coeosc



Milestone 4.5.: "Report: ELSI requirements for Open Science ready Institutions"

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Abstract

This report details the collaborative work undertaken with partners across Tasks 4.1 to Task 4.4, encompassing the diverse inputs to various deliverables within WP4. The development of the learning paths for legal and ethical experts in embedded in the collaboration with Task 4.2.

In describing the collaboration with each Task, the report will (a) provide an overview of the main objectives of each task that may impact the integration of ELSI issues by Task 4.5 partners, (b) establish a connection with existing MVSs and the essential skills listed therein and (c) report on the current state of the work.



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TERMINOLOGY https://eosc-portal.eu/glossary			
Terminology/Acronym Definition			
EOSC	European Open Science Cloud		
FAIR	Findable, Accessible, Interoperable, Reusable		
MVS	Minimum Viable Skillset		
OS	Open Science		
RDA	Research Data Alliance		









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1 Introduction

1.1 About Task 4.5.

The main objective of Task 4.5 is to integrate "key legal, ethical and social aspects in the design of curricula and learning paths for data stewards, data professionals, PhD, and undergraduate students in WP4".¹ In addition, "this task will also define learning paths on OS for legal and ethical experts in the ToT and pilots". Considering the scope and description of Tasks 4.1, 4.2, 4.3 and 4.4, to achieve the main objective of Task 4.5., partners involved in this task (KUL, CNR and UNIMIB) have to collaborate with all other Tasks within Work Package 4.

1.2 About this Milestone:

This report will detail the collaborative work undertaken with partners across Tasks 4.1 to Task 4.4, encompassing the diverse inputs to various deliverables within WP4. The development of the learning paths for legal and ethical experts in embedded in the collaboration with Task 4.2.

In describing the collaboration with each Task, the report will (a) provide an overview of the main objectives of each task that may impact the integration of ELSI issues by Task 4.5 partners, (b) establish a connection with existing MVSs and the essential skills listed therein and (c) report on the current state of the work.

¹ Project Proposal.









2 Collaboration with Task 4.1.: Integrating ELSI in "training curriculum for data stewards"

2.1 Overview:

One of the main objectives of Task 4.1 is to "develop a training curriculum for data stewards". The design of the curriculum will be "based on MVS profiles (T2.1.)" and will build up on "the RDNL 'Essentials for Data Support' training for data professionals".² The team working on the design of these proposal for T4.1 is composed by KU Leuven (Luca Schirru), Aalborg Universitet (Karsten Kryger Hansen) and Aarhus Universitet (Per Møldrup-Dalum). The team from Consiglio Nazionale delle Ricerche (Sabrina Brizioli and Valentina Colcelli) contributed with the review of the content of the module on Personal Data & GDPR.

2.2 Relationship with existing MVS:

Regardless to other relevant resources that are referred to in the report and in Task 4.1., to propose the integration of ELSI-related material in the training curriculum for data stewards, the team working on the modules' design considered the content of the (a) Data Stewards MVS and (b) RDNL "Essentials for Data Support". Concerning the RDNL "Essentials for Data Support" course,³ of particularly importance was the Module V of the RDNL course, which is divided in four sections addressing issues like (i) copyright law and databases; (ii) privacy; (iii) data policy and (iv) licenses.⁴ Finally, it is important to highlight that the modules below are aligned with some of the essential ELSI-related skills competences listed in the Data Stewards MVS,⁵ including but not limited to the following:

• "Knowledge of Open Science practices, policies and regulation and translation of these (when necessary) to local level";

⁵ Whyte, A., Green, D., Avanço, K., Di Giorgio, S., Gingold, A., Horton, L., Koteska, B., Kyprianou, K., Prnjat, O., Rauste, P., Schirru, L., Sowinski, C., Torres Ramos, G., van Leersum, N., Sharma, C., Méndez, E., & Lazzeri, E. (2023). D2.1 Catalogue of Open Science Career Profiles - Minimum Viable Skillsets (v1.2). Zenodo. https://doi.org/10.5281/zenodo.8101903.





² Skills4EOSC Project Proposal.

³ Research Data Netherlands, 'Essentials 4 Data Support', <u>V - Dates, Laws & Policies | RDNL - Essentials 4 Data</u> <u>Support (researchdata.nl).</u>

⁴ Independently translated to English by the authors.



- "Service provision to support specific Open Science practices including: applying FAIR and CARE principles, Open Access (publishing), data curation and preservation";
- "Knowledge brokering about Research Data Management, (personal) data governance and ethics, including to understand information security challenges, and provide access risk assessment and mitigation"⁶

2.3 Current State of the Work:

When it comes to the content of the different modules connected to ELSI issues, to date (February, 2024), there are three modules which the core issues are related to ELSI: (i) Usage Rights and Licenses; (ii) Ethics; and (iii) Personal Data & GDPR. the Modules' Objectives, Learning Objectives, and Learning Outcomes are as follows:

Module: "Usage Rights and Licenses"		
Objective: Know usage rights and licensing issues and mitigate these within		
the research project.		
Sub-module	Learning Objectives	Learning Outcomes
Using pre-existing data and databases: legal issues pertaining Intellectual Property Rights and the Data and Digital Legislation	Identifying the applicable legislation and some of the main legal issues for researchers concerning the access and (re)use of pre- existing data	Be able to identify potential issues concerning IP Rights and Non-personal Data concerning the data being used in the research and communicate with the PI and/or the legal department (e.g. Assessing the commercialisation potential of the research output and the need of taking measures to ensure competitive advantage; rights and obligations arising from Licenses concerning the tools (e.g. software) and methods (e.g. scraping) adopted in data collection). Be able to identify when technology transfer agreements, data use agreements and related agreements concerning the use of data and/or the research

⁶ Whyte et al, 2023, 13.





		output are needed and	
		communicate with the D	
		communicate with the Pl	
		and/or the legal department.	
		Comply with basic IP rules	
		related to research, including	
		but not limited to ensuring	
		correct attribution and respect	
		to other IP rights concerning	
		the use of pre-existing works	
		and other materials.	
The many layers of regulation	Identifying the existing rules	Be able to identify potential	
on research output	(e.g. laws, policies, guidelines	opportunities and obligations	
	of the organisation.	related to the use and sharing	
	requirement by funders) on	of the research output, and to	
	Open Access. Intellectual	communicate with the Pl	
	Property, and Non-Personal	and/or the legal department	
	Data concerning the use.	on related issues, including but	
	publication and sharing of the	not limited to: licensing of the	
	research output and some of	research output: publication	
	the main legal issues faced by	policies of journals: potential	
	researchers	effects of publishing research	
		output: authorship of the	
		research output	
	Module "Ethics"		
Objective: Make the data stoward canable of identifying othical concerns			
Objective: Make the da	ata steward capable of iden	tifving ethical concerns	
Objective: Make the da related to research pro	ata steward capable of iden iect and mitigate the risks v	tifying ethical concerns within the scope of data	
Objective: Make the da related to research pro handling practice. A	ita steward capable of iden ject and mitigate the risks v and assistent in the complia	tifying ethical concerns within the scope of data nce issues related to	
Objective: Make the da related to research pro handling practice. A docume	ita steward capable of iden ject and mitigate the risks v and assistent in the complia ntation before and during a	tifying ethical concerns within the scope of data nce issues related to a project.	
Objective: Make the da related to research pro handling practice. A docume Sub-modules	ata steward capable of iden ject and mitigate the risks v and assistent in the complia ntation before and during a Learning Objectives	tifying ethical concerns within the scope of data nce issues related to a project. Learning Outcomes	
Objective: Make the da related to research pro handling practice. A docume Sub-modules Ethical regulations and	ata steward capable of iden ject and mitigate the risks v and assistent in the complia ntation before and during a Learning Objectives Recognising the stack of ethical	tifying ethical concerns within the scope of data nce issues related to a project. Learning Outcomes Be able to identify and (if	
Objective: Make the da related to research pro handling practice. A docume Sub-modules Ethical regulations and concerns	ta steward capable of iden ject and mitigate the risks v and assistent in the complia intation before and during a Learning Objectives Recognising the stack of ethical regulations and concerns, from	tifying ethical concerns within the scope of data nce issues related to a project. Learning Outcomes Be able to identify and (if required) ensure compliance	
Objective: Make the da related to research pro handling practice. A docume Sub-modules Ethical regulations and concerns	ata steward capable of iden ject and mitigate the risks w and assistent in the complia intation before and during a Learning Objectives Recognising the stack of ethical regulations and concerns, from international, national, regional	tifying ethical concerns within the scope of data nce issues related to a project. Learning Outcomes Be able to identify and (if required) ensure compliance for research projects in ethical	
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Objective: Make the da related to research pro handling practice. A docume Sub-modules Ethical regulations and concerns	ta steward capable of iden ject and mitigate the risks w and assistent in the complia intation before and during a Learning Objectives Recognising the stack of ethical regulations and concerns, from international, national, regional and local level	tifying ethical concerns within the scope of data nce issues related to a project. Learning Outcomes Be able to identify and (if required) ensure compliance for research projects in ethical concerns, and map this to the research life cycle, ensuring steps to meet compliance in	
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Objective: Make the da related to research pro handling practice. A docume Sub-modules Ethical regulations and concerns	ta steward capable of iden ject and mitigate the risks want and assistent in the complia intation before and during a Learning Objectives Recognising the stack of ethical regulations and concerns, from international, national, regional and local level Explaining the concept and role of ethics in research and	tifying ethical concerns within the scope of data nce issues related to a project. Learning Outcomes Be able to identify and (if required) ensure compliance for research projects in ethical concerns, and map this to the research life cycle, ensuring steps to meet compliance in each step Ability to argue for the relevance of ethical concerns	
Objective: Make the da related to research pro handling practice. A docume Sub-modules Ethical regulations and concerns	Intersection ata steward capable of iden ject and mitigate the risks want and assistent in the complian intation before and during a Learning Objectives Recognising the stack of ethical regulations and concerns, from international, national, regional and local level Explaining the concept and role of ethics in research and connect to research	tifying ethical concerns within the scope of data nce issues related to a project. Learning Outcomes Be able to identify and (if required) ensure compliance for research projects in ethical concerns, and map this to the research life cycle, ensuring steps to meet compliance in each step Ability to argue for the relevance of ethical concerns relating to research	
Objective: Make the da related to research pro handling practice. A docume Sub-modules Ethical regulations and concerns Mapping ethical regulations and concerns to practice Ethical concerns related to EU	Interview Links Inta steward capable of iden ject and mitigate the risks want Intation before and during a Intation before and concerns, from international, national, regional and local level Explaining the concept and role of ethics in research and connect to research life cycle Explaining the ethical	tifying ethical concerns within the scope of data nce issues related to a project. Learning Outcomes Be able to identify and (if required) ensure compliance for research projects in ethical concerns, and map this to the research life cycle, ensuring steps to meet compliance in each step Ability to argue for the relevance of ethical concerns relating to research Be able to inform the PI on the	
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Objective: Make the da related to research pro handling practice. A docume Sub-modules Ethical regulations and concerns Mapping ethical regulations and concerns to practice Ethical concerns related to EU projects	Interview Links Ata steward capable of iden ject and mitigate the risks want and assistent in the complian Intation before and during a Learning Objectives Recognising the stack of ethical regulations and concerns, from international, national, regional and local level Explaining the concept and role of ethics in research and connect to research life cycle Explaining the ethical procedures required for projects funded by the EU:	tifying ethical concerns within the scope of data nce issues related to a project. Learning Outcomes Be able to identify and (if required) ensure compliance for research projects in ethical concerns, and map this to the research life cycle, ensuring steps to meet compliance in each step Ability to argue for the relevance of ethical concerns relating to research Be able to inform the PI on the Ethics Appraisal Procedure from EU and guide the PI on	
Objective: Make the da related to research pro handling practice. A docume Sub-modules Ethical regulations and concerns Mapping ethical regulations and concerns to practice Ethical concerns related to EU projects	Interview Links Inta steward capable of iden ject and mitigate the risks way Ind assistent in the complian Intation before and during a Learning Objectives Recognising the stack of ethical regulations and concerns, from international, national, regional and local level Explaining the concept and role of ethics in research and connect to research life cycle Explaining the ethical procedures required for projects funded by the EU: Ethics Appraisal Procedure	tifying ethical concerns within the scope of data nce issues related to a project. Learning Outcomes Be able to identify and (if required) ensure compliance for research projects in ethical concerns, and map this to the research life cycle, ensuring steps to meet compliance in each step Ability to argue for the relevance of ethical concerns relating to research Be able to inform the PI on the Ethics Appraisal Procedure from EU and guide the PI on which units at the university to	
Objective: Make the da related to research pro handling practice. A docume Sub-modules Ethical regulations and concerns Mapping ethical regulations and concerns to practice Ethical concerns related to EU projects	Interview Links Ata steward capable of iden ject and mitigate the risks washing Intation before and during a Intation before and concerns, from International, national, regional and local level Explaining the concept and role of ethics in research and connect to research life cycle Explaining the ethical procedures required for projects funded by the EU: Ethics Appraisal Procedure (Ethics Review Procedure,	tifying ethical concerns within the scope of data nce issues related to a project. Learning Outcomes Be able to identify and (if required) ensure compliance for research projects in ethical concerns, and map this to the research life cycle, ensuring steps to meet compliance in each step Ability to argue for the relevance of ethical concerns relating to research Be able to inform the PI on the Ethics Appraisal Procedure from EU and guide the PI on which units at the university to contact for futher counseling	







	and Ethics Audits). See HE Programme Guide version 4.0	
	15 October 2023 section 12	
Conducting ethical assessment	Explaining the ethics self-	Be able to guide the PI in
to EU grants	assessment required for EU	performing an ethics self-
5	applications. Se EU Grants: How	assessment as described in the
	to complete your ethics self-	EU quide
	assessment version 2.0 13 July	5
	2021	
Мо	dule "Personal data and GD	PR"
Objectives: Make the data	a steward capable of assisti	ng research projects in be
compliant	in relation to handling per	sonal data
Sub-modules	Learning Objectives	Learning Outcomes
GDPR and national regulations	Identifying relevant regulations	Based on the description of
on privacy	and local policies based on	intended work by a researcher,
	data type and research context	provide details and guidance
		on compliant data handling
	Recognising the stack of	Help researchers navigate the
	regulations from international,	stack of regulations and
	national, regional and local	support them in matching legal
	policies	advise and support with data
		stewardship practice.
	Perform the task of evaluating	Based on the researchers
	the usage of a specfic platform	workflow, invite or point
	matching compliance needs	towards relevant infrastructure,
	and the research context.	and describe or assess the
		needed compliance of a given
		infrastructure
	Identifying and balancing	During development of
	conflicting/opposite interests	policies, case by case handling
	and propose solutions to	etc., evaluate possible conflicts
	satisfy relevant stakeholders	of interest (eg. Open Data vs
	within a personal data	GDPR), and be able to assist in
	compliance context	evaluating the good practice
		and propose solutions
	Integrating new regulation	Communicate changes in the
	practices into existing practice	legislation landscape and the
		possible implications on
		research practice.
Commercialisation assessment	Recognising the formal	Ability to, across the research
	requirements for when to	life cycle, take
	perform commercialisation	commercialisation assessment
	assessment	considerations into the practice
		and advice for possible actions
		and steps necessary
	1	· · · /









Identifying stakeholders	Facilitate an encompassing
motivation and common	dialogue on possible issues
attitude towards	relating to commercialisation
commercialisation	
Recognising the legal, ethical	Across the research life cycle
and contractual considerations	be able to take into account
and their origin around data	the various perspectives when
management, and possible	making policies, advising,
conflicting interests	communication etc.

Important: At the time of the writing of this Report (Feb-Mar, 2024) the work on the Modules above is still ongoing. Currently, the Modules have been shared with Data Stewards from different Institutions for feedback purposes, and may still be amended.









3 Collaboration with Task 4.2.: Integrating ELSI in "learning paths for data professionals"

3.1 Overview:

Task 4.2 description starts by presenting its general objective of "design[ing] and pilot[ing] learning paths for data professionals including data stewards, data librarians, data curators, and research support staff as well as other professional roles identified in WP2.1".⁷ Under Task 4.2 there will also be the implementation of Train of Trainers and pilots of "learning paths for legal and ethical experts working in research performing organisations".⁸ As it is based on the results of T4.5., the latter objective will be pursued in collaboration with the partners involved in T4.5. Currently, the development of the Learning Paths for Legal Experts and Ethics Advisors is being led by Aalborg Universitet (Karsten Kryger Hansen), Consiglio Nazionale delle Ricerche (Sabrina Brizioli and Valentina Colcelli), KU Leuven (Luca Schirru), Københavns Universitetsbibliotek (Lorna Wildgaard; Benjamin Derksen), Ss. Cyril and Methodius University in Skopje (Sonja Filiposka), and Copenhagen Business School (Mareike Buss).

3.2 Relationship with existing MVS:

Considering the existing work carried out under T2.1 on the Minimum Viable Skills for each profile, the learning paths will be designed considering the main essentials skills competences related to the Legal Expert⁹ and Ethics Advisor's¹⁰ MVSs. At the time of the writing of this Report the work on the Learning Paths above is still ongoing and the working group will meet on April 2024 to start designing the Learning Paths and Learning Outcomes.

Nevertheless, the topics below – all derived from the essential skills available in the aforementioned MVSs – may represent some of the potential content to be addressed in the learning paths:

• Open Science essentials and its practices;

¹⁰ Whyte et al, 2023, 20-23.







⁷ Skills4EOSC Project Proposal.

⁸ Skills4EOSC Project Proposal.

⁹ Whyte et al, 2023, 28-31.



- FAIR principles and how ELSI professionals may promote and ensure FAIRization of data;
- Ethical issues in research: (some) of the existing ethical principles, frameworks and codes of conduct;
- Legal issues on data governance (e.g. management of personal and non-personal data, development and management of policies on privacy and data protection, data use agreements);
- Knowledge/awareness of existing "information security and risk management standards that may affect data governance, especially when it concerns to personal data protection data-driven technologies"¹¹,
- Intellectual Property Rights and its management in the context of research practices and Open Science (e.g. licensing, attribution, rights retention strategies, secondary publication rights, copyright limitations and exceptions beneficial for research);
- The Data and Digital Legislation (e.g. Open Data Directive, Digital Services Act and Data Act) and the challenges and opportunities for researchers.

3.3 Current State of the Work:

On February, the team had a meeting to decide on the approach to be adopted in the design of the learning paths. In addition to topics on legal and ethical issues, and recognizing that Legal Experts often have an educational background in law and frequently gain experience in the private sector or law firms before joining a research centre or university, the team acknowledges the importance of modules focused on the specific day-to-day issues faced by researchers and other stakeholders in the research community. Moreover, the fact that Open Science and topics such as FAIR data management are not commonly covered in the curricula of Law schools highlights the need for these professionals to have access to this type of information.

A first decision by the working group would be that the learning path would be divided into two different streams:

- (i) What ELSI Professionals need to know about Open Science ("OS Essentials for ELSI Professionals").
 - o Examples of potential issues that may be addressed:
 - introduction to Open Science and research data life cycle.
- (ii) What ELSI Professionals may already know, but with a focus on Open Science ("Research-Oriented ELSI Issues").

¹¹ Whyte et al, 2023, 30.









- Examples of potential issues that may be addressed:
 - Copyright issues that are present in the day-to-day of the researcher (e.g. attribution, licensing);
 - data access and (re)use mechanisms available for researchers in the data and digital legislation (e.g. art. 40 DSA);
 - potential mismatches between the GDPR rules and processes within an organization.

Important: At the time of the writing of this Report the work on the Learning Paths is still ongoing and the working group will meet during the month of April to start developing the expected learning paths and learning outcomes.









4 Collaboration with Task 4.3.: Integrating ELSI in "OS essentials at undergraduate levels"

4.1 Overview:

Task 4.3 aims to "reshape existing undergraduate courses on information and data skills to increase the availability of highly and appropriately skilled professionals enabling Open Science in all fields, and any academic career development". Amongst the expected outputs from this task is the "set of courses to teach essential OS skills and data stewardship". Task 4.5 has been collaborating with Task 4.3 by integrating ELSI aspects in an Open Science course for undergraduates. ¹²

ELSI issues are concentrated in Module 2 ("Open Access") of the Course, namely in the section titled "Copyright and Licensing", which development has been led by KUL (Luca Schirru), (re)using material developed for D.3.6 by both KUL and CNR.¹³

4.2 Relationship with existing MVS:

The ELSI-related content added to Module 2 mainly addresses issues concerning Copyright and (Open) Licensing. These topics are helpful to students as they are often working with or developing copyrightable material. Knowledge about Copyright and (Open) Licensing is not limited to the legal field, but is also needed for the FAIR management of data, especially the (Re)usability of data. Therefore, these topics are aligned with some of the essential skills listed in the Undergraduates MVS,¹⁴ including but not limited to the following:

- "[...]
- Ability to identify general knowledge and awareness of open science and FAIR principles, including identify relevant discipline or domain-specific information

¹⁴ Whyte, A., Green, D., Avanço, K., Di Giorgio, S., Gingold, A., Horton, L., Koteska, B., Kyprianou, K., Prnjat, O., Rauste, P., Schirru, L., Sowinski, C., Torres Ramos, G., van Leersum, N., Sharma, C., Méndez, E., & Lazzeri, E. (2023). D2.1 Catalogue of Open Science Career Profiles - Minimum Viable Skillsets (v1.2). Zenodo. <u>https://doi.org/10.5281/zenodo.8101903</u>.







¹²

¹³ Schirru, L., Colcelli, V., Brizioli, S., Karabuga, E., Fernandes, E., & Margoni, T. (2023). D3.6 - Coordinated set of guides, fact-sheets and FAQs on ELSI aspects for Civil Servants and Policy Makers. Zenodo. <u>https://doi.org/10.5281/zenodo.7991444</u>.



- Ability to apply basic open science principles in the relevant parts of the research life cycle, such as:
 - [...]
 - Evaluate the quality and reusability of the data
 - Recognizing the different open access model for scientific publications
 - Knowledge of how to share e FAIR research data (including code and software), including knowledge of how to use repositories".¹⁵

4.3 Current State of the Work:

A first draft was delivered in February 2024 containing an overview of some of the relevant information for undergraduates concerning Intellectual Property (mainly copyright and open licenses). The Chapter starts by briefly describing what is Intellectual Property and what is Copyright. It then delves into the scope of exclusive rights, providing examples of the diverse content that falls under this protection. The subsequent section on '*EU Copyright Law*' introduces the regulatory landscape of copyright within the European Union, emphasizing the significance of harmonization and the role of national laws. The section "*Scope of Protection*" addresses the main criteria for copyright protection in the EU, namely originality and expression. This is achieved by referring to significant cases that have influenced the development of the concept of originality within the EU, as well as discussing the concept of idea/expression dichotomy.

The section "Exclusive uses" explores some examples of uses covered by copyright, including specific insights on uses provided in the EU Copyright Law and International Treaties. It is followed by an item on "Limitations and Exceptions", which highlights some of the main provisions that allow for reuse of copyrighted works, as is the case of the ones outlined in art. 5 of the InfoSoc Directive and the CDSM Directive. The chapter concludes with a section on "Copyright (Open) Licensing" providing an overview of open licensing frameworks commonly adopted for the (re)use of copyrighted content, as is the case of the Creative Commons licenses and FLOSS (Free, Libre and Open Source Software) licenses. The section briefly described the CC licenses, their main characteristics and scope, and underscores the intricate issue of license compatibility.

Important: At the time of the writing of this Report, the work on the Chapter on Copyright and Open Licensing is in its first draft, and has to be further discussed with other involved partners.

¹⁵ Whyte et al, 2023, 48.













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5 Collaboration with Task 4.4.: Integrating ELSI in "OS ready PhD curricula"

5.1 Overview:

Task 4.4. will develop modules concerning OS-related topics to be embedded in PhD curricula. These modules will take "into consideration the disciplinary needs of the STEM and SSH sectors, and the different years of PhD studies which reflect different levels of expertise and comprehension in relation to research activities, data management and Open Science".¹⁶

5.2 Relationship with existing MVS:

The ELSI-related content to be added to the deliverables related to Task 4.4. should be aligned with the expected essential skills related to the Early Career Researcher,¹⁷ especially with the ones below:

- "[...]
- Sound knowledge of the data life cycle and adequate capacity to implement discipline-specific FAIR principles.
- [...] Research management skills: Ability to design an open research strategy, implement an open research vision, and coordinate research activities that embed open science principles
- [...]
- Good understanding of the relevant legal aspects related to research and their field of expertise, and relevant Open Science practices, including, but not limited to: Intellectual Property Rights (eg copyright, patents, and trade secrets) and other Non-Personal Data (eg use of IoT data and research data), Personal Data Protection and Governance (eg processing Personal Data under the current legal framework, and following existing policies on Data Protection), Privacy, and (Open) Licensing rules and frameworks.
- Good understanding of ethical principles (e.g., transparency, diversity, and accountability) and best practices (e.g., avoiding bias in data processing when using data-driven technologies) applicable to their field of expertise, including, but not limited to the general ethical principles, frameworks and codes of conduct applicable to research (e.g., the RRI Framework; the European Code of Conduct for Research Integrity);

¹⁷ Whyte et al, 2023, 16.





 $^{^{\}rm 16}$ Task 4.4 description available in the Project Proposal.



- Ability to balance (personal and non-personal) data protection requirements with Open Science/FAIR principles."

5.3 Current State of the Work:

According to the Task description, Pilots will be carried out to "test the effectiveness and gather feedback from Universities of the consortium." The first pilot for training PhD Candidates in the Skills4EOSC is scheduled for May 2024, and there will be a separate session for ELSI issues on Open Science.

Considering that participating students come from various research disciplines and programmes, each at different levels of research maturity and development, the team led by UC3M (Eva Mendez and Marina Sanchez Moreno), KUL (Luca Schirru) and CNR (Sabrina Brizioli and Valentina Colcelli) has prepared the following proposal for a panel discussion on ELSI issues on Open Science.

Panel on "Ethical, Legal and Social Issues (ELSI) of Open Science" (2 hours long)

- Legal issues in research data management:

Intellectual Property Rights, the Data and Digital Legislation and Open Science

- Intellectual property rights, copyright and its exceptions
- Open licensing, license compatibility and academic freedom
 - Choosing a license for your Research Objects: publications, software, data.
- Rights Retention Strategy, Secondary publication rights
- An overview of the Data and Digital Legislation from the researcher's perspective
 - Opportunities and challenges for data access and (re)use in the Data and Digital Legislation

Privacy and Personal Data Protection

- Privacy and Personal data regulations
- Principles, roles and responsabilities in Personal Data Processing
- Interoperability and shareability of personal data and risks
- Anonymization and Data Protection Impact Assessment (DPIA)
- Balancing Data Protection and OS/FAIR Principles
- Ethics in Open Science:









- General Ethical Principles, Frameworks (e.g. RRI: Responsible Research and Innovation) and Codes (e.g. the European Code of Conduct for Research Integrity) applicable to Research in the EU
- Best practices in Open Research

Assignment / practice 7: a) Each student will choose licenses for their current or pretending Research Objects (RO). b) Play Dilemma Game (online/app): The Dilemma Game confronts researchers with difficult dilemmas in the context of a critical dialogue, supporting them in further developing their own 'moral compass'.

Considering the limited time of the session and the complexity of the ELSI issues that may affect PhD students, the list above does not intend to exhaust all the ELSI issues, but reflects some of the main points that T4.5 members understand as relevant for PhD students and is aligned with the Early Career Researcher.

Important: At the time of the writing of this Report the work on the Pilot is still ongoing.





