EUROPEAN
POLICYBRIEF

FIRST PATTERN POLICY BRIEF

Policy Brief after the 1ˢᵗ Reporting Period to inform the policymakers

PATTERN.

Empowering Open and Responsible
Research and Innovation

29 April 2024

INTRODUCTION

The EU-funded PATTERN project aims at developing and piloting training around various Open and Responsible Research and Innovation (Open RRI) principles and practices. It also explores how policies at different levels can effectively frame an overarching strategy to support the provision of knowledge on transferable skills, facilitate institutional capacity building and ultimately empower research communities for increased scientific and societal impact.

The First PATTERN Policy Brief draws on the state-of-the-art analysis of the policy landscape for training opportunities for researchers on Open RRI at European, national and institutional levels (2023) as well as on co-creation in Open Studio Cycle 1 (2024) in which the insights were operationalised into recommendations.

This Policy Brief focuses on the identified gaps in the policy landscape and how they could be addressed from the European and/or national perspective.

EVIDENCE AND ANALYSIS

The following PATTERN policy observations and recommendations for policymakers build on the outcomes of the extensive policy mapping and the subsequent co-creation via a PATTERN Open Studio.

Policy mapping and analysis covered three levels: European, national and institutional policies.

European level analysis outlined the state-of-the-art of existing European Union (EU) regulatory and funding policies to support provision of knowledge on transferable skills aimed at researchers.

National level analysis showed the current state of relevant national policy and legal frameworks in the countries hosting PATTERN pilot institutions: Croatia, Denmark, France, Greece, Hungary, Ireland, Italy, the Netherlands, Portugal and Türkiye. Particular attention was paid to assessing the extent to which the national/regional policies embed relevant European practices.

Institutional level covered 14 PATTERN pilot institutions. An assessment of the extent to which the institutional policies follow relevant European and national/regional policies, as well as funding policies and practices at these levels, was an intrinsic part of the analysis.

In total, 31 European policies and initiatives have been mapped, along with 127 national and 107 institutional policies.

The policies mapped targeted the need for training around **eight main transferable skills in the context of Open RRI**: 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 policymakers); Management and Leadership.

An **Open Studio technique** was applied for co-creating the policy recommendations, bringing together multiple expertise. The participants went through phases of open discussion and brainstorming of ideas (divergence) and subsequent concretising of the ideas as well as validating and fine-tuning of them (convergence).

In PATTERN Open Studio Cycle 1, the participants explored potential avenues for better regulation and delivery of training on Open RRI with the aim of providing an added value to the results of policy mapping. This involved assessing gaps and needs in the policy landscape.

Overall, the activities this Policy Brief builds on, were implemented with the following timeline:

- M1- M5 (January – May 2023) – creating an EU policy mapping framework and collection of EU policy mapping outputs.
- M6-M8 (June-August 2023) – analysis of data gathered, elaboration of findings and refinement of national and institutional policy mapping framework.
- M9-M10 (September – October 2023) – collection of national and institutional policy mapping outputs.
- M11-M12 (November – December 2023) – data processing and development of the policy mapping report ([D4.1](#)).
- M13-M15 (January – March 2024) – preparation of the Open Studio Cycle 1.
- M15 – M16 (March – April 2024) – implementation of the Open Studio Cycle 1, development of the first PATTERN Policy Brief.

Cross-cutting principles and points seen at all three policy levels are the following:

- **Integrating the need for enhancing skills on Open RRI** practices in the research sector, into strategic priorities as **part of core values and goals**.

- **Focus on the social responsibility of science**. Provision of knowledge on Open RRI will foster the integration of researchers' expertise into activities and discussions that promote the education of

students and members of the public. This will connect research environments, outputs and methodologies to communities, thereby enhancing interest in science and public engagement.

- **Slow, but clear dynamics towards progressive harmonisation of policies at all three levels.**

- Even if **national funding** is less visible than the European one, it **often sets the same requirements and eligibility criteria for institutions that wish to access funding**, particularly on gender equality plans, ethics, trans-disciplinarity and other matters. The mandatory nature of these provisions requires equipping researchers with relevant transferable skills.

- In the policies, there are **two ways to approach the need for researchers to get relevant knowledge**: i) broader perspective – provision of knowledge on transferable skills as part of researchers' professional development and career advancement and ii) directly mentioning a need to receive training for a specific transferable skill.

- The policies have different levels of detail but have in common **the need for additional time and willingness to translate them into concrete actions**. These include stimulating interest in and integration of the training on transferable skills within research activities and the universities' environment.

Several overarching gaps in the policy landscape were also identified:

1. **Sustainable funding issue needs to be balanced across the research ecosystem.** Funding is pivotal if the research institutions and universities are to increase their provision of training opportunities. The lack of sustainable funding forces universities to focus on attracting and retaining students and generating a managerial model based on short-term objectives that prevents investment in research in the longer term. To ensure long-term strategic planning, there is a need to improve the synergies across research, education and training policies from one side, and funding schemes at all levels from the other.

2. **The policies typically do not explicitly address the necessity of a holistic educational approach covering all aspects of Open RRI.** There is a broad consensus among stakeholders at different levels that Open RRI should become the new *modus operandi* of research and that relevant transferable skills should be reinforced within the research community. However, there is a need to strengthen policy support to make the transition.

3. **Knowledge on certain Open RRI related skills is better reflected in the policies compared to other Open RRI skills**. Open Access, FAIR data and Research Integrity are the most popular, while various aspects of inclusion and non-discrimination (except gender equality plans), management, citizen science and others among those identified by PATTERN, are not appropriately covered. Similarly, the links between different transferable skills are insufficiently explored, e.g. between those relevant to citizen science and science communication, or between gender equality and leadership.

4. **Many policy documents, especially at European level, but also multiple strategic documents at national and institutional levels, provide general principles, but lack more detailed guidance.** Both researchers and trainers may benefit from additional resources or examples that illustrate how to effectively incorporate Open RRI principles into training programmes.

5. **Insufficient acknowledgement of potential challenges and variations in implementing Open RRI principles across different cultural, disciplinary and other contexts.** While many documents acknowledge the importance of national and institutional contexts, more explicit guidance could be

useful on fostering international collaboration and addressing challenges associated with cross-border research and knowledge exchange.

6. **Lack of comprehensive mechanisms for monitoring the policies' implementation**. The relevant policies do not usually outline specific processes, bodies, or indicators to monitor their degree of implementation or evaluate their impacts.

7. **Including Open Science practices into research evaluation**. Despite the recent progress, researchers mostly continue to be rated on authorship of peer-reviewed publications. Such change might enable more interest in Open Science transferable skills within the research community, in addition to multiple benefits of Open Science as such.

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POLICY IMPLICATIONS AND RECOMMENDATIONS

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The findings and recommendations to strengthen policy support of integrating Open RRI principles and practices into trainings for researchers, are divided into the three main interlinked clusters below:

1. National and institutional policies are broadly in line with guiding principles on Open RRI promoted at the European level. Policymakers may leverage the power of this positive dynamic and increase linkages between different policy levels, with actions that:

   - Support developing the training in line with Horizon Europe and other core policy requirements and recommendations, including by providing information about policy as part of the training.

   - Create an outline of policies at EU level for countries that do not have comprehensive Open RRI policies.

   - Create an action framework at a national level, to be developed and applied at institutional level by universities and research institutions.

2. To respond to societal challenges and help adapt the training to what the institutions and their research communities entail, policies should stimulate and accommodate a bottom-up process for defining the training needs. Therefore, there is a need for policies that:

   - Emphasise adaptability in their approaches, ensuring they can be tailored to specific contextual needs taking geographical, cultural, disciplinary and organisational specificities into consideration.

   - Support training of researchers on transferable skills to improve the quality of research activities and research environment, but also to foster alternative career paths for researchers and inter-sectoral mobility.

   - Support the researchers in acquiring the transferable skills that will be evaluated as part of the research assessment framework, e.g. as part of the CoARA framework.

3. Many policies mapped at all levels mention the need for training on Open RRI aimed at researchers but are not supported by clear monitoring and evaluation indicators and mechanisms that could foster their implementation. Thus, the policies should enhance the evaluation culture and:

- Balance quantitative evaluation (e.g. number of policies featuring the need for relevant training) and qualitative evaluation (e.g. continuous engagement with the topic, limitations of the policies, opinions of different stakeholders).

- Balance short-term and long-term indicators and mechanisms to get more comprehensive data and sustainability focus.

- Pay special attention to the cross-cutting dimension of monitoring the policies' implementation: harmonise cross-country aspects and strengthen the links between Open RRI topics to enhance policy support of cross-thematic training.

SUSTAINABILITY AND LEGACY

PATTERN develops:
- Individual, tailored training plans in 14 pilot institutions.
- Training modules strengthening researchers' transferable skills around eight Open RRI themes mentioned above, that will be tested, finetuned and evaluated in two learning cycles.
- Training platform adapted to Project Based Learning methodology and accompanied by the modules' sustainability plan.
- Set of co-created recommendations for various stakeholders, including policymakers, research funding organisations, research performing organisations, research staff and students at universities and research institutions.
- Dissemination and advocacy actions to promote the uptake of the recommendations and modules, and the improvement of policies or the development of new policies by policymakers at all levels.
- A community of universities and research institutions willing to create and deliver comprehensive trainings on Open RRI themes to their researchers and students. The community involves PATTERN partners but aims to progressively extend to the wider community during and beyond the project lifetime, facilitating the exchange of knowledge and implementation of policies.

The project outputs related to the Policy brief can be consulted on PATTERN Zenodo community on https://zenodo.org/communities/pattern/:

D1.1 Report on the analysis of existing training activities and quality assessment
D4.1 State-of-the-art Analysis: Mapping of the policy landscape for learning opportunities for researchers on Open and Responsible Research and Innovation

This specific Policy Brief is available at: 10.5281/zenodo.10998470.

PROJECT OBJECTIVES AND METHODOLOGIES

The PATTERN (Open and Responsible Activities and Trainings Towards the Enhancement of Researchers Networks) project aims to promote the practice of Open RRI by developing and piloting training activities for researchers at all stages of their careers.

The training will strengthen researchers' transferable skills to support their career development, improve research capacities and outcomes, and stimulate innovation. These training activities are co-designed with and implemented by pilot research performing organisations (RPOs) to improve the excellence of the science conducted, tackle pressing societal challenges and strengthen collaboration that benefits both science and society.

The training is developed around eight main transferable skills in the context of Open RRI:
- 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; policy makers);
- Management and Leadership.

Therefore, the consistent methodology applied in PATTERN is based on four subsequent Running Phases:

1. **Consolidation of knowledge** on existing trainings and policies featuring the need for training on Open RRI themes to identify the potential for new training activities for researchers at all stages of their careers and linking it to the policy component;
2. **Developing PATTERN training activities and platform** that enable learners to easily access and make use of those materials in the long-term;
3. **Testing and evaluating PATTERN training modules** to further refine them;
4. **Finding evidence for policy development**.

In addition, there is a horizontal Holding Phase which is a **co-creation and co-design** methodological approach across all activities. Dissemination, communication and engagement activities also assure widespread outreach of the projects' results and outcomes to reach its impacts.

PROJECT IDENTITY

PROJECT NAME	Open and Responsible Activities and Trainings Towards the Enhancement of Researchers Networks (PATTERN)
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Learning Planet Institute – LPI – Paris, France

OPENAIRE AMKE – OpenAIRE - Marousi, Greece

Ruđer Bošković Institute – RBI - Zagreb, Croatia

Stichting SciLink – SciLink - Amsterdam, the Netherlands

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Università Vita-Salute San-Raffaelle – UniSR - Milan, Italy

Universidade do Minho – Uminho - Braga, Portugal

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University of Helsinki – Uhelsinki – Helsinki, Finland

Trinity College Dublin - TCD – Dublin, Ireland

Izmir Institute of Technology – IZTECH - Izmir, Türkiye

University of Debrecen – UDebrecen - Debrecen, Hungary

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FURTHER READING	D1.1 Report on the analysis of existing training activities and quality assessment D4.1 State-of-the-art Analysis: Mapping of the policy landscape for learning opportunities for researchers on Open and Responsible Research and Innovation All project outputs are available on the PATTERN Zenodo community at: https://zenodo.org/communities/pattern/