D.2.4 Recommendations for Designing and Delivering a Joint VET Curriculum and an Occupational Profile for DPOs

PROJECT INFORMATION

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Executive Summary

This document **Deliverable 2.4: Recommendations for Designing and Delivering a Joint VET Curriculum and an Occupational Profile for DPOs** serves as the **digest** of the comprehensive quantitative and qualitative field research that was conducted in the framework of the **DataPRO** project.

More specifically, the current report encompasses all previous stages of the research and scoping analysis aiming also to be presented to relevant key actors in the field of data protection, policy-makers, career advice agencies, high profile stakeholders and the E.C.

In the next paragraphs the results from all country specific reports will be thoroughly presented, compiling and analyzing the findings that have derived from the specific interviews, focus groups and online survey.

The country reports provide a snapshot of Greece's, Cyprus's and Germany's current state of play in skills gaps and shortages and current training provision in the field of data protection aiming both at DPOs as well as simple users who deal with various forms of data.

Moreover, this report identifies the strengths and weaknesses in regards of curricula design and makes recommendations aimed to be incorporated in the upcoming modules' design. It contains the summarized feedback from participants, identifying key themes, conclusions and recommendations for implementation and improvement of current analyzed curricula.

Furthermore, proceeding the reference to the skills gaps and training needs per country, this report engages with the European Skills Frameworks that are recommended to be adapted in order to facilitate the curricula design procedure.

More specifically, for each of the skills gap category identified, digital and transferable competences have been analyzed. This is accompanied by a description of different European frameworks, namely the European Qualification Framework and the DigComp aiming to the development and understanding of digital competences and the users of digital technologies. In addition, the Skills Framework analysis frames the ESCO and NQF mapping of the DPO occupational profile.

More specifically, the report provides information regarding the European and National Qualifications Framework surrounding the formation of the Occupational Profiles for Data Protection Officers in Cyprus, Greece and Germany. Following the identification of strengths and weaknesses, the reports follows the European Skills/ Competences, Qualifications and Occupations (ESCO) as well as the National Qualifications Framework standards in the three countries, and provides country-specific information identifying key themes, knowledges, skills and competences required by data protection relevant occupational profiles as defined and classified by the official frameworks. The collection and analysis provided feeds into the final recommendation for designing and delivering of a VET Curriculum and Occupational Profile for Data Protection Officers, as well as implementing and improving the existing curricula in different countries.

Contents

1. Summarizing the Comparative Analysis results of different data protection curricula

As a first step, the DataPRO partnership proceeded into preparing an analysis on the needed skills and knowledge in the GDPR sector, especially following the recent regulations put in effectiveness in the EU. To this end, VET courses in the Data Protection Sector provided in Greece, Germany, Cyprus, Spain, Luxemburg, the USA and Singapore was examined in order to analyse **what** is being offered as well as **the delivery method**.

As the GDPR sector rapidly progresses and influences all sectors of personal and economic environment, professionals with **operational and digital skills** and familiarized with technological tools are more and more required in order to manage high-profile data breaches, building the highest quality of the data protection infrastructures.

In terms of data management, two types of users are distinguished: **the DPOs** who are responsible for data protection and management and the **simple users** who manage different types of data as it forms part of their daily activities (persons involved in data processing). Following the new data protection era, both groups of users were called to be upskilled/reskilled while also welcoming a new generation of data protection officers who are aimed to be trained in alignment with the new developments of the sector in operational, legal and soft skills via a more organizational centered approach.

However, as analyzed in D2.1 "Comparative Analysis of different data protection curricula", **none of the existing identified courses** are able to offer specialized skills and especially digital skills in specific market sector and areas. **Elective courses** and **adaptability** are missing for all the identified courses.

Via a specifically designed e-learning platform, **the DataPRO project is going to focus on offering different levels of experience and abilities to the trainees. The to-be designed curricula will be provided, offering flexibility and a personalised learning experience**.

The idea is that the learners will be able to be engaged in the training activities regardless the time and location. More specifically they will be able to:

- participate from any location,
- participate in multiple concurrent discussions,
- follow asynchronous discussions where participants do not need to be conversing at the same time in order to participate

It is recommended that the DataPRO curricula design will follow the modular approach, meaning that the training process will follow two-phases:

- Teaching of the foundational knowledge which underlies a specific skill.
- Practical Skills Application: online and in-person training

In addition, the DataPRO curricula will include both mandatory and optional modules, a feature that was not present during the VET curricula research. Furthermore, in terms of assessment

methods, various types will form part, from multiple-choice questions to peer-reviews, case studies etc.

Finally, in terms of the DataPRO WBL activities, a variety of elements will be taken into consideration that will be adjusted in a national context taking such as:
- **Location**
- **Duration**
- **Timing**
- **Origin of trainers**

Finally, beyond certifying the Scheme for DPOs, the recognition of the DataPRO joint qualification will indeed address an unanswered need.

2. Methodology of data analysis and interpretation of the data collection results

Under the D.2.2 "Terms of Reference" a common methodological framework was used among the project partners, aiming at the implementation of a thorough full field research for the identification of common Skills and Competences for Data Protection Officers.

The adapted methodology included:
- A methodology implementation plan with specific milestones
- Interview and survey questionnaire templates
- Interview and focus group methodology and guidelines

This common research framework was used in the study across Cyprus, Germany and Greece with a view to ensure coherence and consistency of findings. Its main objective was to support the transparency and facilitate all foreseen comparative analysis especially the ones coming from the quantitative research. Finally, the "Terms of Reference" acted as step-by-step handbook to facilitate and transfer know-how to the partners who may not be specialised in research activities.

The document was structured around the description of following main components:
- Definition of target groups
- Conduction of desktop research in Cyprus, Germany and Greece in order to develop a sound and updated knowledge base for the on-play Data Protection Officer Curricula.
- A field research consisting of:
  - A qualitative research including interviews and focus groups in the respective countries
  - A quantitative research through an online survey.
- Guidelines for performing and presenting data collection.

Research Questions and Objectives

With respect to the foreseen activities the research objectives were:

- To understand the context in terms of needs and challenges raised from the application of GDPR.
- To acquire a better understanding regarding the impact of being GDPR compliant in terms of creation of new business processes, adaptation of existing ones, development of tailored technical solutions to handle the increasing volume of personal data flows, etc.
- To find out skills needs of public and private organisations involved in personal data processing focusing on questions:
  o Which skills are currently missing from Data Protection Officers?
  o Which skillset is needed for a DPO?
  o What should be the ideal profile of a DPO?
  o In what extend do mismatches exist between actual and needed skills?
- To research and map existing DPO curricula with a view to identify:
  o Gaps in existing trainings in terms of learning objectives
  o Common trends and patterns regarding teaching and delivery methods.
  o Potential areas of improvements and best practices

The quantitative and qualitative field research was conducted in three European partner countries: **Germany**, **Greece** and **Cyprus.** It was driven and posited the following **research questions**:

- Has the GDPR engender a need for skills upgrading in the Data Protection sector?
- Was the Business world ready and agile to quickly adapt to GDPR?
- What are the skills that the market is need for?
- Is the training provision adequate and does it serve the needs of the market?
- What should be the content and form of the training provided?

The consortium embarked on a **cross-national comparative research** that included:

- A survey with the use of a survey questionnaire
- Focus groups
- In-depth interviews

Target Groups

The target group of the research were learners and enterprises, divided as such:

- **Stakeholders** including Chamber Unions, Chambers of Commerce and Industry with in-house experts.
- **End-users** including lawyers of Bar associations, current and future DPOs. The direct beneficiaries of this partnership were young learners, trainers and employees performing DPO duties partly or fully inside an enterprise or as external professionals.

Data Processing methodology

Data processing and statistical analysis transformed the collected data into proper evidence. **The presentation of quantitative findings** was based on processing numerical data. Numerical data were presented in tables and charts in order to be easily interpretable and comparable. **The presentation and reporting of qualitative data** adopted the following principles**:**

- Identification of common themes and groupings
- Reporting of important results of the interviews/FG as quotes
- Identification of patterns among the responses.

The a-priori defined evaluation criteria were the following:

- ✓ **Completeness**: The degree to which the main project results provide full implementation according to project objectives,
- ✓ **Consistency**: The degree to which main project results provide uniform design and notation.
- ✓ **Accuracy**: The degree to which main project results provide the required precision with respect to real life sectorial requirements
- ✓ **Simplicity**: The degree to which the results are implemented in the most non-complex and understandable manner
- ✓ **Portability**: The extent to which project results conform to standards (or EU/national guidelines) that maximize portability

3.   Presenting the current state of the art in each partner country

Key dimension of the DataPRO Training Needs analysis was to explore the market demand on skills as it shaped by the introduction of the GDPR and the current developments in data protection as well as to delineate the skills set necessary for a Data Protection Officer. Approximately 400 individuals were reached during the research implementation. The findings are corroborated by the inclusion in the sample of relevant stakeholders and DPOs in **three** European countries which are characterized by different socioeconomic regimes.

Research both quantitative and qualitative demonstrated **two main patterns:** on the one hand **GDPR introduction was saluted as: a) a major change in all participating countries** that precipitates important changes on how the business world handles personal data as well as on the remit of rights and obligations for all parties involved; on the other there was: **b) a clear difference between Germany and the two other countries (Greece and Cyprus) on level of awareness and preparedness for what GDPR entails.**

GREECE
- GDPR is conceptualised as a **paradigm change**
- Public and private organisations not very well prepared for what GDPR entails
- Greek DPOs feel confident and prepared for GDPR
- GDPR is challenging in terms of cost and IT infrastructure

CYPRUS
- Data Protection and GDPR in its nascent phase

- There is a need for awareness raising
- Need for clear guidance
- **Uncertainty** regarding the level of compliance reached
- An organization can be successfully compliant only through organizational and **cultural change**

GERMANY
- Companies and public sector are more mature in embedding GDPR
- Administrative burden has been increased
- Introducing technical solutions and updated IT systems has been cost intensive
- GDPR is too broad and introduces a very wide field of actions

What emerged as the prevalent trend is the need to move towards **soft skills** and incorporate them in the DPO Curricula. The demand for a set of soft skills with the most prominent the communication skills was very pronounced.

GREECE
- **Communication skills:** The ability to effectively convey information and communicate at all levels
- **Knowledge broker skills:** the ability of DPOs to serve as intermediaries that extract or transfer knowledge within departments and who can be at ease at conversing about different aspects of data protection
- **Legal skills:** It is not just the knowledge of the laws and regulations but also how they relate to the organizational environment and how they will be integrated in the organisation
- **IT skills:** They considered necessary but not sufficient skills for the Data protection profession

CYPRUS
- **Multitasking:** Being able to understand procedures requirements on different contexts including IT, legal and Business is not a task for one person
- **Project management skills:** The DPOs should have an excellent knowledge of the specific business processes and understand the inner dynamics and be able to act proactively, to coordinate and seek for legal and IT support appropriately
- **Analytical skills:** they must be able to map theoretical processes and workflows to tasks and outcomes in order to ensure smooth implementation
- **Communication skills:** Ability to communicate effectively complex concepts was deemed necessary
- Leadership and negotiation skills

GERMANY
- The Data Protection Officer role should mainly focus on an advisory and disclosure

level

- **Analytical skills:** related to process and flow representations are needed both from theoretical and operational point of view

- **Communication Skills:** Communicate efficiently and be a team player

- **IT and Legal skills:** the DPO role should be able to read and combine information from different worlds

Research conducted in all three countries clearly pointed to the **limited** training provision in this field coupled by an evident lack of **tailored curricula** that respond to the needs of specific sectors. Another issue that was emerged the need for a more practical approach on training with case studies and work based learning.

GREECE
- Training provision erratic and limited
- Mainly focused in information workshops of short duration
- Need for tailored training by sector
- Use of case studies and practical examples

CYPRUS
- Training mainly basic and theoretical
- Practical training is missing and practical knowledge should be a part of new curricula
- Need for constant updating of the training materials
- Participants did not know about WBL Schemes

GERMANY

- The training provision is characterized by similar trainings of general knowledge

- Practical scenarios or cases studies are missing from the learning process

- Focus is on GDPR interpretation issues without applying real examples

The DataPRO project embarked on a comprehensive Training Needs Analysis in three countries with both quantitative and qualitative techniques and methods that culminated in the collection of a wide breadth of information and knowledge. It was a challenging and daunting task for this rich information to be systematized so as to discern and present the key points for the reader and the relevant parties.

GREECE
- There is a need for a change of mindsets and organizational culture regarding the

concept of data protection and its importance

- Businesses should provide DPOs with the resources and tools to allow them to perform their duties effectively
- There is an evident mismatch between skills demand and supply and an overall ambiguity regarding qualifications, competences and skills required
- Soft skills should be a key component of training provision
- Training provision should not be generic but more sector specific training should be provided
- Training should be work based with case scenarios and work related examples and not theoretical
- Raising awareness of staff and the general public should be a priority regarding their rights and obligations in light of GDPR

CYPRUS

- Public and private organizations must adequately prioritize data security and protection. This implies the adoption and establishment of a new culture and attitude or in other words data protection by design and default. Practical training is missing and practical knowledge should be a part of new curricula
- Being GDPR compliant is not a task for one person. The DPO should act as the main contact point and either be the leader of a Data Protection team or efficiently collaborate and get support from the respective departments inside an organization
- Trainings are in initial level. External trainings are also needed with a view to a more practical approach.
- Different industries have different requirements related to GDPR realization. Calls for sector-specific trainings and best practices or case studies are increasing

GERMANY

- More efficient and continuous monitoring of the whole process of data protection is required

- During the design of data protection policies, a much broader view is needed, cultural differences among involved persons and organisations should be taken into account

- DPOs should focus on resolving practical issues and be able to answer HOW questions

Summarizing the above results, the research concluded that the role of a DPO is **multidisciplinary** including a combination **of both soft and hard skills**. Both a legal and IT background are needed. A thorough analysis can be found in the D2.3 "State of the art comparative analysis".

Key points to note include that the DPO role includes a multidisciplinary and multitasking dimension.

The main skills/challenges called to be addressed are:

- **Project management skills**.

- **Analytical and problem-solving skills**

- **Lack of DPOs' practical knowledge**

- **Multicultural approach**

More specifically, the project management skillset mainly includes competences such as **time management and planning** in Cyprus, **collaboration and partnerships** in Germany and **conflict resolution** in Greece.

Analytical and problem-solving skills call for professionals that make decisions and are able to analyze information and adopt a problem-solve approach.

Furthermore, current DPOs **lack practical knowledge**, a point to be severely taken into consideration during the curricula design, while the **multicultural approach**, is one more factor to take into account as Data protection professionals will have to deal with DPOs from other countries also outside the EU.

4.   European Skills Frameworks' Adapted

As previously analyzed, the DataPRO partners have shared a common research framework in order to collect comparable data across the three countries of Greece, Cyprus and Germany.

Nevertheless, although some general considerations may be applied to the data protection sector, we should be very cautious when attempting to generalize the findings of the research, mainly because data protection is a crucial issue constantly changing in accordance to ever-new training needs.

Having said that and following the analysis of the research results in terms of skills gaps extracted and presented in the D2.3 "State of the art comparative analysis", the design of the DataPRO curricula will be based on the European framework: DigComp: a Framework for Developing and Understanding Digital Competences in Europe and aligned to the European Qualifications Framework (EQF).

Furthermore, as transferable competences adequately form part of the research results, the DataPRO will also adapt them in the curricula design channeling the 21st century skills, including

skills such as critical thinking, time management etc. More specifically, as transferable skills constitute a core set of skills and abilities, which can be applied to a wide range of different jobs and industries, the DataPRO partnership will properly adapt them as the soft skills part of the skills to be taught.

European Qualifications Framework (EQF)

According to CEDEFOP[1], "the European Qualifications Framework (EQF) is a common European reference framework whose purpose is to make qualifications more readable and understandable across different countries and systems". Its aim is to create a solid reference level between the National Qualifications Framework (NQF) also presented in the upcoming sections, with the European level. It is developed around the learning outcomes, which describe what the learner will be able to know after the end of the training and what (s) he has acquired in terms of knowledge, skills and competences.

The EQF applies to all types of education, training and qualifications, from school education to academic, professional and vocational aiming at improving standardization and comparability of qualifications all over Europe. Contrary to the traditional approach that was mainly content-based, the EQF has 8 levels starting from level 1: basic knowledge to 8: highest level expertise, which makes it easier to evaluate the levels of knowledge, skills and competencies acquired. The descriptors for the levels evaluate the level of autonomy that has been gained which makes it very adaptable to all sectors of knowledge and training.

Below, the 8 EQF levels are presented in detail:[2]

	Knowledge	Skills	Responsibility and autonomy
	In the context of EQF, knowledge is described as theoretical and/or factual.	*In the context of EQF, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).*	*In the context of the EQF responsibility and autonomy is described as the ability of the learner to apply knowledge and skills autonomously and with responsibility*

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[1]   CEDEFOP,   Available   at: https://www.cedefop.europa.eu/en/events-and-projects/projects/european-qualifications-framework-eqf

[2]   Learning   Opportunities   and   Qualifications   in   Europe,   Available   at: https://ec.europa.eu/ploteus/content/descriptors-page

Level 1 The learning outcomes relevant to Level 1 are	Basic general knowledge	Basic skills required to carry out simple tasks	Work or study under direct supervision in a structured context
Level 2 The learning outcomes relevant to Level 2 are	Basic factual knowledge of a field of work or study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy
Level 3 The learning outcomes relevant to Level 3 are	Knowledge of facts, principles, processes and general concepts, in a field of work or study	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	Take responsibility for completion of tasks in work or study; adapt own behavior to circumstances in solving problems
Level 4 The learning outcomes relevant to Level 4 are	Factual and theoretical knowledge in broad contexts within a field of work or study	A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	Exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities
Level 5 The learning outcomes relevant to Level 5 are	Comprehensive, specialized, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others
Level 6	Advanced knowledge of a	Advanced skills, demonstrating	Manage complex

The learning outcomes relevant to Level 6 are	field of work or study, involving a critical understanding of theories and principles	mastery and innovation, required to solve complex and unpredictable problems in a specialized field of work or study	technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups
Level 7 **The learning outcomes relevant to Level 7 are**	Highly specialized knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research Critical awareness of knowledge issues in a field and at the interface between different fields	Specialized problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields	Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams
Level 8 **The learning outcomes relevant to Level 8 are**	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	The most advanced and specialized skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research

It is worth noting that the alignment between NQF and EQF is ongoing, as some countries have completed the task while others are still in development progress.

Narrowing down our focus on the DataPRO project and based on the research implemented and the identified existing curricula, it is suggested that the to-be designed curricula will be developed addressing at least the EQF Level 5.

More specifically about the analysis of the NQF levels within our DataPRO project namely the NQFs of Greece, Cyprus and Germany are thoroughly presented in the next chapter.

DigComp 2.1

Following the research results in terms of the skills gap further analyzed in the previous chapters, it is recommended that the design of the Joint curricula will be based on the European Framework:

DigComp 2.1: The Digital Competence Framework for Citizens. The DigComp is a European Framework that defines areas of competence that are seen as components of e-citizenship.

It addresses all European citizens as users of digital technologies and this is among the main reasons of selection for our DataPRO project as it defines the density of the acquired skills and knowledge so that the same competence can be taught to a simple data user i.e. a lawyer, an IT professional but also to a DPO.

More specifically, the DigComp Framework has 5 dimensions[3]:
1. Dimension: Competence areas identified to be part of digital competence
2. Dimension: Competence descriptors and titles that are pertinent to each area
3. Dimension: Proficiency levels for each competence
4. Dimension: Knowledge, skills and attitudes applicable to each competence
5. Dimension: Examples of use, on the applicability of the competence to different purposes

It includes 8 proficiency levels that are presented and explained in the illustration below. This division will allow the DataPRO team to assess the taught skills through the modular approach analyzed above and the developed learning outcomes. The methodology selected for this activity is suggested to be the Bloom's Taxonomy which focuses on the cognitive domain, broken into the six levels of objectives:

The Bloom's Taxonomy uses action verbs in a framework for understanding the different levels of learning, also inspired by the structure and vocabulary of the European Qualification Framework
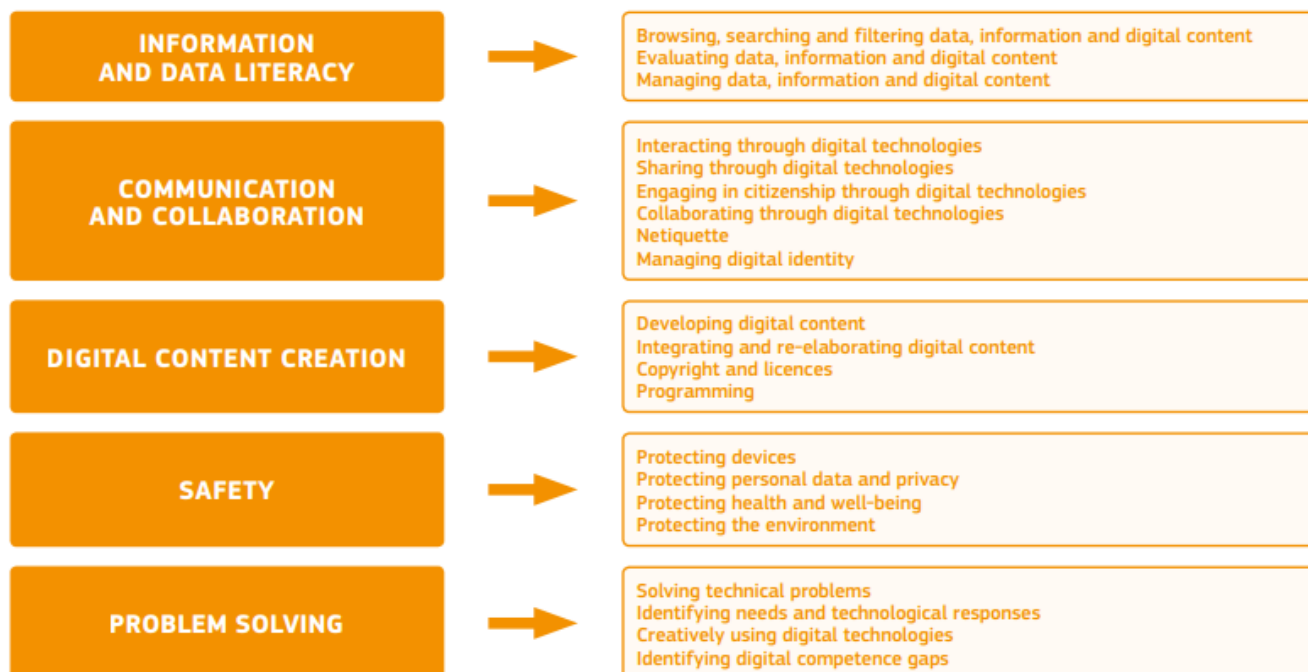
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[3] DigComp 2.1: The Digital Competence Framework for Citizens, 2017, Available at: https://publications.jrc.ec.europa.eu/repository/bitstream/JRC106281/web-digcomp2.1pdf_(online).pdf

(EQF). Further analysis on its use within the to-be designed DataPRO curricula will be further analyzed in the upcoming deliverables.

Further to the DigComp, it identifies 21 competences in five key areas, describing what it means to
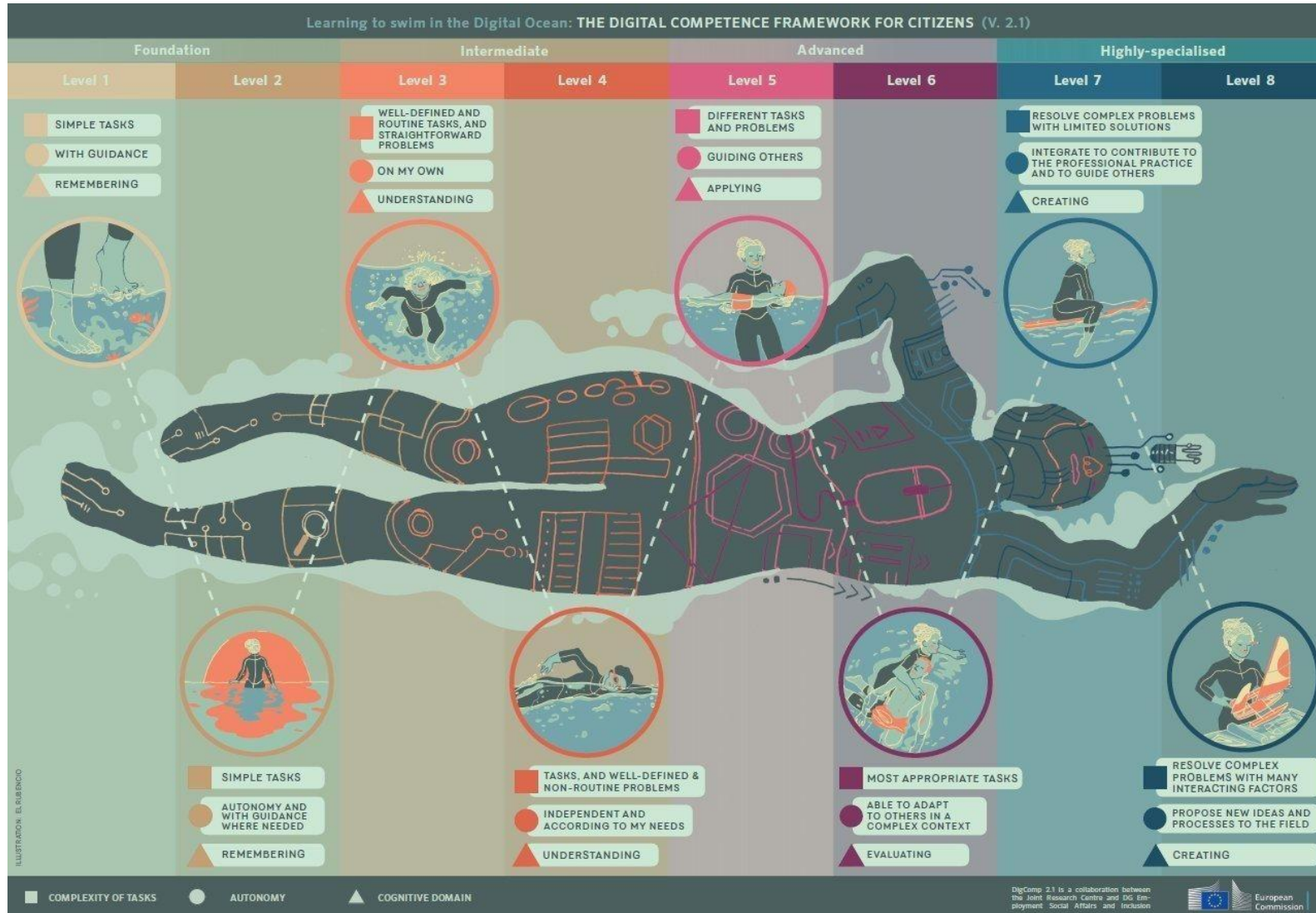
DigComp's five key areas and 21 competences

INFORMATION AND DATA LITERACY	→	Browsing, searching and filtering data, information and digital content Evaluating data, information and digital content Managing data, information and digital content
COMMUNICATION AND COLLABORATION	→	Interacting through digital technologies Sharing through digital technologies Engaging in citizenship through digital technologies Collaborating through digital technologies Netiquette Managing digital identity
DIGITAL CONTENT CREATION	→	Developing digital content Integrating and re-elaborating digital content Copyright and licences Programming
SAFETY	→	Protecting devices Protecting personal data and privacy Protecting health and well-being Protecting the environment
PROBLEM SOLVING	→	Solving technical problems Identifying needs and technological responses Creatively using digital technologies Identifying digital competence gaps

be digitally savvy, as shown in the table below[4]. With a closer look many of the DataPRO skills gap analysis can be identified in the framework.

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[4] DigComp, Available at: https://ec.europa.eu/social/main.jsp?catId=1315&langId=en

Source: DigComp 2.1. http://publications.jrc.ec.europa.eu/repository/bitstream/JRC106281/web-

Legal Skills

According to the research results presented in the previous chapter, among the digital skills identified as necessary for both the DPOs and simple data users, there was a specific note on the "legal skills". This category appeared as a result because of the relatively new data protection regulations and the necessity for all data users to have the knowledge of their rights as both users and managers of all types of data.

Specifically, for the legal professionals, the EU Skills Panorama describes that the five key skills required are: communication, problem solving, teamwork, literacy and planning[5].

Nevertheless, data protection is considered among the drivers of change for the legal professions because of the growing volume of data and information available online. ICT skills and analytical thinking are expected to be demanded even more in the future responding, in that way directly to our research results.

5.   Reference to European and National Frameworks

The Data Protection Officers emerging profile identified during the DataPRO project and analyzed within the comparative analysis report is illustrated with respect to the ESCO Framework. ESCO (Skills, Competences, Qualifications and Occupations) is a European Framework providing a multilingual classification of Skills, Competences, Qualifications and Occupations. The ESCO framework works as a definition, description, identification and classification guidance towards professional occupations, skills and qualifications that are relevant for the EU labor market and education and training. The framework includes description of nearly 3,000 occupations and more than 13,000 skills linked to these occupations. Additionally, the framework involves over time to include the qualifications that are certified by the national education and training systems of the Member-States, as well as the ones issued by private awarding bodies.

The main aim of ESCO is to support job mobility across Europe by providing a common frame of qualifications that will enable the recognition of skills and therefore a more integrated and efficient common labor market. The ESCO Framework is organized in three pillars, including a) occupational profiles b) skills & competencies and c) qualifications. All pillars are structured hierarchically and interconnected to each other. The relationship between the three pillars highlights the interconnections between the learning outcomes produced per institution, the accreditation provided per member-state and the occupational profile that it links to. There is yet no commonly acceptable occupational profile for Data Protection Officer. However, the skills and competencies

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[5]Skills Panorama, Available at:
https://skillspanorama.cedefop.europa.eu/en/analytical_highlights/legal-social-and-cultural-professionals-and-associate-professionals-skills#_summary

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attributed to them and required in the process of their daily duties are included in a number of other ESCO defined occupational profiles.

Occupational Profiles related to Data Protection according to European Skills/Competences, Qualifications and Occupations (ESCO)

The profile of the Data Protection Officer includes include advising on compliance with GDPR and local data protection laws, monitoring an organization's adherence to GDPR standards and acting as a point of contact with supervisory authorities and data subjects. He will also have to create policies that enforce compliance with legislation and deliver GDPR trainings to the organization's staff to increase awareness of data protection measures. It is important to have in-depth knowledge of GDPR and local data protection laws and be familiar with the nature of its data processing activities. Also, one should know how to perform audits to the corporate procedures.

European and national frameworks have not been updated to include labor market information that covers the occupational profiles of the Data Protection Officer. However, the four related job role-profiles have been identified to help companies to outline the occupational needs of the emerging profile and identify the knowledge and skills that are required by a Data Protection Officer. The following pages aim at breaking down four profiles that, following the ESCO classification, are closely related to data management and whose occupational aspects can help structure the occupational profile of a Data Protection Officer.

Data Scientist

A Data Scientist is related to data protection. His role-profile includes utilizing analytical, statistical and programming skills to collect, analyze and interpret large datasets. They then use this information to develop data-driven solutions to difficult business challenges. Data scientists have a wide range of technical competencies including: statistics and machine learning, coding languages, databases, machine learning and reporting technologies.

Job Role-Profile Description	
Title	Data Scientist
Mission	To find and interpret rich data sources, manage large amounts of data, merge data sources, ensure consistency of data-sets, and create visualizations to aid in understanding data. They build mathematical models using data, present and communicate data insights and findings to specialists and scientists in their team and if required, to a non-expert audience, and recommend ways to apply the data.
Academic qualification	Master of Science or PhD in Statistics, Mathematics, Computer Science or another quantitative field.
EQF Reference	Level 6 or 7

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Tasks/ Key responsibilities	Selecting features, building and optimizing classifiers using machine learning techniques
	Data mining using state-of-the-art methods
	Extending company's data with third party sources of information when needed
	Enhancing data collection procedures to include information that is relevant for building analytic systems
	Processing, cleansing, and verifying the integrity of data used for analysis
	Doing ad-hoc analysis and presenting results in a clear manner
	Creating automated anomaly detection systems and constant tracking of its performance
Knowledge	Data mining
	Data models
	Information categorization
	Information extraction
	Online analytical processing
	Query languages
	Resource description framework query language
	Statistics
	Visual presentation techniques

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Skills	*Essential:*
	Build recommender systems
	Collect ICT data
	Deliver visual presentation of data
	Design database scheme
	Develop data processing applications
	Establish data processes
	Execute analytical mathematical calculations
	Handle data samples
	Implement data quality processes
	Interpret current data
	Manage data collection systems
	Normalize data
	Perform data cleansing
	Report analysis results
	Optional:
	Create data models
	Define data quality criteria
	Integrate ICT data
	Manage ICT data architecture
	Manage ICT data classification
	Manage data
	Perform data mining
Relationship/ Reporting to	Head of Data

Chief Data Officer

A Chief Data Officer is related to data protection. His role as a Chief Data Officer included overseeing the collection, management and storage of data across an organization. The Chief Data Officer is responsible for analyzing and deriving insights from data to inform business strategy and value.

Job Role-Profile Description	
Title	Chief Data Officer
Mission	To manage a company's enterprise-wide data administration and data mining functions. To ensure data are used as a strategic business asset at the executive level and implement and support a more collaborative and aligned information management infrastructure for the benefit of the organization at large.
Academic qualification	Bachelor's Degree in Information Technology or relevant field of study.
EQF Reference	Level 5
Tasks/ Key responsibilities	Thorough understanding of the business and data strategy. Designing and implementing data strategies and systems. Lead, motivate and manage large technical teams. Overseeing the collection, storage, management, quality and protection of data. Implementing data privacy policies and complying with data protection regulations. Determine where to cut costs and increase revenue based on insights derived from data. Effectively communicate the status, value, and importance of data collection to executive members and staff. Knowledge of relevant applications, big data solutions, and tools.
Knowledge	Business processes Data mining Data storage Decision support systems Information structure Visual presentation techniques

Skills	*Essential:* Apply information security policies Define data quality criteria Manage ICT data architecture Manage ICT data classification Manage data Utilise decision support system
	Optional: Apply change management Coordinate technological activities Deliver visual presentation of data Develop information security strategy Implement ICT risk management Integrate ICT data Manage business knowledge Report analysis results
Relationship/ Reporting to	Data Head

Information Manager

An Information Manager is related to data protection. His role involves managing, developing and maintaining the systems that provide information to make it easily accessible to others within the company. He will need to work with electronic information, especially online databases content management systems, open access and digital resources and traditional library materials.

Job Role-Profile Description	
Title	Information Manager
Mission	To maintain the systems that provide information to people. They assure access to the information in different work environments (public or private) based on theoretical principles and hands-on capabilities in storing, retrieving and communicating information.
Academic qualification	Master's degree in Information Management, Geographic Information

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	Systems, Computer Science, or a related field.
EQF Reference	Level 6
Tasks/ Key responsibilities	Responsible for storing, categorizing and maintaining databases; identifying and procuring information which would be especially valuable for their organization.

Working with digital resources, such as content management systems (CMS), electronic document and record management systems (EDRMS) and other databases.

Might be responsible for project managing the design, development and implementation of new information management systems from time to time.

Main point of contact for other people who wish to access information. Indeed, they act as information gatekeepers: responding to people's requests, picking out the right pieces of information for them, or training people how to use the organization's internal databases and catalogues.

Make sure that the security, accessibility and quality of the information remains consistent, information officers are also responsible for conducting information audits from time to time. |
| Knowledge | Copyright legislation

Data quality assessment |
| Skills | *Essential:*

Analyse information systems

Assess informational needs

Cooperate to resolve information issues

Design information system

Develop information standards

Develop organisational information goals

Develop solutions to information issues

Evaluate project plans

Manage data

Manage digital libraries

Perform customer management

Perform data mining

Optional: |

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	Analyse big data
	Create semantic trees
	Digitize documents
	Hire new personnel
	Maintain information network hardware
	Manage operational budgets
	Manage schedule of tasks
	Supervise daily information operations
	Use software for data preservation
Relationship/ Reporting to	Chief Information Officer

Data Analyst

A Data Analyst is related to data protection. His role-profile involves collecting and storing data on sales numbers, market research, logistics, linguistics or other behaviors. He will have to utilize technical expertise to ensure the quality and accuracy of that data, then process, design and present it in ways to help people, businesses and organizations make better decisions.

Job Role-Profile Description	
Title	Data Analyst
Mission	Data analysts import, inspect, clean, transform, validate, model, or interpret collections of data with regard to the business goals of the company. They ensure that the data sources and repositories provide consistent and reliable data. Data analysts use different algorithms and IT tools as demanded by the situation and the current data. They might prepare reports in the form of visualizations such as graphs, charts, and dashboards.
Academic qualification	BS in Mathematics, Economics, Computer Science, Information Management, Statistics, or similar function.
EQF Reference	Level 5
Tasks/ Key responsibilities	Interpret data, analyze results using statistical techniques and provide ongoing reports
Develop and implement databases, data collection systems, data analytics and other strategies that optimize statistical efficiency and quality
Acquire data from primary or secondary data sources and maintain databases/data systems
Identify, analyze, and interpret trends or patterns in complex data sets
Filter and "clean" data by reviewing computer reports, printouts, and performance indicators to locate and correct code problems

	Work with management to prioritize business and information needs
	Locate and define new process improvement opportunities
Knowledge	Business intelligence
	Data mining
	Data models
	Data quality assessment
	Documentation types
	Information categorisation
	Information confidentiality
	Information extraction
	Information structure
	Query languages
	Resource description framework query language
	Statistics
	Unstructured data
	Visual presentation techniques
Skills	*Essential:*
	Analyse big data
	Apply statistical analysis techniques
	Collect ICT data
	Define data quality criteria
	Establish data processes
	Execute analytical mathematical calculations
	Handle data samples
	Implement data quality processes
	Integrate ICT data
	Interpret current data
	Manage data
	Normalise data
	Perform data cleansing
	Perform data mining

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	Optional:
	Create data models
	Deliver visual presentation of data
	Gather data for forensic purposes
	Manage data collection systems
	Report analysis results
Relationship/ Reporting to	Head of Business Intelligence

Legal Consultant

A Legal Consultant is involved in data management from a legal point of view. His role-profile involves providing assistance in all legal matters and advice regarding legal documentation, negotiations, contracts etc. This professional is responsible for defending the rights and the legitimate interests of the company. He/she is responsible for drafting and reviewing the legal filings and drafting technically correct opinions. The legal consultant may work in different areas and the duties of this professional will differ accordingly and as per the needs of the company, he/she is working for.

Job Role-Profile Description	
Title	Legal Consultant
Mission	Legal consultants advise a varied array of clients ranging from business, individuals, up to legal firms. They provide legal advisory outside courtrooms in relation to legal affairs which depend on the nature of the client. They usually advise in matters such as merging of multinationals, housing purchase, modification of contracts and its implications. They help clients in general to abide by the regulations and avoid committing illegal acts.
Academic qualification	Bachelor of Arts in Law (or LLB) or Master's degree in Law and/or specialised law field.
EQF Reference	Level 5 or 6

Tasks/ Key responsibilities	Advising on legal issues related to the nature of their client
	Drafting and reviewing agreements and producing technically accurate quality standard work
	Drafting technically correct opinions and reviewing the reports.
	Interpreting and applying the theoretical legal knowledge so that it applies to practical business solutions.
	Assisting in the preparation & research of proposals and trying to identify problems.
	Provide assistance in finding legal solutions to the problems that have cropped up and ensures that it is in compliance with the current laws.
	Prepares the legal cases and ensures that they are being submitted to the relevant authorities.
	Maintain all the legal records and reviews the work done by the subordinate staff members as well.
	Manage the resolution of disputes and participates, recommends as well as drafts new codes that are relevant to the law.
Knowledge	Legal terminology
Skills	*Essential:*
	Advise on legal decisions
	Analyse enforceability
	Compile legal documents
	Ensure law application
	Identify clients' needs
	Interpret law
	Protect client interests
	Provide legal advice
	Use consulting techniques

	Optional:
	Analyse internal factors of companies
	Analyse legal evidence
	Apply technical communication skills
	Consult with business clients
	Manage contract disputes
	Manage contracts
	Moderate in negotiations
	Negotiate in legal cases
	Observe confidentiality
	Present legal arguments
	Respond to enquiries
Relationship/ Reporting to	Depending on case/ assignment

Occupational Profiles related to Data Protection According to National Qualifications Framework (NQF)

Introduction

National qualifications frameworks (NQFs) classify qualifications by level, based on learning outcomes. This classification reflects the content and profile of qualifications, which merely refers to what the typical accreditation of a certificate or diploma is expected to demonstrate in terms of knowledge, understanding and abilities to act. The learning outcomes approach, also, ensures that education and training national systems are open to one another and people can move more easily between education and training institutions and sectors. Thus, it provides a flexible framework for the recognition of qualifications for the Member-States of the EU. The National Qualifications Framework are following the European Qualifications Framework (EQF) and they are implementing their national frameworks covering all levels and types of qualifications.

Greece

In line with the Development of the National Qualifications Framework Action co-funded by the European Union (European Social Fund - ESF) and national resources and coordinated by the Education and Lifelong Learning Operational Programme of the Ministry of Education, Research and Religious Affairs, EOPPEP is the designated organization responsible for the definition of structure,

the recording and analysis of qualifications, the planning and implementation of methodological tools for the classification of common education qualifications in the different levels of the National Qualifications Framework and their correspondence with the European Qualifications Framework.

In Greece there is no registered occupational profile for the profession of Data Protection Officer[6] by the National Organization for the Certification of Qualifications and Vocational Guidance. Additionally, according to the Hellenic Data Protection Authority, the role of the DPO is obligatory only in the cases where:

a) A public authority or public body (including natural or legal persons) processes personal data information. The courts are excluded when acting in their jurisdiction.

b) Business operations involve regular and systematic monitoring of large-scale data, eg. insurance or banking, telephone or internet services, security services, all forms of online profile monitoring and configuration etc.

c) Business operations involve large-scale processing of specific categories of data, eg. in the context of hospital health services, or personal data related to criminal convictions and offenses is carried out.

Despite the existence of relevant curricula in Vocational Education and Training schools, as well as Higher Education Institutes, the regulation does not impose any mandatory requirement for DPO certification, nor does it encourage the acquiring of a certification on an optional basis[7]. The Greek framework for the job profile of the Data Protection Officer follows the Article 39 of the General Data Protection Regulation, as coming into force on May, 25th 2018. This includes a general layout of obligations, including the following:

a) Inform and advise the controller or the processor and the employees who carry out processing of their obligations pursuant to the GDPR Regulation;

b) Monitor compliance with the GDPR regulation, or any future national data protection provisions and with the policies of the controller or processor, in relation to the protection of personal data, including the assignment of responsibilities, awareness-raising and training of staff involved in processing operations and related audits;

c) Provide advice where requested as regards the data protection impact assessment and monitor its performance concerning Article 35

d) Cooperate with the Hellenic Data Protection Authority

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[6] See Occupational Profiles Catalogue, EOPPEP 2019. Available at: https://www.eoppep.gr/index.php/el/structure-and-program-certification/workings/katalogos-ep/105-katalogos_ep1

[7] See No. Γ/ΕΞ/6007/09-08-2017 Authority's Notice and Opinion 7/2017). Available at: https://www.dpa.gr/APDPXPortlets/htdocs/documentSDisplay.jsp?docid=81,138,99,231,213,1,187,76

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e) Act as the contact point for the Hellenic Data Protection Authority on issues relating to processing, including the prior consultation referred to in Article 36[8] and to consult, where appropriate, with regard to any other relevant matter.

There is, hence, a lack of preparedness of both public and private organizations for the new occupational needs lack of preparedness of both public and private organizations for this new landscape drawn by GDPR, as already been identified during the earlier qualitative analysis of data in Greece. In an attempt to outline the occupational profile and role description of the DPO in Greece, we identified a list of relevant to legal data management occupational profiles and the tables below summarize the tasks and the required skills for their professions.

Legal Services Officer

A Legal Services Officer is partly related to data protection. The Legal Service Officer must be distinguished by a great deal of responsibility because he or she is responsible for handling the serious affairs of a company or office. The trends in the development of the profession are directly related to and influenced by the general developments of the dynamic growth of the Greek economy as a whole and the individual sectors and sectors of economic activity. The legal market in Greece today consists mainly of independent bureaus, notaries and approximately equivalent to bailiffs.

Job Role-Profile Description	
Title	Legal Services Officer/ Legal Officer
Mission	The key subject of this profession is the secretarial support of a law firm, a law office, a notary office or a bailiff's office. At the same time, an officer can support the legal services of a company.
Academic qualification	Secondary education degree (optional Bachelor degree)
EQF Reference	Level 4
Tasks/ Key responsibilities	• Reporting, drafting reports, legal texts etc. • Sorting and archiving documents, contracts, evidence of performance • Is involved in auxiliary work in the courts, in the registries and in the public service in general • Dealing with public relations and arranges for meetings that include the daily activities of his employer • Provide legal advice, • Perform research and identify legal risks
Knowledge	Basic customer service Basic principles of communication

8 http://www.privacy-regulation.eu/en/article-36-prior-consultation-GDPR.htm

	Basic framework of professional behavior	
	Institutional protection of sensitive data	
	General rule of Law	
	Elementary knowledge of civil, criminal, commercial law	
	Elementary knowledge of lawyer, notary and bailiff duties	
	Elementary knowledge of enforcement and insolvency law	
Skills	*Essential:*	
	Use of MS Office programmes,	
	Communication skills,	
	Time management,	
	Organisational skills,	
	Team work,	
	Active listening,	
	Archiving documents	
	Optional:	
	Use of English language	
Relationship/ Reporting to	Head of Legal Department	

Lawyer

A Lawyer is closely related to data protection, as their main responsibility is to advise clients about the law and act on their behalf in legal matters. The role of a lawyer involves studying and applying the law and, together with judicial officers and prosecutors, they are a key factor for the proper functioning and administration of justice.

Job Role-Profile Description	
Title	Lawyer
Mission	The mission, duty and concern of a Lawyer is to defend the life, liberty, dignity and property of their client in any court or authority.
Academic qualification	Bachelor of Arts in Law (or LLB) or Master's degree in Law and/or specialised law field.
EQF Reference	Level 5

Tasks/ Key responsibilities	• Validate copies of various documents, which are accepted by all public services, courts and authorities. • Collect information on a case taken from a variety of sources, including public services, where it has the privilege of free entry, at times which are not permitted to the public. • Preparing their client's file with the necessary information, giving them the necessary advice on the case, including rights and obligations. • When the case reaches the courtrooms, he shall examine witnesses, testify and, as the case may be, take all appropriate steps to safeguard the interests of the principal and his client.
Knowledge	Legal knowledge including court procedures and government regulations Knowledge of Greek language for explaining legal matters to non-experts
Skills	*Essential:* Being thorough and pay attention to detail Excellent written communication skills Excellent verbal communication skills to work with different people Analytical and synthetic thinking skills for working on complex cases Active listening skills Ability to accept criticism and work well under pressure Ability to use a computer and the main software packages competently Use of English and other EU language in order to follow the EU law
Relationship/ Reporting to	Depending on case/ assignment

Cyprus

The National Qualifications Framework (NQF) for Cyprus has been developed and includes all levels and types of qualifications from all sub-systems of education and training, from primary to higher education. The NQF is also open to qualifications awarded outside the formal educational system. In this respect the System of Vocational Qualifications (SVQ), being developed by the Human Resource Development Authority of Cyprus (HRDA), is an integral though distinct part of the NQF.

However, the Cyprus NQF is not yet in operation. It will be established at the Ministry of Education and Culture as an in-service department and will be implemented gradually. As a result, there is a proclaimed lack of occupational profiles in Cyprus, which constitutes an absence of official occupational profile for the profession of Data Protection Officer by Cyprus Qualification

Framework9. There are, however, according to the Office of the Commissioner for Personal Data Protection, clear guidelines on the designation of the Data Protection Officer in cases where:

a) A public authority or public body (including natural or legal persons) processes personal data information. The courts are excluded when acting in their jurisdiction.
b) Business operations involve regular and systematic monitoring of large-scale data, eg. Insurance or banking, telephone or internet services, security services, all forms of online profile monitoring and configuration etc.
c) Business operations involve large-scale processing of specific categories of data, eg. in the context of hospital health services, or personal data related to criminal convictions and offenses is carried out.

Just like the Greek framework for the job profile of the Data Protection Officer follows the Article 39 of the General Data Protection Regulation, as coming into force on May, 25th 2018, the Cypriot Office of the Commissioner for Personal Data Protection layouts the duties and obligations of the DPO[10], including the following:

- Inform and advise the controller or the processor and the employees who carry out processing of their obligations pursuant to the GDPR Regulation;
- Monitor compliance with the GDPR regulation, or any future national data protection provisions and with the policies of the controller or processor, in relation to the protection of personal data, including the assignment of responsibilities, awareness-raising and training of staff involved in processing operations and related audits;
- Provide advice where requested as regards the data protection impact assessment and monitor its performance concerning Article 35.

Germany

The German Qualifications Framework for Lifelong Learning (Deutscher Qualifikationsrahmen - DQR) has followed the European process. The arrangement of the DQR levels based on the EQF levels was carried out during the referencing process. The German Referencing Report was successfully presented to and approved by the EQF Advisory Group, in December 2012. The German Qualifications Framework for Lifelong Learning is the first framework to cover all qualifications of the German education system across all educational sectors.

While the official German Qualifications Framework has not yet included an occupational profile in their German qualification classification, an updated version of the professional Code of Practice for Data Protection Officers provides the occupational profile of the Data Protection Officer with respect to the ongoing interpretation, introduction and implementation of the provisions of the EU General Data Protection Regulation (GDPR) . This includes the specific duties and tasks of a Data Protection Officer as far as private companies are concerned. According to the GDPR, a data protection officer is

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[9] See http://www.cyqf.gov.cy/index.php/en/

[10] See
http://www.dataprotection.gov.cy/dataprotection/dataprotection.nsf/page2b_en/page2b_en?opendocument

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required in the public sector, however the appointment procedure activity is currently being shaped by the revision and adaptation of the data protection laws in the German federal states. Thus, the updated version of the professional Code of Practice that outlines this profile initially focuses on the non-public sector.

Data Protection Officer

The Data Protection Officer is duly obliged to manage data protection regarding an organization's management, i.e. the board of directors, the public authority or respective individuals. In this role, data protection officers not only help to keep existing laws but also contribute with their expertise to ensuring that the best process, combined with a secure solution, becomes a success for everyone concerned. The following chapters identify the professional requirements that qualify data protection officers, the tasks and services that they need to fulfil and the professional practice demands that are made to enable the challenges of data protection to be met in an increasingly digitalized world and in the context of GDPR.

Job Role-Profile Description	
Title	Data Protection Officer
Mission	To facilitate innovative solutions and protect corporate values such as the corporate image and the value of the brand by building up and maintaining customer confidence. Also, to secure and admissible handling of data is increasingly the subject of customer decisions, and thus an important competitive factor.
Academic qualification	Bachelor of Science in the categories of organisation and processes, Information and Communication Technology (ICT) or Law
EQF Reference	Level 5
Tasks/ Key responsibilities	• Involvement of the data protection officer by the controller in management systems relevant to data protection • Advice on objectives and tasks, as well as with the updating of the data protection management system • Review of the data protection management system Advising Article 38 (1, 4) Article 39 Recital 77, 97 Article 35 Article • Advising the management • Advising the areas, particularly the specialist departments • Advising of data subjects (staff, customers, business partners) • Advising in relation to data protection impact assessment • Advising staff representatives Monitoring Article 39 • Risk-based establishing of checks relevant to data protection • Arranging for, collaborating on or carrying out audits and checks, incl. the required documentation • Supervising the auditing of data processing business procedures and regulations IT systems of data protection relevant contracts

	• Monitoring the processing of complaints and security-relevant incidents Reporting and informing Article 39 • Regular briefing of management • Co-operation with the supervisory authority • Regular progress reports to the controller
Knowledge	*Essential:* General personal rights and EU charter of fundamental rights with reference to data protection Basic principles of European and relevant national data protection law and its principles Legal basis of processing personal data Data protection-related requirements when using ITC Technical understanding and comprehension of issues concerning information technologies *Optional:* Codes of conduct for the business sector concerned. Legal amendments and current jurisdiction concerning data protection and new technical developments.
Skills	Manage, support and advise management systems, Ability to support administrative procedures, Advise the management and divisions regarding management systems, Assessing and handling risks Assessing the impact of data protection Auditing and monitoring / Reporting integrity Potential for optimization Ability to delegate effectively Verbal and written communication skills Attitude towards professional practice Responsiveness self-monitoring Discretion and confidentiality
Relationship/ Reporting to	Head of Data

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6. Recommendations

The research activities undertaken during this project aimed at identifying the necessary skills and competences for helping Data Protection Officers to fulfill their obligations in a constantly evolving corporate environment. This recommendations report for Data Protection Officers focuses on the detailed description of *one job role-profile* for the Data Protection Officer in Greece, Cyprus and Germany as well as on the creation of Joint VET Curricula. This profile consists of the characteristics, including knowledge, skills and competences, selected as necessary according to research for the set out of the Data Protection Officer.

In order to inform the creation and development of a Joint VET Curriculum and the training programmes that will lead to the DPO Certification for these role-profile skills, including the transferable competences have been ranked starting from those that are most crucial and that are specific to that profile.

Following the overview presentation of the research results as consequence from the views collected from DPOs and other professionals using data in their working environment, we proceed in recommending an initial curriculum design in an alignment with the points received from the research. This is a suggested basis that could be form the basis of the final curriculum design which will form part of the upcoming project deliverables. Nevertheless, it will be used in order to build upon it and further expand it taking into consideration the resulted skills' set.

Recommended design of DPO VET Curriculum			
Learning Objectives	**Teaching Modules**		**Module Content**
A. Understanding "what is" and "what is not" personal data B. Knowledge of the European and national regulatory and institutional framework governing the protection of personal data	*Module 1*	*The Nature and Legal Framework of Personal Data*	A. Documentation of the concept of Personal Data B. Presentation of different "types" of data. C. Legal Framework
A. Understand the importance of personal data B. Cooperate with other DPOs outside the EU C. Respondto technical data protection issues	*Module 2*	*Protection of Personal Data: Legal and Technical Dimension*	A. The importance of protecting personal data B. Legal concept of personal data protection and data transfer between systems / organizations at national, European and global level C. Technical Data Protection Dimensions
A. Manage effectively the Privacy	*Module 3*	*The Role and*	A. Presentation of the DPO's

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Team B. Achieve the compliance of Businesses and Organizations with the requirements of European and national legislation on the protection of personal data C. Communicate effectively with the Supervisory Authorities		***Responsibility of the DPO***	specialty and responsibilities B. Preparing DPOs to understand the importance of their role under the new institutional and regulatory framework
A. Measure the effectiveness of the personal data protection system B. Understand the Life Cycle of a Personal Data Protection Program	***Module 4***	***Compliance and Protection of Personal Data***	A. Introduction and deepening of concepts such as crisis management, as defined by the new framework B. Presentation of an effective model for monitoring and auditing compliance in the data protection regulatory framework
A. Deepen in general GDPR issues using concrete examples B. Understand specific GDPR issues with examples C. Understand the extent of DPO liability D. Understand the importance of Compliance by businesses / organizations and the consequences of failure	***Module 5***	***Examples - Case Studies***	Examples - Case Studies

Furthermore, based on research findings, many of the occupational profiles lead to the need to develop good knowledge of the GDPR regulation, as well as the ability to advice regarding the holistic management of data, and therefore help public and private companies in a more integrated way. It is important for companies that process data information as part of their business to think the strategic importance of the Data Protection Officer appointment.

The Data Protection Officer will be involved in all aspects of data management of a company, working both as a controller or processor and the supervisory authority on issues relating to data processing. The role of DPO is mainly advisory and supportive to the data controllers and he must be able to act independently inside the company. The main aim of his designation is to monitor compliance with the GDPR regulation, and therefore is closely associated with the management of data.

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Job Role-Profile Description	
Title	Data Protection Officer
Mission	To inform and advise the data controlling and processing of information by the company's staff, as well as keep the company in compliance with every legislative imperative regarding data protection, in order to minimize the risk of a data breach.
Academic qualification	Bachelor of Science or equivalent qualification in the fields of Law, Computer Science, Information Technology or relevant.
EQF Reference	Level 5
Tasks/ Key responsibilities	Review and monitoring of the data management system and compliance with the GDPR regulation Advice on objectives and tasks, as well as with the updating of the data protection management system Advising in relation to data protection impact assessment Risk-based establishing of checks relevant to data protection Arranging for, collaborating on or carrying out audits and checks, incl. the required documentation Supervising the auditing of data processing business procedures and regulations IT systems of data protection relevant contracts Monitoring the processing of complaints and security-relevant incidents Reporting and informing Article 39 Co-operation with the supervisory authority Regular progress reports to the controller Processing, cleansing, and verifying the integrity of data used for analysis Doing ad-hoc analysis and presenting results in a clear manner Thorough understanding of the business and data strategy. Designing and implementing data strategies and systems. Overseeing the collection, storage, management, quality and protection of data. Implementing data privacy policies and complying with data protection regulations. Effectively communicate the status, value, and importance of data collection to executive members and staff. Main point of contact for other people who wish to access information. Interpreting and applying the theoretical legal knowledge so that it applies to practical business solutions.

	Provide assistance in finding legal solutions to the problems that have cropped up and ensures that it is in compliance with the current laws.
	Perform research and identify legal risks
Knowledge	*Essential:*
	Legal knowledge including court procedures and government regulations
	Legal basis of processing personal data
	General personal rights and EU charter of fundamental rights with reference to data protection
	Basic principles of European and relevant national data protection law and its principles
	Legal amendments and current jurisdiction concerning data protection and new technical developments.
	Data protection-related requirements when using ITC
	Information categorization
	Visual presentation techniques
	Information categorization
	Information confidentiality
	Institutional protection of sensitive data
	Optional:
	Technical understanding and comprehension of issues concerning information technologies
	Codes of conduct for the business sector concerned
	Information structure
Skills	*Essential:*
	Manage data collection systems
	Report analysis results
	Apply information security policies
	Define data quality criteria
	Assess informational needs
	Cooperate to resolve information issues
	Excellent verbal communication skills to work with different people

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	Analytical and synthetic thinking skills for working on complex cases
	Active listening skills
	Ability to accept criticism and work well under pressure
	Ability to use a computer and the main software packages competently
	Use of English and other EU language in order to follow the EU law
	Manage, support and advise management systems
	Advise the management and divisions regarding management systems,
	Assessing and handling risks
	Assessing the impact of data protection
	Auditing and monitoring
	Reporting integrity
	Potential for optimization
	Ability to delegate effectively
	Verbal and written communication skills
	Attitude towards professional practice
	Discretion and confidentiality
	Self-monitoring
	Observe confidentiality
	Optional:
	Collect ICT data
	Implement data quality processes
	Ability to support administrative procedures
	Define data quality criteria
	Deliver visual presentation of data
	Develop information security strategy
	Deliver visual presentation of data
	Manage data collection systems
Relationship/ Reporting to	Management Board

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7.   Conclusion

The DataPRO team has successfully completed the research phase aiming at identifying the existing curricula for data protection and their potential gaps. In addition, both DPOs as well as simple data users such as lawyers, IT managers etc. participated in interviews and focus groups while also responding to a questionnaire in order for the project team to identify the existing skills' gap that will be addressed by the to-be designed Joint DataPRO curricula. The research participants have described that being GDPR compliant is an on-going process.

The GDPR regulations continue to be interpreted, leading to continuous measures taken by all types of businesses regardless the sector or their size. As appeared from the research, data protection is more mature in Germany compared to Cyprus and Greece. This means that Greece and Cyprus are still in an infancy level demanding an appropriate interpretation of GDPR rules and obligations.

Following the results interpretation, the to-be designed DataPRO curricula will be based on the European Framework of DigComp but will also adapt 21st century skills in a complete alignment with EQF levels. Specifically for the to-be designed curricula and following the identified curricula and skills requirements, it is suggested that DataPRO will proceed to EQF level of at least 5, depending the data user.

Additionally, based on the research findings, the European and National Qualifications Frameworks and the emerging occupational needs to be covered by the Data Protection Officer in Cyprus, Greece and Germany, and most notably the lack of specific occupational profile outline in some national cases examined, we employed an inductive method.

The Data Protection Officer need to develop a very good knowledge of the GDPR regulation, skills and competences surrounding integrated data management, along with a specialized knowledge of the legal framework regarding data protection and enhanced ability to communicate and advise management of data. Public and private organizations should consider the positioning of the Data Protection Officer as part of their strategic development and placement in the market, further to their obligation to comply with the updated European GDPR regulation.