



EUROPEAN POLICY BRIEF



ERA FABRIC

GIVING SUBSTANCE TO THE CONCEPT OF ERA HUB

State of play after one year of project work

December 2023

Throughout the policy brief, attempt should be made to address the following questions:

ERA Hub is a **novel policy concept** focused on connecting and enhancing the place based research and innovation ecosystems in Europe. It aims to foster collaboration, knowledge transfer, talent circulation, and policy alignment among different regions, sectors, and disciplines within the European Research Area (ERA). ERA Hubs are expected to **contribute to the EU's strategic priorities**, such as the green and digital transitions, investing in skills and education, supporting innovative businesses, and developing a robust industrial policy.

The ERA Hub concept is still in its early stages of development and testing, which doesn't make it suitable for immediate adoption. **Two EU funded projects** - COOPERATE and ERA_FABRIC - are now engaged in addressing some of its acknowledged limitations, including:

- The lack of a clear definition and criteria for deciding what constitutes an ERA Hub, and how it differs from other existing initiatives and networks;
- The need for a balanced representation and participation of different types of R&I stakeholders, ensuring diversity and inclusiveness;
- The challenge of a comprehensive definition of ERA Hub considering the different European contexts and the still existing innovation gap among regions;
- The potential duplication of efforts and resources between the ERA Hub and other R&I policy measures, actors and intermediaries;
- The need to recognise a relation between the ERA Hub and other EU policies regarding infrastructures, education, entrepreneurship, industry;
- The difficulty of measuring and evaluating the impact and added value of the ERA Hub, and the need for a common framework and indicators;
- The uncertainty on the long-term sustainability and scalability of the ERA Hub, inclusive on the funding requirements and possible support mechanisms.

None of these limitations seems insurmountable, anyway. This joint policy brief reports about the ongoing efforts to address them through consultation, co-creation, and experimentation. A preliminary conclusion is that **the ERA Hub concept could indeed be a promising way** to coordinate and better align policies and strategies at different levels in the European Research

Area, to foster innovation across regions and sectors. However, we should resist the temptation of looking at it as a 'missing tree in the forest', as there can be other existing trees providing the same ecosystemic functions, although in a fashion that has still to be considered too immature or incomplete.

Relation between ERA Hubs and EU strategic priorities

ERA Hubs are strategically positioned to directly inspire, align with and contribute to the EU's key strategic priorities. These include the European Green Deal, aiming for a sustainable green transition, the Digital Europe Programme, focusing on the digital transformation of society and the economy, and the European Skills Agenda, enhancing education and training for the digital age. ERA Hubs serve as catalysts in these areas, promoting initiatives and collaborations that drive progress towards these crucial goals.

In the context of the green transition, ERA Hubs could facilitate the development and deployment of green technologies by connecting research institutions with industry players and policy-makers. For the digital transition, these hubs could act as incubators for digital innovation, supporting start-ups and SMEs with the resources and expertise needed to develop and implement cutting-edge digital solutions.

ERA Hubs can play a pivotal role in nurturing innovative businesses by providing them with access to research networks, funding opportunities, and market insights. Moreover, these hubs can contribute to the development of robust industrial policies by offering a platform where policymakers, industry leaders, and academics can collaborate to identify and address key industrial challenges and opportunities.

Enhancing Diverse and Inclusive Stakeholder Participation in ERA Hubs

To maximize ERA Hubs' effectiveness, fostering diverse and inclusive stakeholder participation is crucial. Key strategies include:

- **Inclusive Governance:** Implement governance models in ERA Hubs that represent a broad spectrum of stakeholders, including academia, industry, government, and civil society. Prioritize the inclusion of underrepresented groups for diverse perspectives.
- **Cross-Sectoral Collaboration:** Create platforms in ERA Hubs to promote collaborations and idea exchange across different sectors and disciplines, thereby fostering boundary-spanning innovation.
- **Targeted Outreach:** Deploy outreach programs aimed at engaging underrepresented communities in research and innovation, including mentorship, collaborative projects, and networking events.
- **Flexible Participation:** Ensure ERA Hubs have adaptable participation methods to allow various stakeholders, especially smaller entities like start-ups and SMEs, to contribute meaningfully.
- **Interdisciplinary Initiatives:** Support interdisciplinary research within ERA Hubs, combining social sciences and humanities with STEM fields to tackle complex societal issues.

KEY CHARACTERISTICS OF AN ERA HUB

In a nutshell, ERA Hubs are **mission-focused, multi stakeholder collaborative R&I ecosystems** based in specific territories, aimed at developing better governance and promoting increased competitiveness for more efficiently addressing common societal challenges.

More specifically, an ERA Hub is a **multi-level R&I governance initiative** that builds on existing capacity, bringing together the key actors in the R&I cycle (from fundamental research to market uptake), with the main objectives of strengthening place-based innovation ecosystems **for directional knowledge creation, circulation and valorisation**, improving

R&I articulation and collaboration across borders, as well as increasing policy effectiveness and alignment between the regional, national and European levels.

Key characteristics of an ERA Hub include the following:

- **Directionality:** mobilisation of the public and private stakeholders around shared objectives;
- **Multi-level governance processes:** multi-level in interventions, compositions and memberships;
- **Horizontal integration:** formal bridge to other knowledge ecosystems, independently of regional or national borders;
- **Holistic approach:** aiming to support co-creation and joint ownership of the goals and processes, promoting cultural and practical systemic change in both private and public institutions.

An ERA Hub should therefore be envisioned as the outcome of **sustainable place-based collaboration of independent (quadruple or quintuple helix) actors located in a specific geographical area** and working together through joint actions towards a common mission, contributing to the territory's Smart Specialisation Strategy.

Within an ERA Hub, universities, knowledge and technology transfer institutions play a key role and that facilitates knowledge transfer, exploitation, and commercialisation. ERA Hubs need to be dynamic and evolve over time to adapt to a changing external environment and can therefore present various levels of maturity.

A well-developed ERA Hub is expected to:

- Promote the generation of **high-quality research** that contributes to the global body of knowledge;
- Help develop and educate **future talent pools** by providing opportunities for learning, training, and development;
- Facilitate **knowledge transfer** and exchange of ideas by providing opportunities for networking, dissemination, and collaboration;
- Help ensure the availability, visibility and access to relevant **funding options** to support the growth and development of key sectors;
- Promote collaboration by bringing together researchers, innovators, industry representatives, policymakers, and other stakeholders from **different regions and sectors**;
- Develop an effective governance system for the creation of **robust partnerships** between the stakeholders of the quadruple helix, encompassing academia, industry, government and civil society, and the 'fifth helix' consisting of the defenders of natural environment;
- Help drive **ground-breaking innovation** and the valorisation of ideas, leading to the development of new technologies, products, and services.

PROJECT METHODOLOGIES AND EARLY RESULTS

During its first year of activity, ERA_FABRIC has analysed **26 research and innovation ecosystems** within its three focus domains (namely Bio-Based Circular Economy, Clean Renewable Energy and Sustainable Manufacturing). 15 out of 26 cases were selected for further analysis (5 for each domain), namely the following: Bioeconomy Austria (Austria); Biokraft AS (Sweden/Norway); CoLab - ForestWISE (Portugal); ECOSISTER (Italy); H2 Valley (Spain); IMAST (Italy); INTEMAC (Czech Republic); Intelligent Energy Cluster (Croatia); Mazovia Cluster ICT (Poland); Packaging Cluster (Spain); Transilvania IT Cluster (Romania); RAISE (Italy); RENERGY (Norway); VTT (Finland); Waste Management and Recycling Cluster (Poland).

Then 6 out of the chosen 15 were studied more in depth for their specific characteristics (two per domain).

Evidence shows that **these cases share a number of characteristics** that we can define as peculiar of knowledge-based innovation ecosystems:

- A territorial vocation;
- A multi-level governance process;
- Explicit systemic interactions among the actors;
- A strong orientation towards innovation processes;
- Specific and differentiated roles of the actors involved;
- A balanced (although in a very diverse proportions) equilibrium between private and public actors, private and public aims, and private and public financial sources;
- A common focus (although variable in intensity) on environmental sustainability of the innovation processes;
- An intense mobilisation of public and private stakeholders around shared objectives and common strategies of economic and industrial development;
- A clear horizontal integration through widespread connections towards other knowledge ecosystems, independently of regional or national borders.

The overarching question can therefore be: **how can we do better?**

To help answer this question, COOPERATE proposes to focus on developing an ERA Hub Framework, which aims to foster **interregional collaboration** and robust research and innovation ecosystems within the European Research Area (ERA). The framework incorporates the Co-Design Task Force (CDTF), which brings together quadruple helix stakeholders to co-create the ERA Hub model. The Toolbox and Playbook provide guidance and facilitation methodology for ecosystems to become ERA Hubs. Additionally, a Platform and compliance criteria will support the set-up and development of the **ERA Hubs network**, providing a set of digital tools for self-assessment of the **level of maturity and readiness** and support capacity building accelerate the absorption of the model that can be tailored and implemented across various regional settings in the EU. Finally, two piloting phases involve testing the ERA Hub model in different ecosystems, validating its **effectiveness and interregional cooperation**. The first piloting phase has been launched in the emerging CZ ecosystem and the NL and DK ecosystems (already aligned with the ERA Hub concept) to validate the **interregional dimension**. Only after this first pilot phase, COOPERATE will expand to two emerging ecosystems, through a Call for Champions that will be promoted via the ERRIN network in April-May 2024.

A similar view is shared by ERA_FABRIC, which has started an intense activity of critical self-reflection via local/regional working groups within the 9 partner communities. In January 2024, a **EU wide survey will be launched to identify success factors and recurrent characteristics** of regional knowledge ecosystems, across different geographies and structures in Europe, based on key dimensions such as:

- Policy Support
- Collaboration
- Governance processes
- Research & Innovation
- Access to R&I Infrastructures and Services
- Knowledge Transfer
- Entrepreneurial culture and community

The survey will be widely advertised across the EU, also in collaboration with ERRIN.

POLICY IMPLICATIONS AND RECOMMENDATIONS

The **COOPERATE Playbook** is an evolving roadmap collaboratively devised by the consortium, strategically positioned to guide ecosystems through a transformation process. The Playbook is

offered to support R&I actors such as educational institutions, local industry, policymakers, and other stakeholders.

The Playbook provides recommendations for the development of thriving ecosystems within seven lines of action: Research, Talent, Knowledge Transfer, Funding, Collaboration, Governance, and Innovation.

- **Research:** Enhance research capacity and capabilities within key disciplines through infrastructure; Promote research ethics and integrity; Encourage open science practices; Support long-term research projects and initiatives; Promote a culture of research entrepreneurship and commercialisation; Develop research-focused policies and strategies;
- **Talent:** Implement talent attraction and retention strategies; Establish skills development programmes; Promote diversity and inclusion initiatives; Foster international collaborations; Enhance internationalisation efforts; Emphasise continuous learning and professional level;
- **Knowledge Transfer:** Foster a culture of continuous learning and collaboration; Provide training and capacity building programmes for researchers and innovators; Strengthen partnerships with industry, government, and non-profit organisations; Implement effective communication and outreach strategies; Cultivate an entrepreneurial ecosystem for commercialisation;
- **Funding:** Build relationships with investors and venture capitalists for additional funding; Develop a strategic plan for funding allocation and prioritisation; Provide training and assistance in grant writing and proposal development; Explore opportunities for funding projects with social or environmental impact; Implement robust monitoring and evaluation mechanisms for informed funding decisions; Encourage a public-private mix in funding; Establish partnership funds and corporate sponsorship programmes; Encourage risk willingness and support for start-ups; Enable cascade funding; Support early-career researchers;
- **Collaboration:** Promote networking and relationship-building; Facilitate communication and information sharing; Provide infrastructure and technological support; Foster internationalisation and cross-border collaboration; Build trust and enhance collaboration initiatives;
- **Governance:** Enhance mechanisms for stakeholder engagement; Establish a conducive governance framework; Develop a robust policy and strategic framework; Foster international cooperation and partnerships; Invest in capacity building programmes; Implement effective monitoring methods and conflict resolution mechanisms; Enhance transparency and accountability;
- **Innovation:** Embed innovation in university education across study programmes; Develop and enhance infrastructure to support innovation activities; Facilitate stronger industry engagement; Enhance ecosystem connectivity for knowledge exchange; Establish effective pathways for research commercialisation; Expand global partnerships and collaborations; Adopt a place-based approach and prioritise sustainability; Foster diversity, networks, and a bottom-up approach.

CONCLUSIONS AND FUTURE WORK

In order to take full advantage of possible synergies and complementarities between the EU and national and regional ecosystems for knowledge production, circulation and use, **the policy frameworks that govern existing structures for knowledge transfer and sharing should be made more compatible and interoperable**, and address common criteria for assessing work, processes, and outputs.

Reinforcing the network connections, geographically or thematically, among the ecosystem actors on the basis of smart specialisation and other strategic considerations, such as value chains, will help stimulate excellence and complete the ongoing convergence process of European territories.

Each of our projects will continue along their respective workplans, but additional opportunities to achieve synergies will be actively searched, on the way towards defining which ecosystemic functions are notably missing or immature, and what can be done at strategic and tactical levels to enhance the overall added value of an ERA Hub within the EU R&I scenario.

We will commit to covering the following points:

- It makes explicit and visible what kind of knowledge is available at territorial level,
- It can tune this knowledge so that it can be of use to local industry and society, and
- It develops a mechanism to transfer and deploy that knowledge into innovations that can be commercialised and/or implemented to optimise existing processes.

In conclusion, the ERA Hub concept holds transformative potential for the European research and innovation ecosystem. By fostering unprecedented levels of collaboration, knowledge exchange, and strategic alignment across regions, sectors, and disciplines, ERA Hubs are poised to become pivotal in driving Europe's innovation agenda forward.

These hubs represent more than just a new initiative; they are a critical component of a broader, integrated approach to innovation. ERA Hubs are not standalone solutions but are integral to a cohesive strategy that brings together diverse stakeholders and resources to address Europe's most pressing challenges. They embody the spirit of collective effort and shared vision, which is essential for sustainable and inclusive growth in the EU.

As we continue to develop and refine the ERA Hub concept, it is crucial to view them as key enablers within the larger framework of European research and innovation. Their success will be instrumental in achieving the ambitious goals set out in the EU Industrial Strategy, the Green Deal, and other strategic EU priorities.

We invite all stakeholders to engage with and support the development of ERA Hubs. Together, we can build a more connected, innovative, and resilient Europe, where collaborative research and innovation are at the heart of our shared prosperity and progress.

COOPERATE PROJECT IDENTITY

PROJECT NAME	COOrdinating and Piloting actions towards ERA-hubs as inTer- and intraregional Ecosystems for knowledge production - COOPERATE.
COORDINATOR	Eindhoven University of Technology, NL - n.antoni@tue.nl
CONSORTIUM	Brainport Development - The Netherlands CESKE VYSOKE UCENI TECHNICKE V PRAZE - Czech Republic DANMARKS TEKNISKE UNIVERSITET - Denmark IDEA Strategische Economische Consulting - Belgium Science City Lyngby - Denmark STAM - Italy
FUNDING SCHEME	HORIZON WIDERA 2022-ERA-01
DURATION	January 2023 - June 2025 (30 months)
BUDGET	EU contribution: 1 499 887 €
WEBSITE	www.cooperate-project.eu/
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ERA_FABRIC PROJECT IDENTITY

PROJECT NAME	Framing And Bridging Regional research and Innovation ecosystems Capacities for a renewed ERA - ERA_FABRIC
COORDINATOR	ART-ER, Bologna, IT - mariagrazia.zucchini@art-er.it
CONSORTIUM	ADRVN Agentia de Dezvoltare Regionala Nord-Vest, Romania CNR-ISSFRA, Italy ECOPLUS Niederösterreichs Wirtschaftsagentur GmbH, Austria Fundació EURECAT, Spain INESCTEC, Portugal Masarykova Univerzita, Czech Republic Norges Teknisk-Naturvitenskapelige Universitet, Norway Politechnika Warszawska, Poland Trondheim Tech Port, Norway University of Split, Croatia
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BUDGET	EU contribution: 1 429 975 €.
WEBSITE	https://erafabric.eu/
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