integration with organisational strategy
7.1	Stakeholder engagement strategy document; assessed with rubric for strategic depth, integration of ethical/cultural factors, and completeness
7.2	Workshop artifacts, collaboration logs, or team alignment reports; evaluated for effectiveness of facilitation and team outcomes
7.3	Workshop or meeting minutes documenting conflict resolution and consensus; evaluated on mediation quality and decision outcomes
7.4	Impact assessment report; assessed on use of data, metrics, and evidence of stakeholder alignment
7.5	Updated engagement plan or pilot project report; assessed on adaptability and responsiveness to emerging challenges
7.6	Guidelines, training materials, or briefing reports; assessed on clarity, ethical rigor, and cultural sensitivity

7.7	Final stakeholder engagement report; assessed for completeness, documentation quality, and suitability for audits
8.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of performance improvements
8.2	Analysis report submission with metrics calculations; peer review or instructor feedback.
8.3	Risk and ethical assessment report evaluated against a checklist; case study review
8.4	Team project documentation assessed via contribution logs and peer evaluation
8.5	Comparative performance report graded against metrics and benchmarks; oral defense or presentation optional
9.1	Critical Governance Evaluation Report assessed for depth of critical analysis and alignment with emerging AI trends
9.2	Advanced Governance Strategy Document graded for integration of regulatory, ethical, organizational, and technical considerations
9.3	Impact Assessment Report assessed for thoroughness, methodology, and evaluation of systemic and sustainability implications
9.4	Strategic Recommendation Dossier graded on evidence support, feasibility, and clarity of recommendations
9.5	Governance Defense Brief evaluated via oral presentation or written defense, assessed for argumentation and justification quality

	GOVERNANCE		**[5]**
Profile title	**AI COMPLIANCE OFFICER**		**[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: 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. 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 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 EQFX level.		
Deliverables	• AI Compliance Policy • AI Compliance Risk Mitigation Plan • AI Compliance KPI's • Legal and Safety Standards • Quality Assurance (Training) • AI Compliance • Ethical AI		

1. PLO Technology Trend Monitoring [EQF6]	
The learner has demonstrated capability 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	
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 capability 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 organizational 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 capability to…	
Develop and lead AI security strategies across organizational 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 organizational units, services, and systems, using structured risk assessment frameworks such as NIST AI RMF or threat modeling approaches.
3.2	Develop and implement AI security strategies that align with organizational 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 organizational 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 organizational 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 organizational 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 organization, using presentations, briefings, and strategic documentation targeted at executives and teams.

4. PLO Contract Management [EQF6]	
The learner has demonstrated capability 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 capability 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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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 [EQF7]	
The learner has demonstrated capability to…	
Secure organizational 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 organizational 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 organizational projects.
8.4	Evaluate AI security operations in live organizational environments using compliance and audit frameworks to ensure regulatory and ethical alignment.
8.5	Apply AI governance frameworks across organizational AI systems to optimize operational resilience and trustworthiness.

9. PLO IS Governance [EQF7]	
The learner has demonstrated capability to…	
Design, apply, and evaluate AI governance frameworks and lifecycle controls, by integrating regulatory requirements, ethical principles, organizational risk appetite, and business objectives to guide responsible AI deployment, manage AI-specific risks, and support accountable decision-making in organizational 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Annotated portfolio submission, short written test
1.2	Comparative analysis table, oral explanation or peer review
1.3	Trend mapping report, written report evaluation
1.4	Mini prototype/simulation demonstration, lab report
1.5	Ethics and impact briefing, rubric-based report assessment
1.6	Presentation/dashboard, peer and instructor evaluation
2.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence; peer-review of contributions.
2.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components; grading rubric based on completeness and accuracy.
2.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs; assessment of clarity, cohesion, and accessibility.
2.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements; submission of compliance verification report.
2.5	Evaluation of customized AI documentation templates and modified project documentation; assessment based on alignment with project-specific requirements and adaptability.
3.1	AI Risk Assessment Report (written report), case study analysis, scenario-based risk evaluation
3.2	AI Security Strategy Document (strategic report), policy proposal, peer review of strategy alignment
3.3	AI Governance Framework Specification (documented framework), rubric-based evaluation, audit simulation
3.4	AI Implementation Guidance Report (team coordination plan), presentation of AI implementation roadmap, reflective report on team guidance
3.5	AI Strategy Evaluation Report (evaluation report), KPI/metric analysis, compliance review exercises
3.6	AI Security-by-Design Plan (integration plan), lifecycle mapping submission, strategic design checklist evaluation
3.7	AI Threat & Regulation Foresight Brief (foresight report), scenario planning exercise, policy adaptation proposal
3.8	AI Stakeholder Communication Package (presentations, briefings, strategic documents), peer/expert review, communication effectiveness rubric

4.1	Assessment of AI contract analysis report (written analysis of requirements and obligations)
4.2	Evaluation of AI contract lifecycle compliance plan (documented plan showing lifecycle management)
4.3	Grading of AI contractual clauses and SLAs (drafted clauses or service level agreements)
4.4	Assessment of AI supplier risk evaluation (risk report using governance and performance data)
4.5	Evaluation of AI contractual decision dossier (documented justification of decisions and mitigation measures)
5.1	Written AI risk assessment report evaluated against completeness and methodological correctness
5.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
5.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
5.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
5.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
5.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
6.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of performance improvements.
6.2	Analysis report submission with metrics calculations; peer review or instructor feedback.
6.3	Risk and ethical assessment report evaluated against a checklist; case study review.
6.4	Team project documentation assessed via contribution logs and peer evaluation.
6.5	Comparative performance report graded against metrics and benchmarks; oral defense or presentation optional.
6.6	Lessons-learned or reflective report reviewed for completeness, clarity, and insightfulness.
7.1	Individual assignment evaluating AI quality metrics selection with written justification
7.2	Case-based exercise analysing governance and monitoring configurations
7.3	Data analysis report on AI performance, fairness, reliability, and security
7.4	Group project with documented implementation of AI quality improvement measures
7.5	Written report or dashboard presenting AI quality findings

7.6	Structured evaluation paper or exam question assessing AI outcomes against business, ethical, and regulatory criteria
8.1	Review of Organizational Security Policy Document, rubric-based evaluation for completeness and regulatory alignment
8.2	Evaluation of Mitigation Implementation Report, evidence of addressing model manipulation, adversarial attacks, and privacy risks
8.3	Review of Team Management Log and project records for execution of AI security and compliance initiatives
8.4	Assessment of Operational Compliance Report, audit-style evaluation for regulatory and ethical adherence
8.5	Review of Governance Application Report evidence embedded in policy, mitigation, and compliance documentation
9.1	Applied AI Governance Framework submission, assessed for alignment with business objectives and risk appetite.
9.2	Governance Effectiveness Report evaluated against performance metrics, compliance outcomes, and incident handling.
9.3	Stakeholder Coordination Plan assessed for clarity of roles, responsibilities, and collaboration mechanisms.
9.4	Risk Mitigation Register graded for completeness, accuracy, and suitability of mitigation strategies.
9.5	Improvement Recommendations Report evaluated for practicality, regulatory alignment, and ethical soundness.

	GOVERNANCE		**[5]**
Profile title	**AI RISK MANAGER**		**[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: 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. 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 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
	E.9.	IS Governance	e-4
Complexity	The profile has an EQF7 level.		
Deliverables	• Risk Management Policy • Information Security Risk Treatment Plan • Risk Management • AI System Risk Classification Register • Risk Management Policy • Risk Assessment Register • Information Security Policy		

1. PLO Technology Trend Monitoring [EQF6]	
The learner has demonstrated capability 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	
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 capability 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 organizational 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 capability to…	
Develop and lead AI security strategies across organizational 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 organizational units, services, and systems, using structured risk assessment frameworks such as NIST AI RMF or threat modeling approaches.
3.2	Develop and implement AI security strategies that align with organizational 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 organizational 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 organizational 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 organizational 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 organization, using presentations, briefings, and strategic documentation targeted at executives and teams.

4. PLO Information and Knowledge Management [EQF6]	
The learner has demonstrated capability to…	
Manage AI-related knowledge and information by independently identifying AI-related knowledge needs and systematically organizing, 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 organizational 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 organize, 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]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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 capability 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.

9. PLO IS Governance [EQF7]	
The learner has demonstrated capability to…	
Design, apply, and evaluate AI governance frameworks and lifecycle controls, by integrating regulatory requirements, ethical principles, organizational risk appetite, and business objectives to guide responsible AI deployment, manage AI-specific risks, and support accountable decision-making in organizational 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Annotated portfolio submission, short written test
1.2	Comparative analysis table, oral explanation or peer review
1.3	Trend mapping report, written report evaluation
1.4	Mini prototype/simulation demonstration, lab report
1.5	Ethics and impact briefing, rubric-based report assessment
1.6	Presentation/dashboard, peer and instructor evaluation
2.1	Evaluation of AI documentation repository for organization, version control, and collaborative workflow evidence; peer-review of contributions
2.2	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components; grading rubric based on completeness and accuracy
2.3	Review of consolidated AI documentation integrating datasets, model outputs, and system logs; assessment of clarity, cohesion, and accessibility
2.4	Verification of AI documentation against regulatory, ethical, and stakeholder requirements; submission of compliance verification report
2.5	Evaluation of customized AI documentation templates and modified project documentation; assessment based on alignment with project-specific requirements and adaptability
3.1	AI Risk Assessment Report (written report), case study analysis, scenario-based risk evaluation
3.2	AI Security Strategy Document (strategic report), policy proposal, peer review of strategy alignment
3.3	AI Governance Framework Specification (documented framework), rubric-based evaluation, audit simulation
3.4	AI Implementation Guidance Report (team coordination plan), presentation of AI implementation roadmap, reflective report on team guidance
3.5	AI Strategy Evaluation Report (evaluation report), KPI/metric analysis, compliance review exercises
3.6	AI Security-by-Design Plan (integration plan), lifecycle mapping submission, strategic design checklist evaluation
3.7	AI Threat & Regulation Foresight Brief (foresight report), scenario planning exercise, policy adaptation proposal
3.8	AI Stakeholder Communication Package (presentations, briefings, strategic documents), peer/expert review, communication effectiveness rubric

4.1	Assessment of an AI knowledge asset inventory and AI asset classification document
4.2	Evaluation of a written AI information needs analysis and AI process–knowledge mapping
4.3	Review of a structured AI knowledge repository with AI documentation templates and version control evidence
4.4	Assessment of an AI knowledge quality checklist and documented AI knowledge governance procedures
4.5	Evaluation of an AI knowledge sharing package with documented AI knowledge reuse evidence
5.1	Comprehensive AI risk evaluation report graded for depth, multi-dimensional coverage, and contextual reasoning
5.2	Submission of AI governance framework design, evaluated for process completeness, scalability, and alignment with organisational needs
5.3	Strategic recommendations document assessed for practicality, impact, and contribution to compliance and resilience
5.4	Cross-functional coordination report evaluated for documentation of collaborative activities and consistency in risk management practices
5.5	Policy alignment analysis assessed for clarity, alignment with regulations, and integration with organisational strategy
6.1	Graded workflow diagrams and updated AI pipelines; rubric-based evaluation of performance improvements
6.2	Analysis report submission with metrics calculations; peer review or instructor feedback
6.3	Risk and ethical assessment report evaluated against a checklist; case study review
6.4	Team project documentation assessed via contribution logs and peer evaluation
6.5	Comparative performance report graded against metrics and benchmarks; oral defense or presentation optional
6.6	Lessons-learned or reflective report reviewed for completeness, clarity, and insightfulness
7.1	Individual assignment evaluating AI quality metrics selection with written justification
7.2	Case-based exercise analysing governance and monitoring configurations
7.3	Data analysis report on AI performance, fairness, reliability, and security
7.4	Group project with documented implementation of AI quality improvement measures
7.5	Written report or dashboard presenting AI quality findings
7.6	Structured evaluation paper or exam question assessing AI outcomes against business, ethical, and regulatory criteria

8.1	Evaluation of Vulnerability Analysis Report detailing AI components and workflow weaknesses
8.2	Review of Risk Assessment Matrix, including severity and mitigation measures, using rubric
8.3	Assessment of Secure Development Implementation Plan, evidence of applied DevSecMLOps practices
8.4	Observation and review of Monitoring Dashboard or Log outputs during lab exercises
8.5	Assessment of Team Project Security Plan documentation, peer and instructor evaluation of collaboration and security planning
9.1	Applied AI Governance Framework submission, assessed for alignment with business objectives and risk appetite
9.2	Governance Effectiveness Report evaluated against performance metrics, compliance outcomes, and incident handling
9.3	Stakeholder Coordination Plan assessed for clarity of roles, responsibilities, and collaboration mechanisms
9.4	Risk Mitigation Register graded for completeness, accuracy, and suitability of mitigation strategies
9.5	Improvement Recommendations Report evaluated for practicality, regulatory alignment, and ethical soundness
9.6	Governance Communication Brief assessed for clarity, persuasiveness, and suitability for target stakeholders

	GOVERNANCE		**[5]**
Profile title	**AI AUDITOR**		**[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: 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. 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 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
	C.4.	Problem Management	e-3
	D.8.	Contract Management	e-3
	E.3.	Risk Management	e-3
	E.6.	ICT Quality Management	e-4
	E.8.	Information Security Management	e-3
	E.9.	IS Governance	e-4
Complexity	The profile has an EQF7 level.		
Deliverables	• Audit Readiness Checklist • Third-Party/Supplier AI Compliance Evidence • Audit Plan and Scope for AI Systems • Audits of AI Models and Processes • AI Documentation Review • AI System Tests for Fairness, Bias, and Accuracy		

1. PLO Technology Trend Monitoring [EQF6]	
The learner has demonstrated capability 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	
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]	
The learner has demonstrated capability to…	
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]	
The learner has demonstrated capability 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 organizational 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 Problem Management [EQF6]	
The learner has demonstrated capability 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 optimize system and AI performance, in situations with varying and partially undefined problems.	
Unit Learning Outcomes	
4.1	Investigate complex ICT and AI incidents, including subtle system failures, AI model drift, and emerging bias patterns, using diagnostic tools and historical performance data.
4.2	Evaluate root causes of incidents and their impact on system and AI performance through structured analysis and impact assessment methods.
4.3	Apply corrective and preventive measures to mitigate incidents in less predictable operational situations.
4.4	Design monitoring strategies or knowledge management practices to track recurring AI failures and support system optimization.
4.5	Advise or collaborate with team members by sharing findings and recommending improvements in AI system performance and ethical compliance.

5. PLO Contract Management [EQF6]	
The learner has demonstrated capability 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	
5.1	Analyse AI-related contractual requirements concerning data ownership, model training rights, performance standards, liability, and regulatory compliance, using legal and organisational documentation.
5.2	Apply legal, organisational, and regulatory requirements to manage AI contracts from negotiation to termination, in end-to-end contract lifecycle processes.
5.3	Design contractual clauses and service levels addressing AI performance monitoring, auditability, and compliance obligations, by aligning with governance and operational standards.
5.4	Evaluate AI supplier arrangements and contractual risks, using documented governance frameworks, performance metrics, and compliance reports.
5.5	Justify contractual decisions and risk mitigation measures in AI projects, by referencing documented evidence and organisational objectives.

6. PLO Risk Management [EQF6]	
The learner has demonstrated capability 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	
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 [EQF7]	
The learner has demonstrated capability to…	
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	
7.1	Design AI quality management frameworks by integrating governance mechanisms, metrics, and ethical principles.
7.2	Adapt AI quality approaches to complex organisational contexts involving multiple AI systems and stakeholders.
7.3	Evaluate the effectiveness of AI quality controls using performance, risk, and compliance evidence.
7.4	Assess AI-related risks and uncertainties in relation to trustworthiness, fairness, and system robustness.
7.5	Manage the implementation of AI quality assurance activities within organisational or cross-functional projects.
7.6	Interpret AI quality outcomes to inform strategic decisions on AI deployment, scaling, or modification.
7.7	Critically reflect on limitations of AI quality practices in light of evolving technological, ethical, or regulatory conditions.

8. PLO Information Security Management [EQF6]	
The learner has demonstrated capability 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.

9. PLO IS Governance [EQF7]	
The learner has demonstrated capability to…	
Design, apply, and evaluate AI governance frameworks and lifecycle controls, by integrating regulatory requirements, ethical principles, organizational risk appetite, and business objectives to guide responsible AI deployment, manage AI-specific risks, and support accountable decision-making in organizational 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.

Assessment	
Unit Learning Outcome	**Assessment method**
1.1	Annotated portfolio submission, short written test
1.2	Comparative analysis table, oral explanation or peer review
1.3	Trend mapping report, written report evaluation
1.4	Mini prototype/simulation demonstration, lab report
1.5	Ethics and impact briefing, rubric-based report assessment
1.6	Presentation/dashboard, peer and instructor evaluation
2.1	Review of submitted AI documentation inventory or reference table; quiz or oral questioning on AI documentation types and template purposes.
2.2	Written explanation or short report linking AI documentation types to purposes; scenario-based questions on AI transparency or compliance documents.
2.3	Evaluation of completed AI datasheet, compliance checklist, or user guide for accuracy, completeness, and adherence to template.
2.4	Inspection of document repository showing correct storage, retrieval, and versioning of AI documentation; submission of log demonstrating updates.
2.5	Review of annotated AI documents or verification checklist demonstrating corrected errors and alignment with organizational standards.
3.1	Assessment of developed AI technical specifications, compliance records, and transparency reports for multiple system components; grading rubric based on completeness and accuracy.
3.2	Review of consolidated AI documentation integrating datasets, model outputs, and system logs; assessment of clarity, cohesion, and accessibility.
3.3	Verification of AI documentation against regulatory, ethical, and stakeholder requirements; submission of compliance verification report.
3.4	Evaluation of customized AI documentation templates and modified project documentation; assessment based on alignment with project-specific requirements and adaptability.
4.1	Assessment of AI incident investigation report; depth and accuracy of data analysis
4.2	Evaluation of root cause evaluation; impact analysis review
4.3	Review of mitigation plan; effectiveness of corrective/preventive measures
4.4	Assessment of monitoring/knowledge strategy document; clarity and feasibility of design
4.5	Review of advisory report; quality of recommendations for AI performance and ethical compliance

5.1	Assessment of AI contract analysis report (written analysis of requirements and obligations)
5.2	Evaluation of AI contract lifecycle compliance plan (documented plan showing lifecycle management)
5.3	Grading of AI contractual clauses and SLAs (drafted clauses or service level agreements)
5.4	Assessment of AI supplier risk evaluation (risk report using governance and performance data)
5.5	Evaluation of AI contractual decision dossier (documented justification of decisions and mitigation measures)
6.1	Written AI risk assessment report evaluated against completeness and methodological correctness
6.2	Risk impact and likelihood matrix graded for accuracy, logical reasoning, and alignment with organisational objectives
6.3	Mitigation plan submission assessed for feasibility, relevance, and alignment with defined project boundaries
6.4	Oral presentation or report evaluated for clarity, communication of risk findings, and stakeholder engagement
6.5	Review of AI system performance logs, annotated with identified emerging risks and analysis
6.6	Updated risk documentation evaluated for incorporation of lessons learned and adherence to organisational standards
7.1	Design assignment producing an integrated AI quality management framework
7.2	Case study analysis justifying adaptation of AI quality approaches to complex organisational contexts
7.3	Evaluation report assessing effectiveness of AI quality and risk controls
7.4	Risk assessment document analysing trustworthiness and uncertainty in AI systems
7.5	Project-based assessment with an AI quality assurance implementation plan
7.6	Strategic decision brief based on interpreted AI quality evidence
7.7	Critical reflective essay on limitations of AI quality management practices
8.1	Evaluation of Vulnerability Analysis Report detailing AI components and workflow weaknesses
8.2	Review of Risk Assessment Matrix, including severity and mitigation measures, using rubric
8.3	Assessment of Secure Development Implementation Plan, evidence of applied DevSecMLOps practices
8.4	Observation and review of Monitoring Dashboard or Log outputs during lab exercises

8.5	Assessment of Team Project Security Plan documentation, peer and instructor evaluation of collaboration and security planning
9.1	Applied AI Governance Framework submission, assessed for alignment with business objectives and risk appetite.
9.2	Governance Effectiveness Report evaluated against performance metrics, compliance outcomes, and incident handling.
9.3	Stakeholder Coordination Plan assessed for clarity of roles, responsibilities, and collaboration mechanisms.
9.4	Risk Mitigation Register graded for completeness, accuracy, and suitability of mitigation strategies.
9.5	Improvement Recommendations Report evaluated for practicality, regulatory alignment, and ethical soundness.
9.6	Governance Communication Brief assessed for clarity, persuasiveness, and suitability for target stakeholders.

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 for European ICT professional role profiles and it has been adapted to reflect the specific characteristics, responsibilities and competence requirements of the AI field.

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 skill areas, 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 *(from e-CF)*	A list of necessary competences (from the e-CF) to carry out the mission, including a proficiency level and the 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 *(from e-CF)*	The e-CF distinguished 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 *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	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: ESCO/EQF expert group (2021). *Towards a structured and consistent terminology on transversal skills and competences*. European Commission & Cedefop.
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 CEN/TS 17699:2022, *Guidelines for developing ICT Professional Curricula*, 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**	**[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	
The learner has demonstrated capability to…	
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 (CWA 16458)

This annex outlines how the original CWA 16458 role profiles were 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 ICT framework. 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 set of European ICT professional role profiles (CWA 16458) offers a structure and provides a generic set of 30 ICT role profiles[11]. One of the intentions of the makers of this framework is to use this generic set to create more specific ICT Profiles in context, leading to so-called 'generations 3' of the European ICT Professional Profiles. It is also explained how to adapt the different components of the profiles to meet specific needs[12].

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 multiple AI-related roles. For example, the generic Data Specialist role becomes a Data Analyst and a Data Engineer.

[11] CEN Workshop Agreement (2018). CWA 16458-1 *European ICT professionals role profiles - Part 1: 30 ICT profiles*. Brussels: CEN. https://www.cencenelec.eu/media/CEN-CENELEC/AreasOfWork/CEN sectors/Digital Society/CWA Download Area/ICT_SkillsWS/16458-1.pdf

[12] CEN Workshop Agreement (2018). CWA 16458-2 *European ICT professionals role profiles - Part 2: User Guides*. Brussels: CEN. https://www.cencenelec.eu/media/CEN-CENELEC/AreasOfWork/CEN sectors/Digital Society/CWA Download Area/ICT_SkillsWS/16458-2.pdf

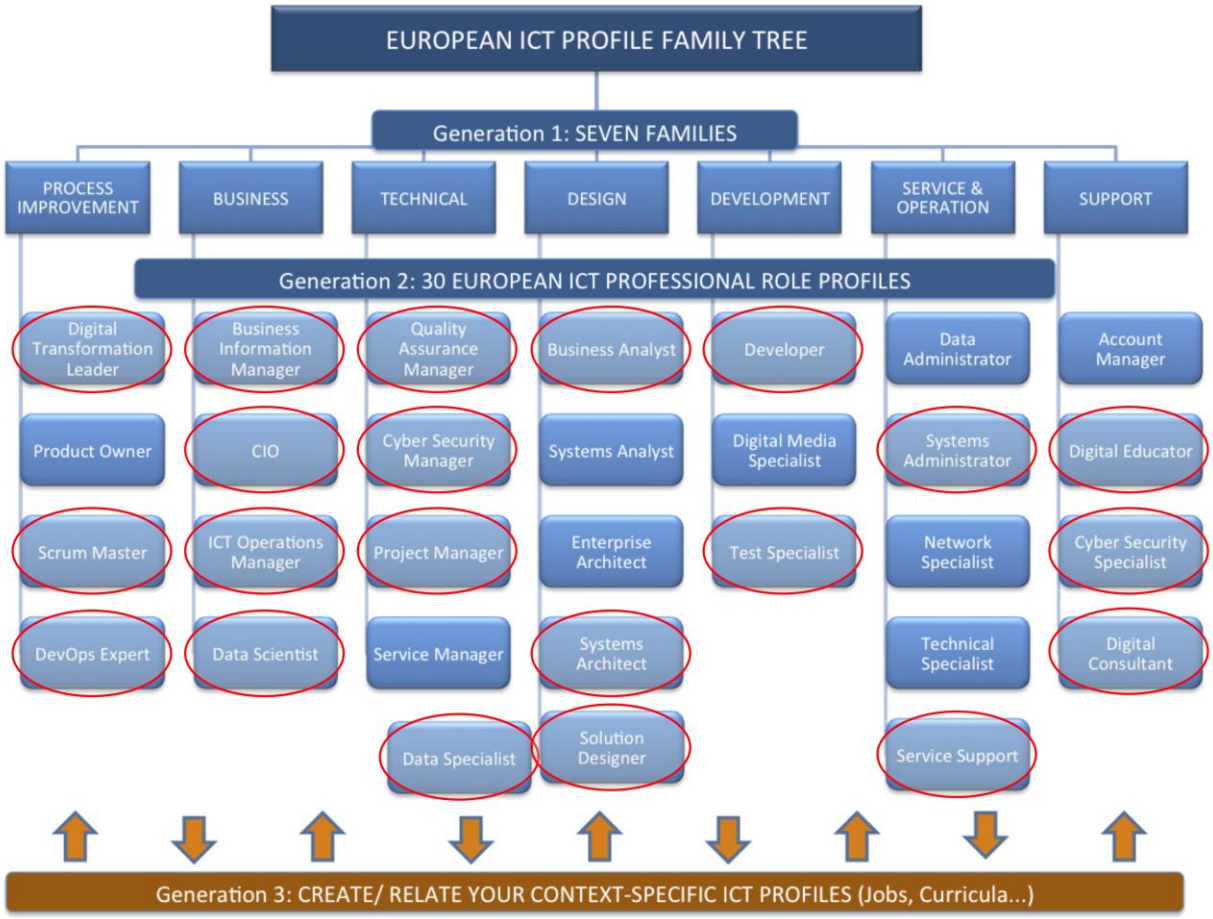


Figure F.1 — Selection of AI-related roles from CWA 16458 European ICT professional role profiles

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 AI role profile template is based on the template used in CWA 16458. There are some sections added to this original template: Transversal aspects (from e-CF), personal and interpersonal skills and a level descriptor is added to provide additional context to the competence in relation to AI.

The table below shows the relation between the general ICT professional role profiles from CEN CWA 16458 and the AI role profiles. A grey title indicates that the role profile is not a direct counterpart but is loosely associated to the AI role profile.

ICT prof. role profiles (CWA 16458)	**A.I. 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**

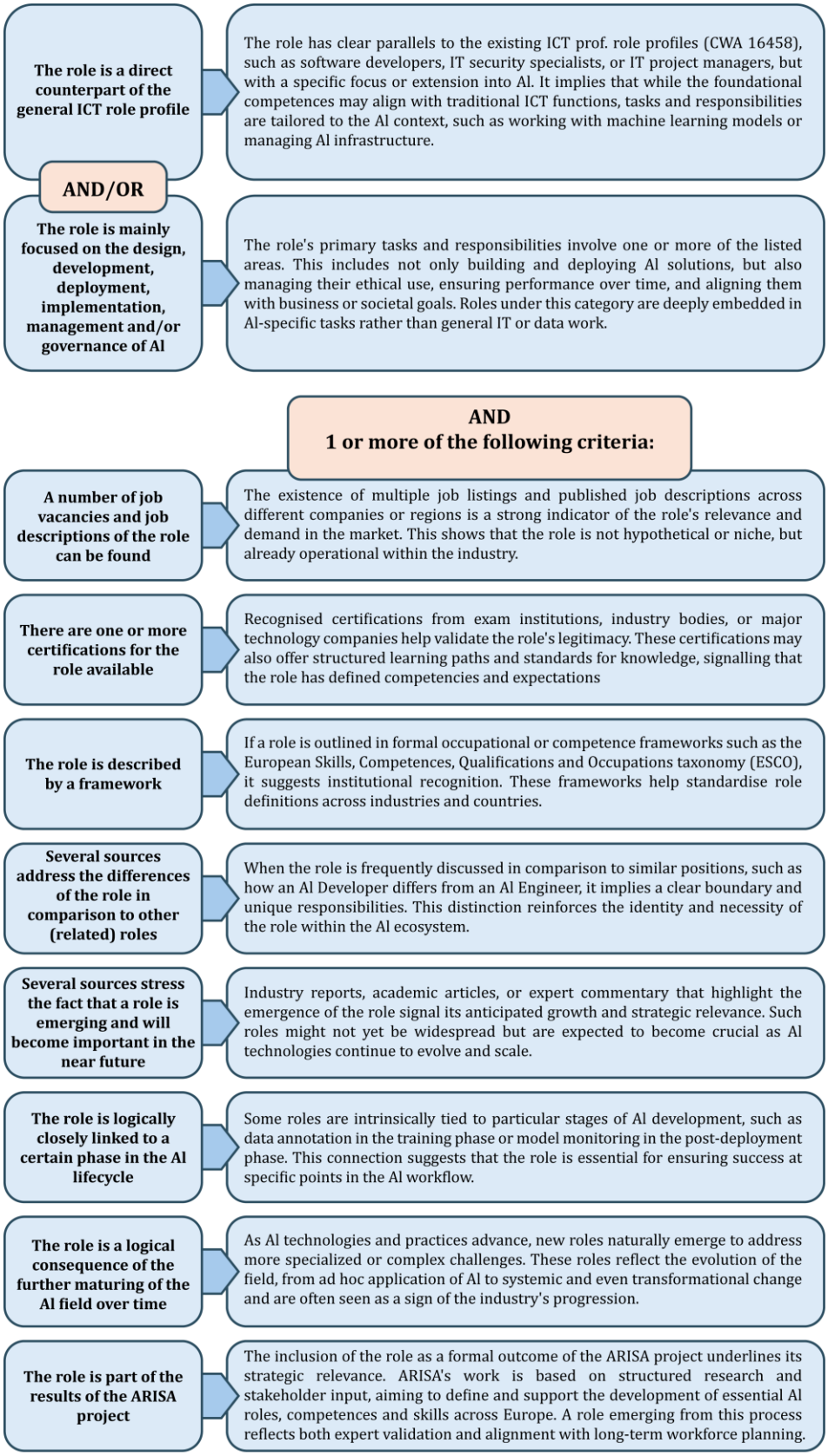
Annex G
(informative)

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.


The role is a direct counterpart of the general ICT role profile
The role has clear parallels to the existing ICT prof. role profiles (CWA 16458), such as software developers, IT security specialists, or IT project managers, but with a specific focus or extension into AI. It implies that while the foundational competences may align with traditional ICT functions, tasks and responsibilities are tailored to the AI context, such as working with machine learning models or managing AI infrastructure.
AND/OR
The role is mainly focused on the design, development, deployment, implementation, management and/or governance of AI
The role's primary tasks and responsibilities involve one or more of the listed areas. This includes not only building and deploying AI solutions, but also managing their ethical use, ensuring performance over time, and aligning them with business or societal goals. Roles under this category are deeply embedded in AI-specific tasks rather than general IT or data work.
AND
1 or more of the following criteria:
A number of job vacancies and job descriptions of the role can be found
The existence of multiple job listings and published job descriptions across different companies or regions is a strong indicator of the role's relevance and demand in the market. This shows that the role is not hypothetical or niche, but already operational within the industry.
There are one or more certifications for the role available
Recognised certifications from exam institutions, industry bodies, or major technology companies help validate the role's legitimacy. These certifications may also offer structured learning paths and standards for knowledge, signalling that the role has defined competencies and expectations
The role is described by a framework
If a role is outlined in formal occupational or competence frameworks such as the European Skills, Competences, Qualifications and Occupations taxonomy (ESCO), it suggests institutional recognition. These frameworks help standardise role definitions across industries and countries.
Several sources address the differences of the role in comparison to other (related) roles
When the role is frequently discussed in comparison to similar positions, such as how an AI Developer differs from an AI Engineer, it implies a clear boundary and unique responsibilities. This distinction reinforces the identity and necessity of the role within the AI ecosystem.
Several sources stress the fact that a role is emerging and will become important in the near future
Industry reports, academic articles, or expert commentary that highlight the emergence of the role signal its anticipated growth and strategic relevance. Such roles might not yet be widespread but are expected to become crucial as AI technologies continue to evolve and scale.
The role is logically closely linked to a certain phase in the AI lifecycle
Some roles are intrinsically tied to particular stages of AI development, such as data annotation in the training phase or model monitoring in the post-deployment phase. This connection suggests that the role is essential for ensuring success at specific points in the AI workflow.
The role is a logical consequence of the further maturing of the AI field over time
As AI technologies and practices advance, new roles naturally emerge to address more specialized or complex challenges. These roles reflect the evolution of the field, from ad hoc application of AI to systemic and even transformational change and are often seen as a sign of the industry's progression.
The role is part of the results of the ARISA project
The inclusion of the role as a formal outcome of the ARISA project underlines its strategic relevance. ARISA's work is based on structured research and stakeholder input, aiming to define and support the development of essential AI roles, competences and skills across Europe. A role emerging from this process reflects both expert validation and alignment with long-term workforce planning.

Annex H
(informative)

AI professional role profile titles and related titles

This annex provides an overview of the official AI professional role profile titles used in this CEN Workshop Agreement, together with closely 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 standardise 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.

A.I. role profiles	Alternative titles/ Closely related titles
DATA PROCESSING & ANALYSIS	
Data Scientist	Data Scientist AI, AI Data Scientist
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 Analyst	Data Analyst AI, AI Data Analyst, AI Analyst, Big Data Analyst
Data Engineer	Data Engineer AI, AI Data Engineer, Big Data Engineer, Big Data Specialist
AI Data Trainer	Training Data Specialist, Data Annotation Specialist, Data Annotator, AI Data Labelling, 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, Data & Analytics Translator, Decision Engineer
DEVELOPMENT & OPERATIONS	
AI Architect	AI Solution Architect, AI Enterprise Architect, AI Infrastructure Engineer, Agentic AI System 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
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, 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	ML Researcher, AI/ML Scientist, AI Research Scientist, AI Research Engineer
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, 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 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 Center 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 Advisor	AI Consultant, AI Specialist, AI Adoption Specialist, 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, AI Safety ML 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-Centered AI Lead, Head of AI Interaction, Director of Human-Centered AI
MANAGEMENT	
AI Transformation Leader	AI Innovation Leader, AI Transformation Officer

Chief AI Officer	AI Strategist, AI Strategy Manager, 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 Programme 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	Manager AI Operations, AI Data Operations Manager
AI Project Manager	Project Manager AI, AI Project Lead
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 Compliancy Officer
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

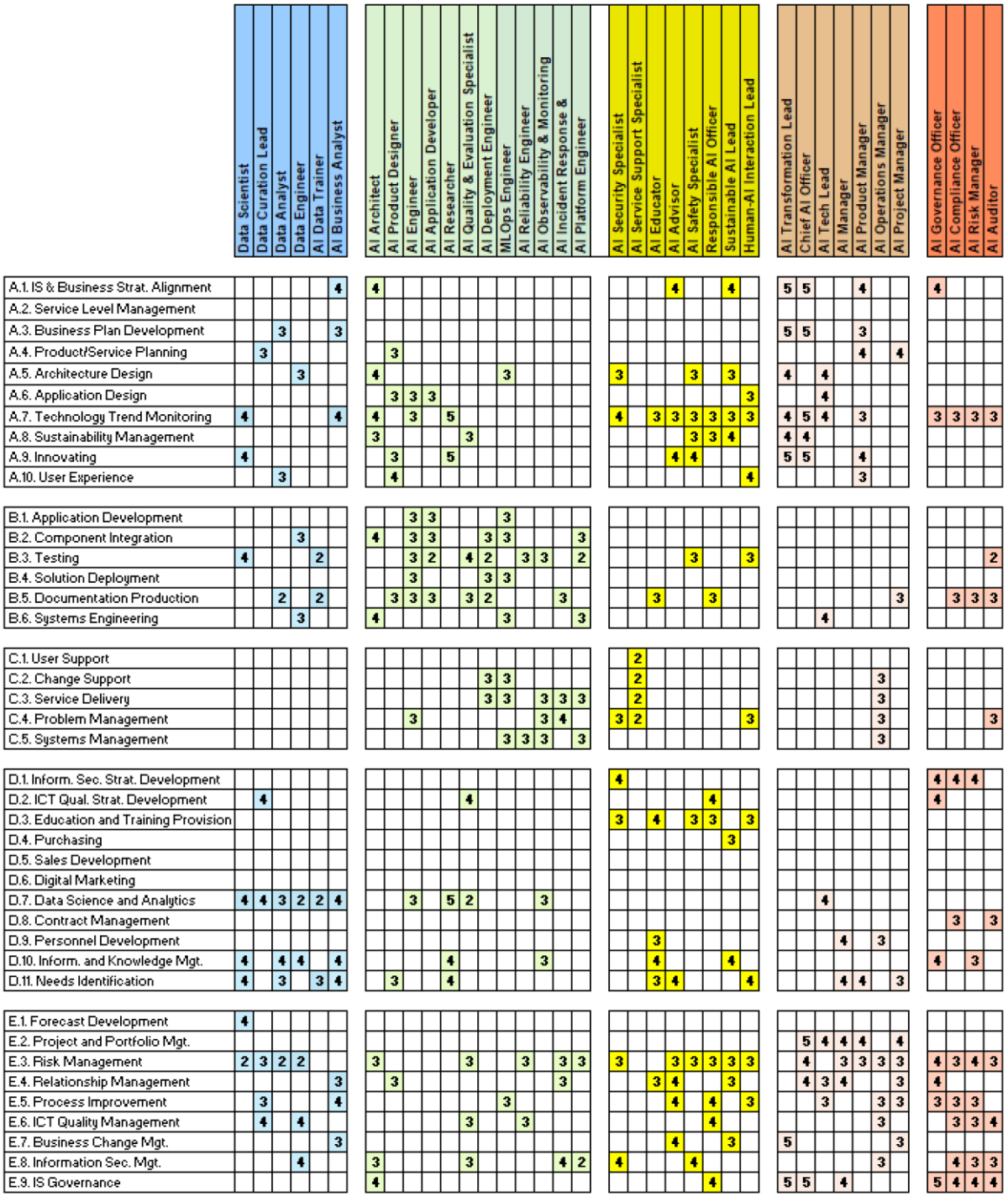
Annex I
(informative)

Table – AI professional role profiles vs 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) (CEN/EN 16234-1:2019). The table provides a consolidated view of how AI-specific roles relate to these established ICT competences, including indicative proficiency levels.

The mapping builds in part on the competence associations already defined for comparable roles in the European ICT professional role profiles (CWA 16458). 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.


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 &
AI 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
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.1. Application Development
B.2. Component Integration
B.3. Testing
B.4. Solution Deployment
B.5. Documentation Production
B.6. Systems Engineering
C.1. User Support
C.2. Change Support
C.3. Service Delivery
C.4. Problem Management
C.5. Systems Management
D.1. Inform. Sec. Strat. Development
D.2. ICT Qual. Strat. 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. Inform. and Knowledge Mgt.
D.11. Needs Identification
E.1. Forecast Development
E.2. Project and Portfolio Mgt.
E.3. Risk Management
E.4. Relationship Management
E.5. Process Improvement
E.6. ICT Quality Management
E.7. Business Change Mgt.
E.8. Information Sec. Mgt.
E.9. IS Governance

The numbers in the table refer to the e-CF proficiency levels of a competence and can be compared to EQF levels:

e-CF prof. level	*EQF*		
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)

Table – AI skill areas description

This annex provides concise descriptions of the AI skill areas referenced throughout this CEN Workshop Agreement. 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)*, the SFIA framework for AI-related skills, the Bertelsmann University & LinkedIn *AI Upskilling Framework* (2024), and the Alan Turing Institute's *AI Skills for Business Competency Framework (2023)*. 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.

Title	Description
AI Skill Areas – Technical [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 optimize data for analytics and AI use.
Data Engineering	Build, integrate, and maintain data pipelines and architectures that reliably ingest, transform, and serve data.
AI Technology	Select, configure, and manage platforms and libraries that support AI development and deployment. Provision and optimize compute, storage, and networking resources for scalable AI workloads. Evaluate and integrate tools that support AI development, deployment, monitoring, and collaboration.
Machine Learning	Develop, train, and deploy algorithms that learn from data to make predictions or decisions.
Deep Learning	Design and optimize 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.
Computer Vision	Enable machines to interpret, analyse, and generate insights from images and video data.

GenAI	Design and deploy models that generate new content such as text, images, code, or synthetic data.
Prompt Engineering	Design prompts that enable effective collaboration between humans and AI systems.
Testing AI-based systems	Design and execute tests to verify functionality, reliability, and safety of AI-enabled systems.
Security & AI	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.
MLOps	Automate, manage, and govern the end-to-end lifecycle of AI models from development to retirement.
AI Skill Areas – Managerial [M]	
AI Strategy	Define how AI supports organizational goals, competitive advantage, and long-term value creation.
AI Trend Monitoring	Monitor and assess AI market trends, technologies, competitors, and emerging innovations.
AI Business Application & Impact	Identify and prioritize AI use cases that deliver measurable business and societal value.
Project Management of AI Initiatives	Plan, execute, and govern AI initiatives across teams, timelines, and dependencies.
AI Skill Areas - Governance & Policy [G]	
AI Governance	Establish oversight structures, policies, and decision rights for AI development and use.
AI Ethics	Apply ethical principles to guide responsible AI design, deployment, and use.
AI Risk & Assurance	Assess and provide assurance that AI systems operate safely, reliably, and as intended.
AI Policy	Interpret and apply laws, standards, and policies governing AI development and use.

Annex K
(informative)

Table – AI role profiles vs AI skill areas

This annex presents a consolidated mapping between the AI professional role profiles defined in this CEN Workshop Agreement and the AI skill areas identified in the framework. The table illustrates which skill areas are considered essential for the effective performance of each role, providing a structured view of skill relevance across the AI professional landscape.

The mapping is based on expert input and reflects current professional practice rather than theoretical completeness. It captures typical skill expectations associated with each role, and considers that actual skill requirements may vary depending on organisational context, sector, and maturity of AI adoption.

	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 Specialist	AI Incident Response & Reporting Lead	AI 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 Leader	Chief AI Officer	AI Tech Lead	AI Product Manager	AI Operations Manager	AI Project Manager	AI Security Manager	AI Governance Officer	AI Compliance Officer	AI Risk Manager	AI Auditor
AI Skill Areas - Technical																																					
Data Analytics	4		4/5			3	3																						1	1	1						1
Data Modelling	4		3	4		3	4																						1	1	1						1
Data Engineering				4/5			4																														1
AI Technology	4		3	3	3	3	4/5		4/5	4/5	5	3		4				3	4		1	1					1	1		2	2	2	1			1	2
ML	4		3	3		3	3-5				3-5			4				3	4										2	2	2						1
DL	3/4		2	2			3-5				3-5																										1
NLP											3-5																										1
Computer Vision											3-5																										
GenAI	3		2	2	3	3	3		4/5	4/5	3-5			4				3	4				1						2	2	2	1	1	1	1	1
Prompt Engineering	3		3	3	3	3	3		3	3	3	3		3				3	3		2	2	2				2	2	2	2	2	2		2	2	2	2
Testing AI-based systems	4		3	3	4	3			4	4	3	5		3				3	3				2						2	2	2					1
Security & AI	3		3	3		3			3	3		3						4	5		1	1				1	1		2	2	2	5	1	1	2	2
Safe & Responsible AI	3				3	3	3		3	3	2	3						3	5		1	1		3			1	1		2	2	2	4	1	2	2	2
Sustainability & AI							3											3			1	1		2			1	1		2	2	2		1	1	1	2
MLOps	4/5		2	2		3	4/5		4/5	4/5		3		5				3/4												2	2	2					
AI Skill Areas - Managerial																																					
AI Strategy						4	3														3		3				5	5					3	4	3	3	3
AI Trend Monitoring						4	3				2								2		4	4	2	3			5	5		5	4	3	3	3	3	3	3
AI Business Application & Impact						4	3														3	3		4			5	5		5	5	3	4		4	4	4
Project Management of AI Initiatives						3																		3			5			5	5	5			3	3	3
AI Skill Areas - Governance & Policy																																					
AI Governance						3													2		3	3	2	4			5	4		4	4	4		4	5	4	4
AI Ethics						3													5		3	3	5	5			5	5		4	4	4	4	4	4	3	3
AI Risk & Assurance						3													3			3	3	4			5	4		4	4	4	4	3	5	5	5
AI Policy						3																		3				5					3	5	4	3	3

Numbers refer to levels from Bertelsmann (2024) "Upskill on Artificial Intelligence (AI) and Generative AI"

1 = Understanding (for all professionals incl. leaders/managers)

2= Applying (for all professionals, incl. leaders/managers, e.g. prompt engineering)

3 = Building (for power users and developers building AI-powered applications and solutions

4 = Training and Maintaining Models (for engineers implementing AI/ML, DL, finetuning models

5 = Deeply Specialising (for tech specialists and R&D roles incl DevOps, ML researchers, etc)

Annex L
(informative)

AI Role Profiles versus 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.

Personal skills	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 Specialist	AI Incident Response & Reporting Lead	AI 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 Leader	Chief AI Officer	AI Tech Lead	AI Product Manager	AI Operations Manager	AI Project Manager	AI Security Manager	AI Governance Officer	AI Compliance Officer	AI Risk Manager	AI Auditor
1. Thinking skills																																					
Processing information, ideas and concepts																																					
Think analytically	x		x	x			x		x	x				x							x	x				x	x		x	x	x	x	x	x	x	x
Think critically											x	x							x			x	x	x			x	x		x	x	x	x	x	x	x	x
Think holistically						x															x	x					x	x		x	x		x	x		x	x
Think quickly																		x																			
Planning and organising																																					
Plan activities				x		x	x		x	x	x	x		x				x	x				x				x			x	x	x					
Organise information	x		x																		x													x				
Dealing with problems																																					
Identify problems			x			x						x							x			x	x	x			x	x				x	x		x	x	x
Solve problems	x		x	x		x	x		x	x	x			x				x				x					x	x				x	x			x	
Thinking creatively and innovatively																																					
Think creatively						x					x										x						x										
Think innovatively	x						x		x	x											x	x					x	x		x	x						
Improvise			x	x								x		x				x	x		x		X				x					x						
2. Self-management skills																																					
Working efficiently																																					
Act independently							x				x			x										x			x							x	x	x	x
Focus on quality				x								x							x		x	x	X	x				x			x	x			x	x	x	x
Manage time																																	x						
Meet commitments						x			x	x								x				x										x						
Attend to detail	x		x																		x			x									x			x	x	x
Taking a proactive approach																																					
Show initiative																						x		x			x								x			
Make decisions							x																				x	x		x	x						
Assume responsibility			x						x	x								x									x	x		x	x		x			x	x	x
Assume accountability	x			x										x					x		x		x				x	x				x		x				
Show commitment																								x														
Show determination																								x			x								x			
Exert result-orientedness						x																					x			x	x	x		x		x	x
Manage personal progression																																					
Forms judgements											x	x									x	x		x												x	x	x
Maintaining a positive attitude																																					
Cope with uncertainty	x		x	x		x	x		x	x				x					x			x	x			x	x				x	x	x				
Cope with stress												x						x												x	x	x					
Manage frustration											x											x		x			x											
Demonstrating willingness to learn																																					
Exert willingness to learn	x		x	x		x	x		x	x		x		x				x	x		x		x											x			
Demonstrate curiosity											x										x																x
Adapt to change																											x	x									
Exercise self-reflection																																					

Annex M
(informative)

AI Role Profiles versus 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.

Interpersonal skills	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 Specialist	AI Incident Response & Reporting Lead	AI 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 Leader	Chief AI Officer	AI Tech Lead	AI Product Manager	AI Operations Manager	AI Project Manager	AI Security Manager	AI Governance Officer	AI Compliance Officer	AI Risk Manager	AI Auditor
3. Social and Communication Skills																																					
Communicating																																					
Communicate	x			x					x	x				x				x			x	x		x			x	x		x	x	x	x	x	x	x	x
Promote							x				x													x											x	x		
Persuade						x																		x			x								x	x		
Negotiate						x																					x											
Moderate																																					
Resolve conflict																												x					x				x
Report			x									x							x			x	x	x							x	x			x	x	x
Supporting others																																					
Show empathy																					x																
Exert customer orientedness						x	x														x	x									x						x
Coach, mentor, advise others																					x	x		x			x	x							x		
Teach, train, instruct others	x			x					x	x	x	x		x				x	x		x		x	x			x						x		x	x	x
Collaborating in teams, networks and organisations																																					
Collaborate with others																					x								x	x	x	x	x		x		
Work in teams	x		x	x		x	x		x	x		x		x				x	x				x						x	x	x						
Build and maintain networks											x										x						x	x						x	x		x
Exert business orientation																					x						x	x		x	x					x	x
Exert organisation sensitivity						x	x														x						x	x		x	x						x
Exert political sensitivity																					x		x				x					x						
Exert social awareness																				x												x						
Leading others																																					
Lead others																											x	x									
Manage others																														x	x	x	x			x	
Control progress																																x	x		x	x	
Motivate others						x	x													x				x										x	x		x
Delegate responsibilities																											x	x									
Build team spirit	x		x	x					x	x		x		x				x				x							x	x	x						
Hold a vision											x										x		x				x							x				
Following ethical code of conduct																																					
Exert ethical behaviour						x					x										x		x				x	x		x	x	x	x	x	x	x	x
Comply with regulations	x		x	x			x		x	x		x		x				x	x			X	x				x	x		x	x	x	x	x	x	x	x
Respect confidentiality																					x	x															x
Demonstrate loyalty																																					
Demonstrate trustworthiness																							x									x					

Annex N
(informative)

Table – AI role profiles vs AI deliverables

This annex presents a consolidated mapping between the AI professional role profiles defined in this CEN Workshop Agreement and the AI deliverables identified in the framework. The table illustrates which deliverables are widely recognised key outputs to each role.

The mapping is based on expert input and reflects current professional practice rather than theoretical completeness. It captures typical outputs associated with each role, ensuring that only one role can be held accountable or responsible for a certain output, while multiple roles, though, may contribute to that same output. In the context of this CWA, accountability, responsibility, and contribution describe distinct roles in relation to a concrete output. Accountability denotes ultimate ownership of the output and its outcomes; the accountable party is answerable for the quality, completeness, timeliness, and suitability of the output and holds final decision-making authority, including approval or rejection. Responsibility refers to the obligation to perform and manage the work necessary to produce the output in accordance with agreed requirements and standards, without necessarily holding final authority over acceptance. Contribution denotes the provision of specific inputs, expertise, or supporting activities that enable the production of the output; contributors deliver defined elements or advice but are not answerable for the final outcome.

DELIVERABLES	Data processing & analysis	Data Scientist	Data Curation Lead	Data Analyst	Data Engineer	AI Data Trainer	AI Business Analyst	Development & operations	AI Architect	AI Product Designer	AI Engineer	AI Application Developer	AI Researcher	AI Quality & Evaluation Specialis	AI Deployment Engineer	MLOps Engineer	AI Reliability Engineer	AI Observability & Monitoring Specialist	AI incident response & reporting lead	AI Platform Engineer	Support & guidance	AI Security Specialist	AI Service Support Specialist	AI Advisor	AI Safety Specialist	Responsible AI Officer	Sustainable AI Lead	Human-AI Interaction Lead	AI Educator	Management	AI Transformation Lead	Chief AI Officer	AI Tech Lead	AI Manager	AI Product Manager	AI Operations Manager	AI Project Manager	Governance	AI Governance Officer	AI Compliance Officer	AI Risk Manager	AI Auditor
AI Act Compliance Assessment Report																														R									C		A
Incidents Database																																C				R				A	C
Fundamental Rights Impact Assessment (FRIA)																									R														A	C	C
Risk Assessment Register																																	A								R	C
AI Transformation KPIs																														R								A			C
Data governance framework			C								R																											A			C
Data Quality & Integrity				R	C																																	A			C
Data Verification and Validation						R																																A			C
Audit Readiness Checklist																																						A	C		R
Third-Party / Supplier AI Compliance Evidence																																			C			A			R
Data Security					R																C																	C	A	
Guidelines, Recommendations and Regulations regarding AI																								C	R	C	C			C								A	C	C	
AI Security Strategy																					R																	A	C	C	
AI Project Plan																							C	C		C							A			R			C	C	
Change Management Plan																														A						R			C	C	
Information Security Risk Assessment																					R		C																C	C	
AI Governance Policy										C																					R							A		C	
AI Strategy & Implementation							C		C																					R	A							C		C	
AI/ML Business Case							R																							A	C									C	
Business Relationship							R																							A	C									C	
Safety Plans																								R			A													C	
Information Security Risk Treatment Plan																					C																	A	C	R	
Risk Management Policy																					C			C														A	C	R	
Information Security Policy																					C							C			A									R	
Legal, Ethical and Safety Compliance														C																								R	A		
AI Literacy Programme																											C	R											A		
AI Ethics KPI's			C																						R		C											A		
Ethical Standards in Research													R														C												A		
Secure and Compliant Solution							C				R										C																		A		
AI Transformation Strategy																								C						R								A	C		
AI Training Policy																												R										A	C		
Data Acquisition		R				C																																A	C		
Data Management Plan		R			C																																	A	C		
Legal and Ethical Considerations			R				C																		R													A	C		
Security and Privacy																C					R																	A	C		
AI Solution Choice																							C													R			C		
Quality Assurance																																	A			R			C		
AI Learning Programme/ Training Course																												R							A				C		
AI System User Instructions										R																	C							A					C		
AI Transformation Roadmap																								C						R	A								C		
Learning Outcomes																												A			A								C		
AI Ethics Policy																									R		C				A								C		
Community Engagement													C															R		A									C		
AI Needs Analysis							R																					A											C		
Human Oversight Instructions																									A		R												C		
AI/ML Security Guidelines									A		R					R					C																		C		
AI Compliance Policy																															C								A	R		
Quality Assurance (Training)																												C											A	R		
AI Compliance KPI's																					C			C															A	R		
AI Compliance Risk Mitigation Plan																					C			C															A	R		
Legal, Ethical and Safety Standards																								C															A	R		
Ethical AI																									A		C													R		
Sustainable AI Policy																										R													A			
HR Development Plan																												C											A			

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Team Management																												C			A		R						A				
Ethics Board																										C					R							A				
Research Strategies for AI Policies													R										C															A				
Strategic Alignment							R		C																						A							C				
AI Solution Documentation		C			C						R	C		C																							A				
Integrated AI Solution					C				R		C	R																									A				
Validated AI Solution														C		R																			A	R						
Quality Plan																					C			C								A			R						
Budget Plan		C							C																								R		A						
Automated Workflows					C											R																C		A							
CI/CD Pipelines											C				R																	C		A							
Functioning AI System					C							R																				C		A							
Infrastructure Strategy					C				R																							C		A							
Quality Assurance and Auditing														C			R															C		A							
AI Solution in Operation																C	C			R														A							
Data Pipeline Reliability and Scaleability					R				C																									A							
Solved Incident																	C			C												A			R						
Feedback Documentation														R													C						A								
UX Design							C																	C			R						A								
Business Insights from Data		R		C			C																										A								
Business Requirements for AI Exploitation		C					A		C																								A								
Data Analytics		C		R																													A								
Evaluation of AI Performance					C	R																											A								
Implemented AI System					C				C		R																						A								
Human Rating Guideline Adherence														A										C			R						C								
Test Result											C			R			A																C								
AI Release Plan		C			C																										A		R								
AI Solution Requirements		C				C			C																						A		R								
Educational Initiatives													C															R		C			A								
Development, Testing & Deployment of AI Systems		C			C						R																						A								
Knowledge or Information Base													C										R										A								
Selecting Models, Architecture and Techniques							C		R				C																				A								
Technical Aspects of AI Projects					C				R		C																						A								
Coalitions in the AI Ecosystem							C																								A		R								
AI Model											R		C											C									A								
AI/ML Component		C										R																					A								
Built Pipeline		C			R																												A								
Choice of Technology							C		R		C																						A								
Developed AI Models and Experiments											C		R																				A								
Model Tuning and Fine-tuning		R			C																												A								
Software Design Description							C		C		R																						A								
Software Quality									C		R						C																A								
Technological Interventions					C		C				R																						A								
Testing and Evaluation		C									C					C	R																A								
Model Deployment Processes									C						R	A																	C								
Scalability and Reliability									C							A	R																C								
AI Tool Portfolio																					C											A	R								
Development Process									C		C					R																A	R								
System Architecture					C				R		C																					A								
Business Plan for AI Exploitation							R																							A	C								
Disseminating Findings		R											A															C												
Research Impact and Publications		R											A															C												
Evaluation Outcome Reporting		C					R							A													C													
Safety of Stakeholders									R															A			C													

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AI experience design specs										R																																
AI risk dashboards & metrics																			R																							
AI Security Policy		C			C				R		C											A																				
AI system improvement																			C																							
Alerting rules																		R																								
Annotating and Labelling Datasets		A			A	R																																			
Annotation and Judgment		A					C							R																												
Anomaly Detection Configurations																		R																								
Continuous Service Improvement Backlog																						C																				
Critical Business Process Integration Proposal (Security)							C														R		A																			
Curated and Trusted Data Assets			A																																						
Data Annotation Guidelines		R				C																			A																
Data Architecture		C			R				A		C																														
Data Collection and Representation		R		A	C		C																																		
Data Curation & Metadata Framework			A																																						
Data Infrastructure					R				A													C																			
Data Management System		C			R				A																																
Data Model		C			R				A											C																					
Data Pipeline Integration					R				A		C					C																										
Data Selection		R		A	C		C																																		
Documented Code									C		R	A																													
Evaluation of Quality and Reliability											C			A			R																									
Executed Evaluation Tasks		A												R								C																				
Experiment Design		R		C							C		A																													
Human-AI interaction design										A																																
Incident and Service Support Reports																							R																			
Incident Investigation Report																		R																								
Incident report																			A																								
Incident Response		C			C						R													A																		
Incident Response Plan		C			C		C				R								A		R																					
Metric Development		R														C									A																	
ML Workflows					R				A		C																															
Model performance and drift reports																		A																								
Model retraining																		C																								
New AI Solution Proposal						C			R		C												A																		
Operational monitoring dashboards																		A																								
Opportunity Memo							R						C										A																		
Organisational risk & governance reports																			C																							
Original high quality research		R					C				C		A																													
Product strategy & feature definition										C																																
Quality of AI Dataset and Annotations		R		C		A																																			
Regulatory compliance submissions																			R																							
Resolved Support Tickets / Incident Records																							A																		
Secure AI/ML Lifecycle		C			C		C				R					R						A																			
Security Measures against AI/ML-Specific Attacks									A							C						R																			
Test Plan		C									R			A			R																									
Test Procedure		C									R			A			C																									
Troubleshooting Guides																							R																		
Trust & usability of AI experiences										A																																
User Support Case Resolution Outcomes																							A																		

Annex O
(informative)

Comparison between 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)

Key differences between AI literacy and AI professionalism

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.

The table below supports a shared understanding among educators, employers, policymakers and practitioners.

Table XX — 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	Designing, building, deploying, managing, and governing AI systems
Credentialing	Often informal (e.g., training, public education)	Formal (e.g., degrees, certifications, professional standards)