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PATTERN.
Empowering Open and Responsible Research and Innovation

D5.4

First Strategic Exploitation Plan

Project Name	Piloting open and responsible Activities and Trainings Towards the Enhancement of Researchers Networks
Project Acronym	PATTERN
Contract No.	101094416
Type of action	HORIZON Coordination and Support Actions
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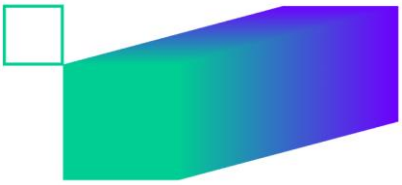
Topic	HORIZON-WIDERA-2022-ERA-01-44: Developing and piloting training on the practice of open and responsible research and innovation
Start of Project	1 January 2023
Duration	42 months

OUR CONSORTIUM

Funded by the European Union



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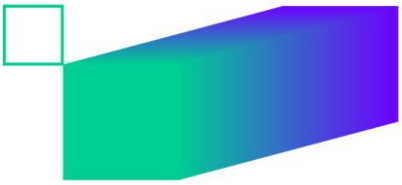

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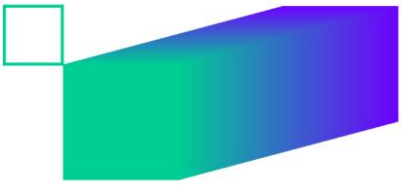
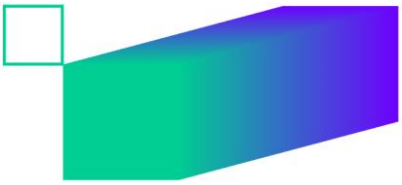


Table of Abbreviations and Acronyms

Abbreviation	Meaning
Open RRI	Open and Responsible Research and Innovation
IPR	Intellectual Property Right
GA	Grant Agreement
CA	Consortium Agreement
SEO	Search Engine Optimisation
EA	Exploitable Asset
EM	Exploitation Manager



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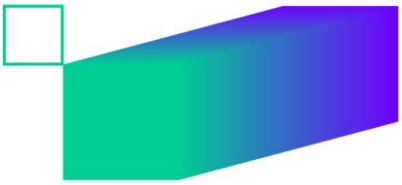

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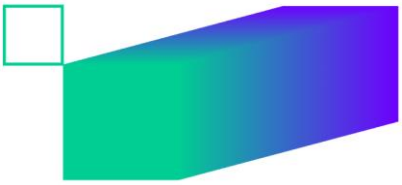

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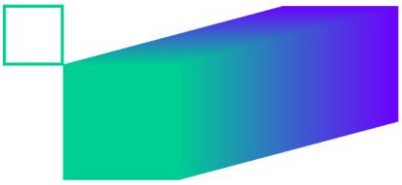
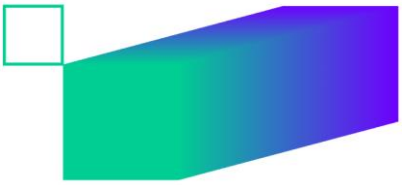


1 Executive Summary

The current report presents the initial version of PATTERN's Strategic Exploitation Plan and it will be followed by two (2) updates in M18 and M42. This initial version sheds light on the key terms pertaining to the management and protection of intellectual property and lays down the main components of the relevant methodology to be applied throughout the project.

Preliminary description of the project results, along with initial identification of the contributing partners, protection types and access rights are provided within the report. An overview of PATTERN's assets as envisioned at this stage of the project is also presented, as well as the initial considerations of background and foreground IP, as currently perceived by the project partners. The methodology applied is supported by the IPR Matrix that facilitates registration of all background and foreground IPR and helps the timely identification and resolution of any potential conflict in this respect.

The report will be further elaborated and updated as the project progresses. Once the project reaches its midpoint and most of the project results are developed and matured, the updated version of the Strategic Exploitation Plan will be developed (M42). This report will detail the project's assets, their main exploitation routes, the target groups per project asset, the general terms of use of each asset and the relevant IPR provisions, and joint exploitation plans for the consortium. Namely, it will outline the means and procedures for the exploitation of the assets, considering individual project partners (or groups of partners), together with a roadmap to this end.



2 Introduction

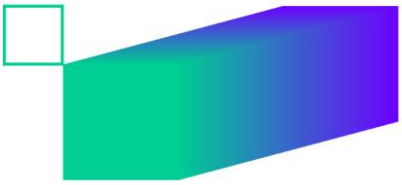
The European Research Area (ERA) envisions a successful transition to a sustainable, digital, and resilient Europe. Research and innovation in the European Union (EU) are grounded in shared values and principles, encompassing pursuit of excellence, value creation, ethics and the integrity of research and innovation, freedom of scientific research, gender equality, equal opportunities and inclusiveness, free circulation, coordination, coherence, commitment, global outreach, and societal responsibility.

One of the ERA's top priorities is to train researchers to actively contribute to a closer relationship between science and society and enhance trust in science. Simultaneously, it aims to equip them with the necessary skills for the labour market, focusing on upskilling and reskilling through targeted training. This aligns with the Horizon Europe framework and the European Skills Agenda, which recognise the significance of transferable skills in facilitating intersectoral mobility and knowledge transfer.

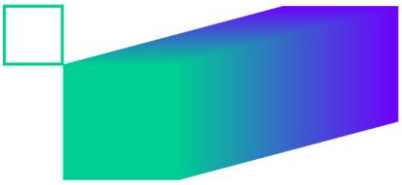
The overarching goal of the PATTERN project is to cultivate inclusive and sustainable practices in Open Science (OS) and Responsible Research and Innovation (RRI), through promoting researcher training in the relevant transferable skills. According to the European Commission: 'Responsible Research and Innovation (RRI) implies that societal actors (researchers, citizens, policy makers, business, third sector organisations, etc.) work together during the whole research and innovation process in order to better align both the process and its outcomes with the values, needs and expectations of society'. The key components are public engagement, gender equality, social justice and inclusion, ethics and research integrity, science education, open science, governance, and sustainability.

PATTERN has a focus on eight main transferable skills within the context of OS and RRI. These eight skills comprise Open Access, FAIR data Management, Citizen Science, Research Integrity, Gender, non-discrimination and inclusion in research, Dissemination and Exploitation of Results, Science Communication (towards media and policy makers), and Management and Leadership. At the core of PATTERN are the mapping and quality assessment of state-of-the-art training opportunities for researchers (Work Package 1, WP1), along with an analysis of policy at institutional, national, and European levels (WP4). These aim to identify existing gaps and to enhance capacity within the ERA to address societal challenges and foster a closer dialogue between science, policy and society.

WP5 (Dissemination, Communication and Engagement) has the objectives of ensuring wide visibility of the project; clustering and creating synergies with other EU initiatives and paving the way for the exploitation of PATTERN project results. To achieve the last objective of WP5 in this report, the



Exploitation Manager (EM) LOBA, provides with the support of project partners an initial overview of PATTERN IPR management strategy which takes into consideration background IP of PATTERN Consortium partners, foreground IP to be developed by the project, Exploitable Assets and potential exploitation plans per asset.



3 IPR management Overview

This chapter provides an overview of the Intellectual Property Rights (IPR) management expected to be implemented in the context of the PATTERN project.

The PATTERN partners are committed to producing results that will be sustainable after the project's completion, all while ensuring that innovative ideas emerging from the project are fully identified and investigated in terms of exploitation potential.

The first version of the Strategic exploitation plan will serve as a basis for the activities to be implemented in the framework of Task 5.3 towards sound innovation management as well as towards exploitation and sustainability of the project's results after the end of the grant. The Strategic Exploitation Plan will be updated at M42, to reflect partners' plans and actions aiming at exploiting the PATTERN's assets.

In chapter 6, PATTERN exploitable assets (EA) are provided which may be subject to IP protection.

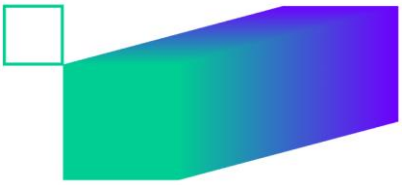
The identification of the EAs, their related possible IPR and observations were supported by Horizon IP Scan service.

The following sub-sections aim to set the objectives of the IPR management strategy as well as to clarify the main terms concerning the key elements of IPR management, which represent the principal aspects of the IPR management procedures of the project.

3.1.1 Objectives

PATTERN IPR management objectives embrace the need to protect project's assets in order to handle and manage efficiently all the outcomes that will stem during the project's life span with a view to ensuring the sustainability of the PATTERN exploitable results, along with their proper dissemination. To this end, the main objectives of the PATTERN's Innovation and IPR Management Strategy are the following:

- Describe the IPR management methodology to be followed within the context of PATTERN.
- Identify the assets that will emerge from the activities foreseen within the lifecycle of the project, thus determining a portfolio of assets from the early stages of the project.
- Develop a common understanding among PATTERN's partners regarding the terms and issues of the background and foreground IP and their respective access rights.



- Define and eventually resolve any possible conflicts in IP within the consortium and beyond.
- Establish common guiding routes and actions within the consortium to safeguard the smooth operation of the IPR strategies to be implemented.

In general, the key concepts to consider for designing the Innovation and IPR management strategy of Horizon Europe projects are the following:

- Background IP knowledge
- Foreground IP knowledge
- Dissemination channels
- Access rights

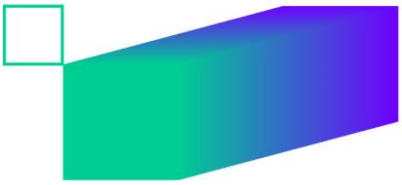
Therefore, the following sub-sections aim to clarify the main terms concerning the key elements of IPR management which, in turn, specify the IPR management procedures of the project

3.1.2 Background

Background IP can be defined as data, know-how or information – including any rights - owned or licenced to a project partner prior to the commencement of the agreement and needed to implement the action or exploit the project's assets[1]. The background needed for carrying out the project activities or exploiting the underlying results must be accessible to the other project partners on a royalty-free basis. Under this frame, all project partners must identify the background that is pertinent to the project actions and grant access rights to this IP, in principle. The background of a project can be identified and agreed (i) within the consortium agreement, after the internal evaluation of pre-existing knowledge, or (ii) in a separate agreement ("agreement on the background"). In this respect, there are two main aspects to consider when dealing with the background of a project:

- **Identification of Background**: Naming of the assets that each project partner provides to the consortium and which are imperative for successful implementation and exploitation of the project actions.
- **Definition of Access Rights**: Clarification of the rights to use knowledge under the terms and conditions agreed within the consortium and in alignment with the underlying background rules and obligations set by the EC in order to ensure the smooth implementation of the project.

[1] See Article 16 of the PATTERN Grant Agreement.



3.1.3 Foreground

Foreground refers to the results and assets that are generated through the implementation of the project activities, including pieces of information, materials, and knowledge[2]. These results comprise any tangible or intangible output of the project's actions which can be protectable or not. In this respect, foreground IP can emerge and be obtained by project partners in order to protect and exploit the underlying exploitable assets of the project. It includes intellectual property rights (e.g., copyrights, industrial designs, patents), similar forms of protection (e.g., rights for databases) and unprotected know-how (e.g., confidential material). It should be noted that results generated outside the project activities cannot be defined as foreground.

The Grant Agreement of PATTERN establishes that the results of the project are owned by the beneficiaries that generate them [3]. Given the collaborative nature of the project, some results can be jointly developed by several partners. In this case, joint ownership can arise among the contributing partners and is subject to the agreement on the allocation and terms of the exercise of their joint ownership. Although regulations concerning the frame of joint ownership are embedded in the PATTERN Consortium Agreement (CA)[4], it would be best practice for partners to establish during the project implementation a separate joint ownership agreement in order to define the allocation and terms of exercising their ownership. Each joint owner can grant non-exclusive licences to third parties to exploit the jointly owned results unless otherwise agreed in the CA or the joint ownership agreement.

3.1.4 Access Rights

Access rights refer to user rights for requesting access to a project partner's background and foreground IP in order to implement its activities under the project or to use its own results. In addition, access rights can be utilised as long as they are needed for exploiting the project's results and assets. The granting of access rights within a collaborative Horizon Europe project follows specific rules in the Grant Agreement[5] and the Consortium Agreement[6]. Depending on their purpose of use, access rights within PATTERN can be depicted in the following table.

Purpose for Access	Access to Background	Access to Results

[2] See article 16 of the PATTERN Grant Agreement
[3] See article 16 of the PATTERN Grant Agreement
[4] See section 8.2 PATTERN Consortium Agreement.
[5] See Article 16 of the PATTERN Grant Agreement.
[6] See Section 9 of the PATTERN Consortium Agreement.

	(Article 16 of PATTERN's GA)	(Article 16 of PATTERN's GA)
Project Implementation	• Royalty-free • Unless otherwise agreed by participants before accession to GA	• Royalty-free
Exploitation of Own Results	• Subject on individual agreement • Granted under fair and reasonable conditions	

Table 1 - Access rights

3.1.5 Protection of Results

When considering IP protection, it must be noted that IP assets can be protected by several types of IPR, and consequently, the most appropriate protection strategy must be chosen. The selection of the most suitable form of IP protection depends on the nature and specific characteristics of the results under consideration and the objectives of the IP owner.

Various types of instruments may be considered for protecting IP, such as:

- Trade and service marks;
- Patents;
- Utility models;
- Copyrights;
- Trade secrets;
- Confidentiality agreements.

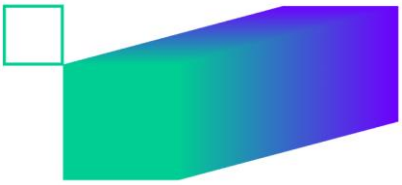
Further details with respect to each of the above-mentioned protection instruments are provided in the sub-sections below.

3.1.6 Trademarks and Service Marks

Trademarks

A trademark constitutes an exclusive right over the use of a sign in relation to the goods and services for which it is registered[7]. Trademarks consist of signs capable of distinguishing the products (either goods or services) of a

[7] See https://op.europa.eu/en/publication-detail/-/publication/ddf8fb93-ec0e-11e9-9c4e-01aa75ed71a1/language-en/format-PDF/source-164620483 for the definition of trademark in Europe.



trader from those of others. The main function of a trademark is to identify the commercial origin of a product. This does not mean that it must inform the consumer of the actual person who has manufactured the product or even the one who is trading in it. It is sufficient that the consumer can trust in a given enterprise, not necessarily known to him, being responsible for the product sold under the trademark.

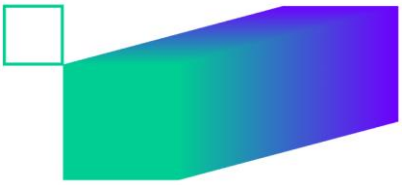
Service Marks

In modern trade, consumers are confronted not only with a vast choice of goods of all kinds but also with an increasing variety of services which tend more and more to be offered on a national and even international scale. There is therefore also a need for signs that enable the consumers to distinguish between the different services such as insurance companies, car rental firms, airlines, etc. These signs are called service marks and fulfil essentially the same purpose for services as trademarks do for goods. Since service marks are very similar in nature to trademarks, basically the same criteria can be applied. Thus, service mark protection has sometimes been introduced by a very short amendment to the existing trademark law, simply providing for the application to service marks of the provisions on the protection of trademarks[8].

3.1.7 Patents

A patent is an exclusive right granted for the protection of inventions (products or processes) offering a new technical solution or facilitating a new way of doing something. The patent holder enjoys the exclusive right to prevent third parties from commercially exploiting his/her/their invention for a limited period. In return, the patent holder must disclose the invention to the public in the patent application[9]. A patent does not give its owner the positive right to use the patented invention. Third party rights may have to be requested. Still, a patent owner has the right to decide who may or may not use the patented invention throughout the period during which the invention is protected. Moreover, the patent owner may give permission to other parties, or licence them, to use the invention on mutually agreed terms. The owner may also sell the right to the invention to someone, who then becomes the new owner of the patent. Finally, patents are granted only country by country, some regionally, and may also be used in non-patented territories. Once a patent expires, the protection ends, and the invention becomes part of the public domain, in the sense that the owner no longer

[8] See WIPO Intellectual Property Handbook 2008: Policy, Law and Use. Chapter 2: Fields of Intellectual Property Protection, p. 68.
[9] Definition of patents in the European context retrieved from. https://op.europa.eu/en/publication-detail/-/publication/ddf8fb93-ec0e-11e9-9c4e-01aa75ed71a1/language-en/format-PDF/source-164620483



holds exclusive rights to it, and it becomes available for commercial exploitation, free of charge, by others[10].

3.1.8 Utility Models

Also referred to as a "petty patent", a utility model is an exclusive right granted for an invention, which allows its owner to prevent others from commercially using the protected invention, without their authorisation, for a limited period[11]. The inclusion of utility models into the intellectual property system in some countries has the primary objective of nurturing the rapid evolution of local innovativeness, particularly in small and medium-sized enterprises and among individuals[12].

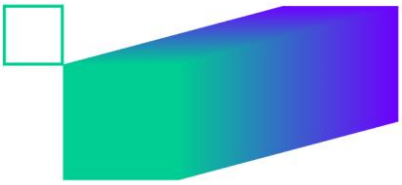
3.1.9 Copyrights

Copyright (or author's right) is the term used to describe the rights that creators have over their literary, scientific and artistic works. There is not an exhaustive list detailing the works that can be protected by copyright. However, there are several works usually covered by copyright at the international level[13]:

- Literary works such as novels, poems, plays, newspaper;
- Articles;
- Computer programs, databases;
- Films, musical compositions, and choreographies;
- Artistic works such as paintings, drawings, photographs;
- Sculptures;
- Architecture;
- Advertisements, maps, and technical drawings.

Copyright protection also includes moral rights, including the right to claim authorship of a work, and the right to oppose changes to it that could harm the creator's reputation. The creator - or the owner of the copyright in a work

[10] See WIPO Intellectual Property Handbook 2008: Policy, Law and Use. Chapter 2: Fields of Intellectual Property Protection, p. 17.
[11] Definition of utility models in the European context retrieved from https://op.europa.eu/en/publication-detail/-/publication/ddf8fb93-ec0e-11e9-9c4e-01aa75ed71a1/language-en/format-PDF/source-164620483.
[12]. See WIPO Intellectual Property Handbook 2008: Policy, Law and Use. Chapter 2: Fields of Intellectual Property Protection, p. 40.
[13] Definition of copyrights in the European context retrieved from. https://op.europa.eu/en/publication-detail/-/publication/ddf8fb93-ec0e-11e9-9c4e-01aa75ed71a1/language-en/format-PDF/source-164620483



- can enforce rights administratively and in the courts, by inspection of premises for evidence of production or possession of illegally made "pirated" goods related to protecting works. The owner may obtain court orders to stop such activities, as well as seek damages for loss of financial rewards and recognition. Finally, it is important to note that copyright only protects the expression of ideas represented in a physical embodiment, not the ideas themselves, and provided the expression is original[14].

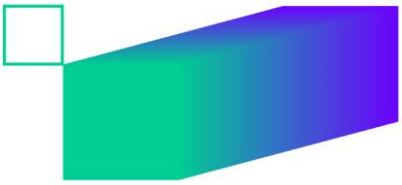
A very common and useful copyright tool that is applied is the Creative Commons Licence (CC), which forges a balance inside the traditional "all rights reserved" setting that copyright law creates. These copyright licences and tools give everyone from individual creators to large companies and institutions a simple, standardised way to grant copyright permissions to their creative work. There are several Creative Commons Licences and each one helps the creators retain copyright while allowing others to copy, distribute, and make some use of their work, at least non-commercially. Furthermore, every Creative Commons licence ensures creators get the credit they deserve, is valid around the world and lasts as long as the applicable copyright lasts (because they are built on copyright). The set of Creative Commons licences is composed of the following licences[15]:

- CC BY (Attribution)
- CC BY-SA (Attribution-ShareAlike)
- CC BY-ND (Attribution-NoDerivs)
- CC BY-NC (Attribution-NonCommercial)
- CC BY-NC-SA (Attribution-NonCommercial-ShareAlike)
- CC BY-NC-ND (Attribution-NonCommercial-NoDerivs)

3.1.10 Trade Secrets

Any confidential business information providing a competitive advantage to an enterprise can be considered a trade secret. The type of information that can be protected as a trade secret is therefore highly diverse. It can include know-how, technical knowledge (potentially protectable as a patent), but also business and commercial data such as lists of customers, business plans, recipes or manufacturing processes[16].

[14] See WIPO Intellectual Property Handbook 2008: Policy, Law and Use. Chapter 2: Fields of Intellectual Property Protection, p. 40.
[15] For more information about Creative Commons licenses visit: CreativeCommons.org
[16] Definition of trade secrets in the European context retrieved from https://op.europa.eu/en/publication-detail/-/publication/ddf8fb93-ec0e-11e9-9c4e-01aa75ed71a1/language-en/format-PDF/source-164620483



3.1.11 Confidentiality Agreements

Confidentiality is an extremely important issue for participants in R&I projects, from the setting-up to the implementation and exploitation phases. Exchanging valuable information with other partners is generally a necessity that regularly occurs in collaborative initiatives or undertakings. Accordingly, confidentiality issues and measures should be taken into consideration to safely exchange information, facilitating the project development and ensuring the non-disclosure of sensitive technology, business or commercially confidential information. Confidentiality agreements provide protection and more security to an organisation that is about to share or make available information to another organisation by ensuring that confidential information will be used only for the permitted purposes agreed between the signatories of the agreement and will not be used or revealed to third parties without consent.

4 IPR Management Strategy

Under the frame of PATTERN, key IP and innovation management will be employed, with a view to setting a common understanding concerning the background, foreground, ownership (including joint ownership), access and usage rights, dissemination and exploitation during and after the project development. In this respect, the PATTERN IPR management strategy applies a comprehensive framework which separates the IP management processes of the project into the following stages:

- Grant Agreement preparation stage;
- Project implementation stage;
- Post-project stage.

Figure 1 illustrates the IPR management stages, as considered within PATTERN. More details about these stages are presented in the sub-sections that follow.

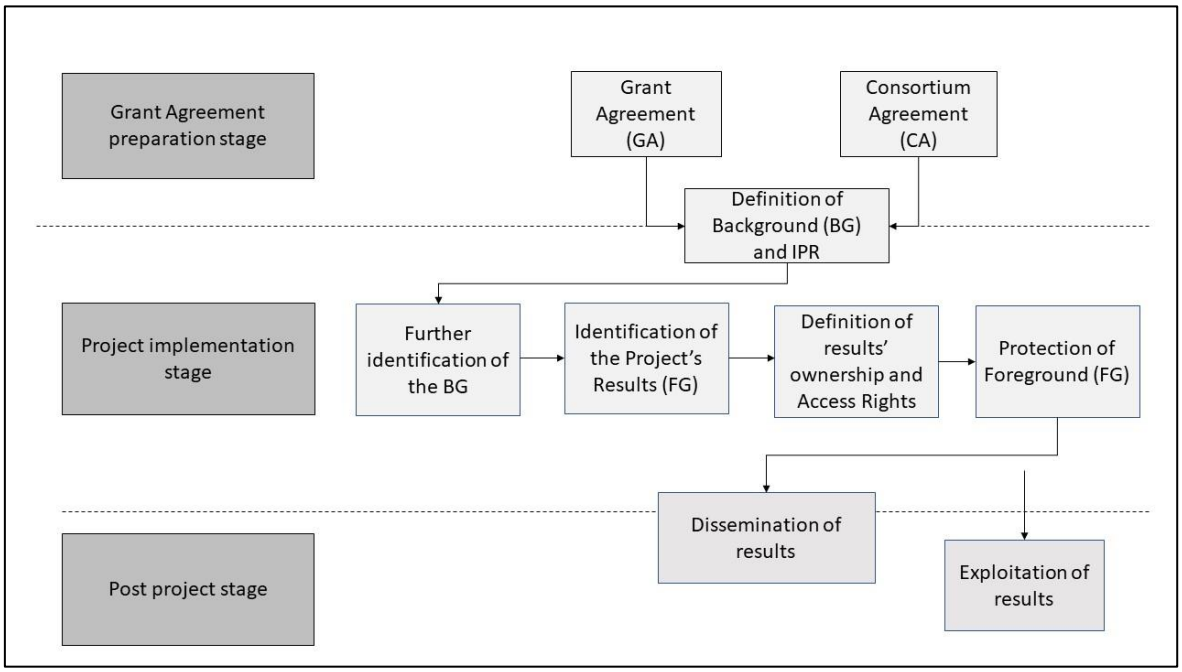
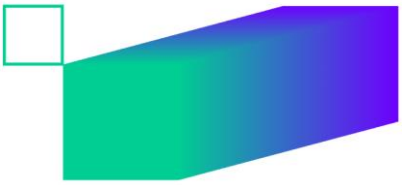


Figure 1: PATTERN IPR Management Stages

4.1 Grant Agreement preparation stage

Both the Grant Agreement and the Consortium Agreement constitute documents which include a description of several issues related to IPR. Their unique provisions represent a reference point for IPR issues among the project partners. Any further advancements regarding IPR actions to be put



in place by project partners will be facilitated under their underlying provisions.

4.1.1 Grant Agreement

The Grant Agreement (GA) constitutes a contract which sets out the key rules and conditions of the project and is conducted between the EC and the PATTERN partners. It represents the main contractual basis for PATTERN while its main points and sections referring to IPR are included in Article 16. Under this scheme, the management of the PATTERN IP is regulated, whereas access rights and obligations related to the background are set. In addition, the GA defines issues concerning the ownership and protection of the project's generated results, as well as their exploitation and dissemination outcomes. Finally, transferability and access rights to results are also defined in the PATTERN GA.

4.1.2 Consortium Agreement

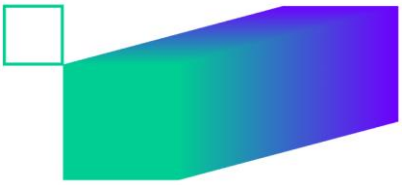
The Consortium Agreement (CA) constitutes a contract among the partners of PATTERN consortium which aims to define rights and obligations within the partnership for the purposes of carrying out the project's foreseen actions and activities. The CA minimises the probability of later disputes by providing rules and responsibilities during the project and it also defines the access rights to be granted to the partners regarding the project. In addition, the CA outlines rights and responsibilities among the consortium members concerning IP.

The PATTERN Consortium Agreement main points and sections referring to IPR are contained in:

- Section 8 "Results", that sets out provisions on ownership and joint ownership of results, as well as on their transfer and dissemination.
- Section 9 "Access Rights", which clarifies the access rights governing principles along with the access rights for the exploitation and dissemination purposes. It also states specific provisions for access rights to the software.
- Attachment 1 "Background included" that presents the initial list of usable background IP.

4.2 Project implementation stage

During the implementation stage of the project, IP handling procedures are foreseen to be applied among the PATTERN partners to properly organise results/assets management of the project. In this respect, as the project evolves, the focus will be on foreground identification, assets' ownership, access rights, and protection, as well as the exploitation of the project's results.



The PATTERN IPR management emphasises establishing robust handling procedures of the IPR issues that are of strategic importance to the project in order to facilitate the exploitation of its results.

Therefore, partners should focus on two different points:

- Providing access rights to their knowledge for other partners to carry out their work on the project.
- Establishing early asset identification procedures with a view to protecting, disseminating, and exploiting the project's assets, all while fostering long-term cooperation among partners and efficient project management.

In this respect, key IP-related issues in the PATTERN implementation phase include:

4.2.1 Background identification

During the first stages of PATTERN, it is imperative to identify the relevant knowledge, know-how and data of partners, complementary to those outlined in the consortium agreement, which constitute the background of the project. Under this framework, the underlying background can be attached to the generated assets of the project, which, eventually, will help the determination of access rights, ownership issues and IPR.

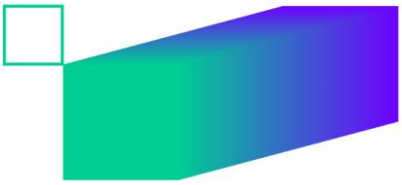
4.2.2 Foreground identification

A core process of the PATTERN IP management is the project assets' identification with a view to creating a concrete mapping of the project's assets and enhancing the PATTERN IP portfolio. Therefore, all IP valuable assets within the project must be identified, listed, named, described, and analysed in a systematic way.

4.2.3 Protection of results

Effective exploitation of the innovative concepts and assets developed under the frame of PATTERN depends on the protection of the project's results. In particular, the project's results must adequately be protected if protection is possible and justified, taking all relevant considerations into account, including the prospects for commercial exploitation, the legitimate interests of the other beneficiaries and any other legitimate interests (PATTERN GA, Annex 5, Article 16).

In this respect, when considering IP protection PATTERN partners must consider their own interests along with the interests of the whole consortium. Project partners must safeguard the identified exploitable PATTERN results with adequate protection schemes, which will offer a decent protection period within a suitable geographical territory. The table



that follows, illustrates the different protection instruments that can be applied to a variety of subjects.

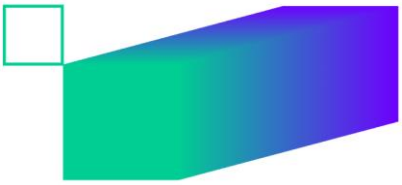
Subject Matter	Patent	Utility Model	Copyright	Trademark	Confidential Information
Invention	X	X			X
Software	X*	X	X		X
Scientific Article			X		
Technology Design			X	X	
Name of Technology				X	
Know How	X	X			X
Website			X	X	X

Table 2: Protection Instruments of Results

4.2.4 Dissemination of results

PATTERN partners are set to select the appropriate means for dissemination of project results (e.g. scientific publications, publication on websites, conferences, etc.), according to the conditions set forth in the CA[17] and in other specific confidentiality agreements that might arise in order to maintain confidentiality where needed during and after the end of the project. At M13, no confidentiality agreements are expected to be needed in the context of project activities. Additionally, partners are obligated to disseminate their results as soon as they are feasible by using publicly available formats in accordance with any restrictions due to IP protection, security rules or legitimate interests and the provisions of GA[18]. Along with that, the Open Science approach will be followed by partners, which focuses on spreading knowledge as soon as it is available using digital and collaborative technology. Considering that, PATTERN partners are requested to make their scientific publications available as Open Access publications, and grant access as open as possible and as closed as necessary[19]. All partners should be aware that they first ensure the protection of a project's

[17] See Section 8.4 of the PATTERN Consortium Agreement.
[18] See Article 17 and Annex 5 of the PATTERN Grant Agreement
[19] European Commission, Your guide to IP management in Horizon Europe, p.19



exploitable result and then proceed to dissemination actions of this or any other underlying result.

4.2.5 Post Project Stage

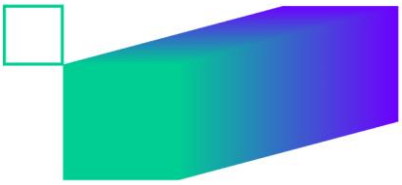
At the project's conclusion, the final version of the Strategic Exploitation Plan will be submitted, outlining the use that PATTERN consortium intends to make of its exploitable results and the related plans and time frame for their exploitation. The Plan will describe the further activities that need to be implemented in order to ensure the use and sustainability of PATTERN results. In addition, it will include the final findings concerning IP issues, as well as the final update of the IPR Matrix (See chapter 5), detailing the intellectual property rights applied and registered.

4.3 Role of the Exploitation Manager

The Exploitation Manager (EM) LOBA, is responsible for defining the project's Innovation and IPR Management Strategy, preparing the respective reports and ensuring that innovative ideas which arise during the project will be thoroughly examined and assessed for potential exploitation, while at the same time all background and foreground intellectual property of the project is managed. To this end, the EM will be in close communication with the Project Coordinator to ensure continuous feedback from escalating project activities from the start until the project completion. The EM also assumes a mediation role in case of IP conflicts, monitors project activities and feeds the development of the subsequent versions of this report in the context of PATTERN.

4.4 Knowledge Management of the Project

Efficient management of IP in PATTERN will be achieved through adopting a process able to identify IP results as well as to determine their adequate handling and protection. In this respect, it is essential to establish mechanisms that will guarantee that IP information is reliable and timely captured. Should WP Leaders identify a new asset that will be generated under their respective WP activities, the Exploitation Manager must be informed accordingly. The PATTERN EM constitute the party that will handle the screening and the managing of any newly identified assets and their corresponding IP issues that arise during the project's lifespan. The EM will direct the consortium partners in order to commonly establish the most adequate and efficient IPR strategy based on the nature of the newly identified asset and the purposes of the PATTERN consortium concerning the exploitation of this asset. To facilitate this process, the PATTERN IPR management strategy foresees creating and updating a living IPR Matrix (See chapter 5) to be revised and extended with new pieces of project results as the project's implementation advances.

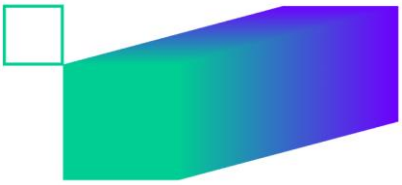


4.5 IP Conflicts

In order to proactively avoid IP conflicts, project partners will be well-informed about IP rules and guided through the exploitation process not only via the IPR Matrix but also through the help of the Exploitation Manager. The Exploitation Manager will provide assistance for the following indicative (and not exclusive) issues:

- Is there a possible misunderstanding about the definition of the exploitable result and therefore of the object of claims?
- Are there exploitation claims that should be further specified so that the partners can check the compatibility of their claims?
- Are the foreseen exploitation claims compatible with the ownership claims of the partners (related issue of access rights)?
- Are there any confidentiality issues e.g. on new knowledge of strategic importance for a partner and consequently the need for a confidential agreement?
- Are there any possible IP conflicts between the partners, both related to ownership and the related need for access rights and to exploitation claims?

In terms of IP conflict, the Exploitation Manager will encourage conflicting parties to get in contact and proactively find solutions, making written agreements whenever necessary. In case no agreement will be achieved, internal mediation process will be kicked off following the provisions of section 11.8 of the PATTERN Consortium Agreement.



5 IPR Matrix Methodology

The PATTERN IPR management approach foresees the utilisation of an IPR Matrix to define the main IPR issues concerning the PATTERN Innovation and IPR Management Strategy. This approach will support all project partners in identifying and managing the background, foreground knowledge and exploitable results of the project, and also of potential co-innovators, in order to have a full overview of IP protection and the necessary agreements to enable successful exploitation of the project's offerings.

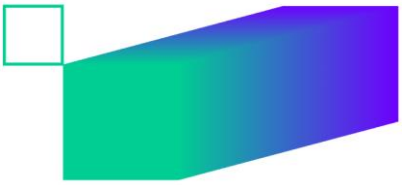
The IPR Matrix methodology is comprised of 4 distinct but interconnected steps, as follows:

- Step 1: Identification of the background IP and definition of access rights among partners (within the project).
- Step 2: Identification of the results, which constitute the foreground IP of the project and are foreseen to be generated under the PATTERN activities.
- Step 3: Identification of the project's exploitable results/assets along with the main contributing partners to each asset. This activity will be integrated into the Second dissemination, communication and exploitation plan (M18).
- Step 4: Definition of a preliminary framework of IPR protection for the identified PATTERN assets, which will enhance their further exploitation.

At this early stage of the project, the objective of the Innovation and IPR Management Strategy is, on the one hand, to define the main assets and, on the other hand, identify to the extent possible, the BG and FG IP of the project along with their corresponding access rights. During the later stages of the project's implementation, the IPR methodology will be revised accordingly, in order to capture and integrate the evolution of the identified results and the project's IPR approach. In particular, the identification of exploitable assets would result in the need to establish an ownership regime among project partners for each one of the exploitable results. In addition, rules and conditions to get access to exploitable results will also be considered later on.

Under this framework, the structure of the IPR Matrix that will be used throughout the project is summarised in the following table.

Background (BG)	Foreground (FG)	Exploitable results (ER)
BG#	FG#	ER#



Partner's Background **Contributing Partner** **Short Description of BG** **Type of Protection** **Conditions to Use within PATTERN** **Conditions to use outside PATTERN** **Interest in further exploitation through PATTERN results**	Project Result Contributing Partners Short Description of FG Related BG# Type of Protection Conditions to Use within PATTERN Interest in Further Exploitation of Project Results Conditions to Use after the end of the Project	Exploitable result Main partner Further contributing partner(s) Related FG# Related BG# (BG owner) Proposition for the ER-owner Exploitation claims Relevance for IP Protection

Table 3: Structure of the IPR Matrix

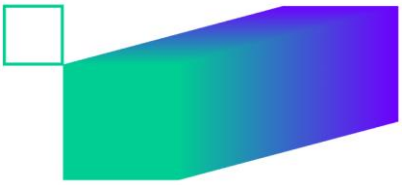
5.1 Identification of Background IP

In the first part of the IPR Matrix, the background IP that will be used during the project's implementation shall be identified, as illustrated in the following table.

Relevant Background	Contr. Partner	BG numb	Short description of BG	Type of protection	Conditions to use within PATTERN	Conditions to use outside PATTERN	Interest in further exploit. through PATTERN results

Figure 2: IPR Matrix Background

In the 1st column of this part of the IPR Matrix, the project background knowledge is listed. In the 2nd column, the name of the partner who owns this background is indicated. For each identified background required for the creation of the result, a specific background number per partner shall be assigned. In column 3, the corresponding background number shall be



indicated, while column 4 should include a short description of the background. In column 5, partners shall indicate the IP protection of the BG (if any). In the 6th column, the conditions to use the background within the project (e.g. free to use or subject to charges, etc.) shall be indicated by each partner, whether there are any restrictions to use the background or not. In the 7th column, the background's condition to use outside PATTERN is indicated while in the last column partners shall mention if they have any interest in exploitation of the relevant background through the project results.

5.2 Identification of Foreground IP

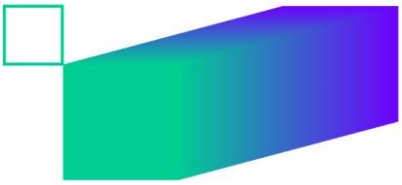
In the second part of the IPR Matrix, the foreground IP of the project is registered, as presented in the following table.

PR#	Project result (PR)	Main Partner	Contrib. partner	Rel. BG	Short description of FG	Type of protection	Use in PATTERN	Use after the project

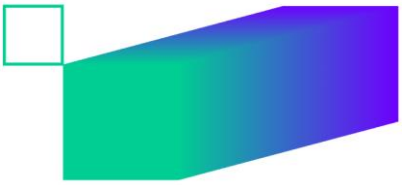
Figure 3: IPR Matrix Foreground

In the first four columns, the PATTERN results to be developed, along with the corresponding main and contributing partners, are listed. In the 5th column, the related background number is indicated. In the 6th column, a short text describing the identified FG shall be included by the responsible project partner. In the 7th column, partners shall indicate relevant IP protection type for the FG, in terms of patents, copyright, etc. In the next column, the conditions to use the FG within PATTERN (e.g., free to use or subject to charges, etc.) shall be indicated by each partner whether there are any restrictions to use the FG or not. In the last column, the project partners shall describe if they have an interest in exploitation of the project result.

The results of the Foreground IP identification, as defined at this stage of the project, are presented in chapter 6.



The identification of the Exploitable Results will be part of the next update of the Strategic Exploitation Plan on M18.

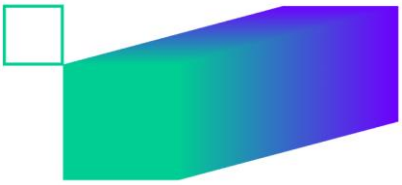


6 PATTERN's Assets, Background IP, Foreground IP

6.1 Identified Assets of PATTERN

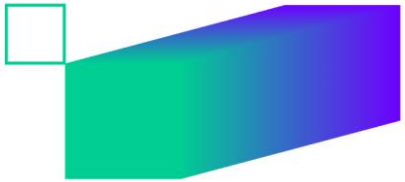
The main assets of PATTERN, as identified by the consortium at this stage of the project, along with their description are presented in the table that follows.

Title	WP	Brief description	Main partner leading the development
Report on the analysis of existing training activities and quality assessment (D1.1)	1	Overview on open and responsible research and innovation (open RRI) training opportunities for researchers at all stages of their careers in Europe, including the identification of gaps and opportunities in open RRI skills training.	AU
PATTERN Platform	2	A training and discovery platform that will enable learners to easily access and make use of those materials mapped in WP1 in the long-term.	LPI
PATTERN Trainings	3	Personalised training programmes building on WP1 mapped materials delivered within PATTERN Pilot Organisations and focused on: open access, research integrity, management and leadership, FAIR data management, science communication, dissemination and exploitation of results,	OpenAIRE



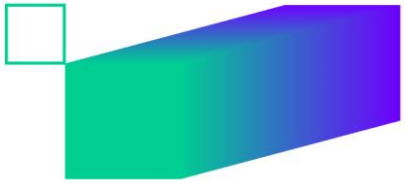
		citizen science, gender, non-discrimination and inclusion in research	
PATTERN Policy recommendations	4	Policy recommendations on open RRI practices building on PATTERN pilot results, addressing authorities and institutions responsible for researcher training.	ESF
PATTERN website	5	PATTERN website offering access to the PATTERN offerings (public results, dissemination materials, training materials, events, etc.)	LOBA

Table 4: PATTERN main assets



6.2 Background IP

Relevant Background	Contr.Partner	BG numb	Short description of BG	Type of protection	Conditions to use within PATTERN	Conditions to use outside PATTERN	Interest in further exploit. through PATTERN results
Digital tools used during the PATTERN project	LPI	BG.1	The PROJECTS / WELEARN / PEOPLE PLATFORMS code (front-end and backend).	N/A	PATTERN projects data is accessible to the Consortium projects members directly through the platform web interface (dashboards) or through specific technical APIs.	Excluded	TBD
Open Plato	OpenAIRE	BG.2	A learning platform composed of a learning management system (LMS), based on the open-source Moodle platform, and a training resource catalogue	N/A	OpenPlato is free to use (for learners) and metadata are being made as FAIR compliant as possible. Resources are licensed CC-BY 4.0 and also made available through Zenodo.	Excluded	TBD
OpenAIRE Research Graph	OpenAIRE	BG.3	Metadata knowledge graph encompassing entities and relationships among research products, funders, organisations, authors, and services.	CC-BY 4.0	Graph metadata is accessible via API and peropdic dumps.	Excluded	TBD
OpenAIRE MONITOR	OpenAIRE	BG.4	An on-demand service built upon the OpenAIRE Research Graph, offering tailor-made data and visualisation monitoring dashboards for institutions, funders and research infrastructures,		Please refer to the terms of use.	Excluded	TBD

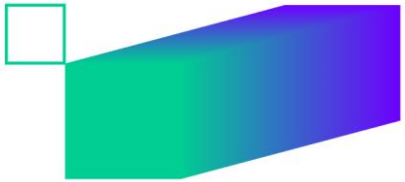


			populated with well-rounded, timely and accurate monitoring indicators of research activities.				

Table 5: Background IP

6.3 Foreground IP

PR#	Project result (PR)	Main Partner	Contrib. partner	Rel. BG	Short description of FG	Type of protection	Use in PATTERN	Use after the project
1	Report on the analysis of existing training activities and quality assessment (D1.1)	AU	All	N/A	Overview on open and responsible research and innovation (open RRI) training opportunities for researchers at all stages of their careers in Europe, including the identification of gaps and opportunities in open RRI skills training.	CC-BY	Free	Free
2	PATTERN Platform	LPI	OpenAIRE	BG1 BG2	A training and discovery platform that will enable learners to easily access and make use of those materials mapped in WP1 in the long-term.	To be defined*	Free	Free
3	PATTERN Trainings	OpenAIRE and partners who are developing the training	All	N/A	Personalised training programmes building on WP1 mapped materials delivered within PATTERN Pilot Organisations and focused on: open access, research integrity, management and leadership, FAIR data management, science communication, dissemination and exploitation of results, citizen science, gender, non-discrimination and inclusion in research.	CC-BY or CC-By-NC	Free	Free

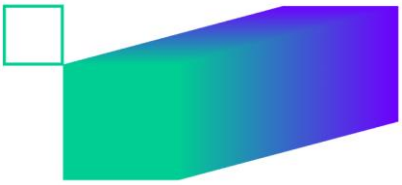


4	PATTERN Policy recommendations	ESF	All	N/A	Policy recommendations on open RRI practices building on PATTERN pilot results, addressing authorities and institutions responsible for researcher training.	CC-BY	Free	Free
5	PATTERN website	LOBA	All	N/A	PATTERN website offering access to the PATTERN offerings (public results, dissemination materials, training materials, events, etc.)	Copyright	Free	Free

Table 6: Foreground IP

*Possible IP protection of PATTERN platform may include:

- Copyright (e.g., for source code; user manual; graphic elements; original databases);
- Trademark;
- Industrial design (e.g., for graphical user interfaces);
- Sui generis database protection (in the case of non-original databases);
- Trade secrets (confidential business information);
- Domain name.



7 Initial exploitation plans per asset

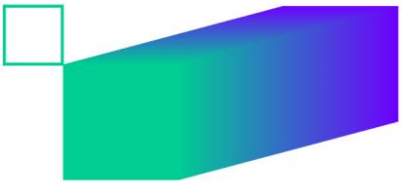
In this chapter of the impact, exploitation and sustainability strategy, the main assets of the PATTERN project are described, along with the main contributors to their development. It also addresses who their projected users could be, what the expected benefits from exploiting that asset are as well as how that exploitation is expected to happen. In parallel, the main creator of each asset indicates any foreseeable action that may be needed to facilitate the intended exploitation of the asset. More specifically, in this chapter, the main creators of the PATTERN assets indicate what needs to be done, when and by whom. The above information is presented in two tables for each asset:

- One table summarising the exploitation plan of that asset.
- A second table summarising any actions needed for the exploitation of that asset.

Each asset is presented in a different sub-section of this chapter

7.1 Report on the analysis of existing training activities and quality assessment

Asset description	Overview on open and responsible research and innovation (open RRI) training opportunities for researchers at all stages of their careers in Europe, including the identification of gaps and opportunities in open RRI skills training.
Creators of Asset	The main creator of the asset is AU with the support of all partners.
Intended users and expected benefits from exploiting the asset	The main users of the Report on the analysis of existing training activities and quality assessment will be academics and researchers at all stages of their career.
Intended exploitation route	The Report on the analysis of existing training activities and quality assessment will be disseminated through the project's website, as well as through well-known open repositories (e.g., Zenodo, Horizon Results Platform), providing the interested parties with information about the benefits of integrating open RRI principles in their research processes. The report will serve as basis for the development of infographics and factsheets introducing the most appealing learning opportunities in the fields of: open access, research integrity, management and leadership, FAIR data management, science



	communication, dissemination and exploitation of results, citizen science, and gender, non-discrimination and inclusion in research.

Table 7: Exploitation plan for the Report on the analysis of existing training activities and quality assessment

	What?	By whom?	When?
IPR	CC-BY	No actions needed.	During the project.
Communication and dissemination	The Report on the analysis of existing training activities and quality assessment and related materials will be extensively disseminated to all target users following its exploitation route described above.	LOBA with the support of all partners.	During the project.

Table 8: Actions needed for the exploitation plan for the Report on the analysis of existing training activities and quality assessment

7.2 PATTERN Platform

Asset description	A training and discovery platform that will enable learners to easily access and make use of those materials mapped in WP1 in the long-term.
Creators of Asset	The main creator of the asset is LPI with the support of OpenAIRE.
Intended users and expected benefits from exploiting the asset	The main users of PATTERN platform are academics, researchers and end users interested in incorporating open RRI principles and expertise in their research and management processes.
Intended exploitation route	While the initial target users will belong to Pilot organisations and Consortium partners through the delivery of WP3 trainings, we will consider extending target groups to policymakers, and industry professionals who could benefit from understanding RRI principles. Collaborations will be explored with universities and research institutions with a view to integrating the platform and stored resources into their existing programmes. We will leverage the services of Horizon Results Booster (process already initiated with REINFORCING project) to boost networking with similar EU-funded projects and initiatives which

	could be interested in using the platform, even after project's end, for the benefit of their beneficiaries.

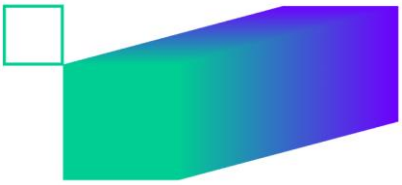
Table 9: Exploitation plan for PATTERN Platform

	What?	By whom?	When?
IPR	To be defined.	To be defined.	During the project.
Testing, validation and finetuning	PATTERN Platform will be first tested by PATTERN Consortium members. To ensure high quality control of the PATTERN platform, a test plan will be prepared on the specific areas and functionalities proposed for this project.	LPI with the support of OpenAIRE.	During the project.
Communication and dissemination	We will utilise SEO strategies and content marketing to improve the platform's visibility online. Whenever applicable, webinars and networking events will be organised for attendees to discuss RRI-related topics. Consortium networks, including Pilot organisation will be leveraged to address potential end users.	LPI, OpenAIRE, LOBA with the support of all partners	During the project.

Table 10: Actions needed for the exploitation plan for PATTERN Platform

7.3 PATTERN trainings

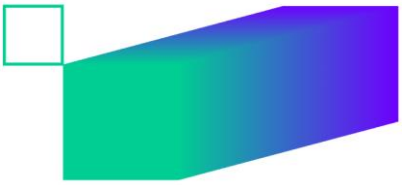
Asset description	Personalised training programmes building on WP1 mapped materials delivered within PATTERN Pilot Organisations and focused on: open access, research integrity, management and leadership, FAIR data management, science communication, dissemination and exploitation of results, citizen science, and gender, non-discrimination and inclusion in research.



Creators of Asset	The main creator of the asset is OpenAIRE with the support of all partners.
Intended users and expected benefits from exploiting the asset	The main users of PATTERN trainings are academics, researchers and end users interested in incorporating open RRI principles and expertise in their research and management processes.
Intended exploitation route	Collaborations will be explored with universities and research institutions with a view to integrating the platform and stored resources into their existing programmes. We will explore the possibility of developing certificates upon completion, which could be used for professional development credits. We will further explore the possibility of having the trainings accredited by relevant educational or professional bodies. If possible, we will conduct research on the effectiveness of the RRI trainings and publish the findings, contributing to increase the credibility of the trainings and of open RRI as a whole.

Table 11: Exploitation plan for PATTERN trainings

	What?	**By whom?**	**When?**
IPR	CC-BY	OpenAIRE	During the project.
Testing, validation and finetuning	PATTERN trainings will be first delivered in PATTERN Pilot organisations and will be subject to refinement to respond to the needs of end-users across 2 learning cycles, each 12 months long.	OpenAIRE, all partners.	During the project.
Communication and dissemination	We will utilise SEO strategies and content marketing to improve the trainings' visibility online. Whenever applicable, webinars and networking events will be organised for attendees to discuss RRI-related topics and present possible gaps	OpenAIRE and LOBA with the support of all partners	During the project.



	that can be filled by the trainings. Consortium networks, including Pilot organisation will be leveraged to address potential end users.		

Table 12: Actions needed for the exploitaiton plan of PATTERN trainings

7.4 PATTERN Policy recommendations

Asset description	Policy recommendations on open RRI practices building on PATTERN pilot results, addressing authorities and institutions responsible for researcher training.
Creators of Asset	The main creator of the asset is ESF with the support of all partners.
Intended users and expected benefits from exploiting the asset	Policy makers, authorities and institutions responsible for researcher training.
Intended exploitation route	The exploitation route of PATTERN Policy recommendations goes in line with expected dissemination and communication activities, which may include: publishing in peer-reviewed journals; presenting at relevant conferences and workshops; the creation of concise Policy Briefs (D4.2 and D4.3); promote the recommendations together with corresponding podcasts to share with a wider public; posting the recommendations on related EU projects and initiatives; hosting webinars and virtual workshops to discuss the recommendations; distribute the recommendations through newsletters or targeted email campaigns. Additionally, the possibility of integrating the policy insights, stemming from the recommendations, into the PATTERN trainings will be evaluated during the course of the project.

Table 13: Exploitation plan for PATTERN Policy Recommendations

	What?	By whom?	When?
IPR	CC-BY	ESF	During the project.
Communication and dissemination	Please refer to the intended exploitation route.	ESF, APRE, LOBA and all partners	During the project.

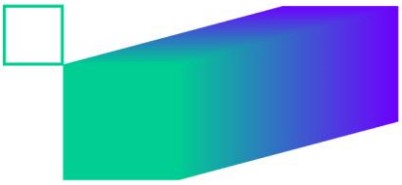


Table 14: Actions needed for the exploitation plan of PATTERN Policy recommendations

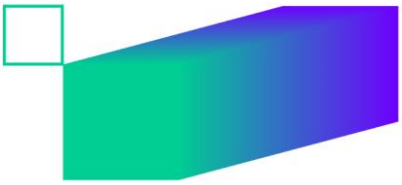
7.5 PATTERN website

Asset description	PATTERN website offering access to the PATTERN offerings (public results, dissemination materials, training materials, events, etc.).
Creators of Asset	The main creator of the asset is LOBA.
Intended users and expected benefits from exploiting the asset	Academics, researchers, university students, policy makers, authorities and institutions interested in open RRI practices.
Intended exploitation route	PATTERN website will be kept live for 5 years after the end of the project, ensuring access to all hosted resources and information beyond project lifespan.

Table 15: Exploitation plan for PATTERN website

	What?	**By whom?**	**When?**
IPR	Copyright	LOBA	During the project.
Testing, validation and finetuning	PATTERN website was improved based on collected feedback, and will continue to be, improved throughout the project.	LOBA	During the project
Communication and dissemination	Please refer to the intended exploitation route.	ESF, APRE, LOBA and all partners	After the project.

Table 16: Actions needed for the exploitation of PATTERN website



8 Conclusions

This initial version of the PATTERN Strategic exploitation plan has described the strategy and methodology employed in this respect within the framework of PATTERN, while also providing an overview of its Background and Foreground IP. A dedicated tool, namely the IPR Matrix, has been elaborated in order to facilitate the identification and management of PATTERN's assets by project partners under the supervision of the Exploitation Manager (LOBA) throughout the project.

Accordingly, the Exploitation and Sustainability Plan of PATTERN project will be updated to reflect the interim (M18) and final (M42) project results along with their protection, ownership, access rights with the support of all partners. The final version of the Strategic exploitation plan will provide a more accurate outline of the main exploitable assets of the project, the main target groups of external stakeholders (e.g. prospective end-customers, end users and beneficiaries) and the potential benefits they stand to gain from PATTERN's outcomes, the exploitation plans per asset, per partner and per groups of partners. Alongside, the updated report will encompass the measures that have been taken to protect the partnership's IP, fostering the successful post-project exploitation and sustainability of the project's assets.

The Exploitation Manager will keep the plan updated and monitor project activities as they evolve so as to timely become aware of any potential conflicts of interest and to facilitate their resolution before the end of the project, as well as to feed the development of the updated version of this report in the context of PATTERN.

PATTERN.

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