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ERA_FABRIC Quality label

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Executive summary

The ERA_FABRIC project, funded under Horizon Europe, supports the development of ERA Hubs as interconnected knowledge ecosystems designed to enhance research and innovation across Europe. Deliverable D5.4 introduces a proposed ERA_FABRIC Quality Label – a voluntary, standards-based certification system that recognizes excellence and maturity in regional and multiregional R&I ecosystems.

The quality label is built around three core dimensions aligned with the ERA Hubs concept:

1. Knowledge Ecosystems,
2. Multi-Stakeholder Platforms
3. Policy Co-Creation Toolbox

Each dimension comprises specific, evidence-based criteria scored on a five-point maturity scale, producing an overall assessment score and performance tier – from "initial" to "flagship." Only ecosystems meeting high thresholds and all mandatory criteria are awarded the formal ERA_FABRIC Quality Label.

The assessment process can be governed by the newly proposed ERA_FABRIC Certification Body (EFCB) – an independent, non-profit entity operating under international standards such as ISO/IEC 17065. The certification workflow includes:

- A structured submission process,
- Desk and field audits,
- Tiered scoring and certification decisions,
- Continuous monitoring over a four-year certification cycle.

This deliverable builds on international best practices for quality assurance schemes and tailors them to the specific needs of research and innovation ecosystems. The proposed label aims to ensure transparency, foster trust, encourage continuous improvement, and enhance policy alignment with long-term UN objectives such as the SDGs and the EU twin transition (green and digital transitions).

The ERA_FABRIC Quality Label embeds the principles of the UN Sustainable Development Goals (SDGs) into its assessment framework, guiding ecosystems toward inclusive, sustainable, and impact-driven innovation. Rather than treating the SDGs as an external add-on, the label integrates their values across its three core dimensions – structural capacity, stakeholder engagement, and policy co-creation. Criteria such as strategic transformation alignment, societal relevance, and sustainable R&I orientation reflect the SDGs' emphasis on long-term impact, environmental responsibility, and social inclusion, making the label a practical tool for localising global ambitions within European research and innovation ecosystems.

The ERA_FABRIC Quality Label also refers to the project's Theory of Change (ToC), which defines how ERA Hubs are expected to drive systemic impact by building on maximising the value of knowledge (Knowledge Ecosystems), strengthening excellence (Multi-stakeholders Platforms) and existing capacities (Policy Co-creation Toolbox). These three pillars directly shape the methodology's structure: each form one of the label's core assessment dimensions. The criteria, scoring logic, and maturity tiers are designed to reflect the ToC's outcomes in operational terms, allowing ecosystems to

be assessed not just on performance, but on their contribution to the transformative goals set out in the ERA_FABRIC framework. Thus, the quality label is more than a certification tool – it is a mechanism for testing, applying, and reinforcing the project's Theory of Change in practice.

The criteria and scoring model embedded in the Quality Label act as ERA Hubs' KPIs and performance metrics, allowing ecosystems to be evaluated consistently and transparently over time. By establishing clear, credible benchmarks for what constitutes a mature and impactful ERA Hub, the quality label supports the sustainability, comparability, and strategic value of ERA Hubs across the EU. It also connects directly to the project's Theory of Change and classification work, enabling future replication, scaling, and policy uptake.

ERA FABRIC is a Horizon Europe funded project. The content of this document reflects only the author's view. The European Commission is not responsible for any use that may be made of the information it contains.

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Abbreviations

COM	Communication
EFCB	ERA_FABRIC Certification Body
ERA	European Research Area
R&D	Research & Development
R&I	Research & Innovation
ToC	The theory of change
UN	United Nations

Introduction

The overarching aim of the ERA_FABRIC project is to define, structure, populate and validate the 'interconnected knowledge space' foreseen by the EU ERA Hubs initiative (COM/2020/628 final[1]). Three distinct, and intertwined, dimensions, all of them relevant for policy making, have been adopted as a structuring principle for the community to be built and cultivated during the project:

1) ERA Hubs as Knowledge Ecosystems which foster the dynamic interaction of R&D and innovation actors at regional and multiregional levels, considering the different knowledge and cultural contexts and the alignment of research foci and industrial needs.
2) ERA Hubs as Multi Stakeholder Platforms which bring together the representatives of the various involved interest groups in a seamless and uninterrupted discussion and deliberation on strategic priorities, actions and results evaluation.
3) ERA Hubs as a Policy Co-Creation Toolbox which are a transformative set of measures and tools operating in a "middle ground" needing to be configured as a distinct space from both the EU and the MS/Regional levels, historically presided over by "ad hoc" sets of instruments (e.g. Framework Programmes for R&I, Structural and Investment Funds, Interregional and Cross Border Cooperation Programmes).

One of the project' objective was to design and validate a Quality Label and standardisation approach for ERA Hubs, grounded in the principles, metrics, and evaluation methodologies developed throughout the ERA_FABRIC project. This task aims to translate strategic policy visions - such as the ERA Hubs Theory of Change and alignment with the UN's Sustainable Development Goals - into a practical, operational framework that enables consistent assessment and recognition of high-performing R&I ecosystems.

Specific objectives include:

- Developing a robust certification methodology that reflects the diversity and maturity of regional research and innovation ecosystems.
- Defining clear, evidence-based criteria and indicators organised under the three key ERA Hubs dimensions: Knowledge Ecosystems, Multi-Stakeholder Platforms, and Policy Co-Creation Toolbox.
- Establishing an independent, accredited certification body (EFCB) to ensure impartiality, transparency, and trust in the label's implementation.
- Designing a multi-tiered quality label structure, enabling ecosystems to track their progress and aspire toward maturity and excellence.

Expected results of this task include:

- A fully articulated ERA_FABRIC Quality Label framework, including scoring logic, performance tiers, and procedural workflows.

[1] COM/2020/628 final

- A practical and scalable assessment and certification process, including self-assessment tools, audit protocols, and monitoring mechanisms.
- The institutional foundation for a long-term quality assurance mechanism, supporting the replication, comparability, and strategic alignment of ERA Hubs across Europe.
- Enhanced visibility, legitimacy, and coherence of the ERA Hubs initiative through a credible, standards-based recognition model.

This deliverable serves as a cornerstone for the operational sustainability of the ERA Hubs concept, facilitating policy uptake and enabling regions to benchmark and continuously improve their research and innovation ecosystems.

Method

To design a credible and effective Quality Label for ERA Hubs, the ERA_FABRIC project conducted a comparative review of existing certification and labelling approaches. This review assessed eight distinct methods, each offering a different balance of rigour, stakeholder involvement, technological integration, and practicality (Table 1).

Table 1. Methods for Defining Quality Labels – review

Method	Steps	Conditions	Limitations	Source
Third-Party Certification Scheme	1. Define standards 2. Independent audits 3. Grant label 4. Monitor compliance	Clear standards, neutral certifiers needed	Costly, audit fatigue risk	Mazé et al. (2016) Chkanikova & Kogg (2018); Vince & Haward (2019)
Self-Declaration (First-Party Labelling)	1. Define own label 2. Publicly declare compliance	Low-risk contexts	Low trust, potential for false claims	Dekhili & Akli Achabou (2014); Rossi & Rivetti (2020)
Multi-Criteria Labelling	1. Define multiple criteria 2. Assign weights 3. Composite score calculation	Complex products/services	Difficult consumer communication	Hashemi et al. (2020); Cárdenas et al. (2025)
Participatory Labelling	1. Stakeholder co-creation 2. Joint standard setting 3. Cooperative audits	Stakeholder-driven sectors	Slow process, political risks	Fujita et al. (2012); Lemeilleur & Sermage (2020)
Lifecycle Assessment (LCA)-Based Labelling	1. Full lifecycle mapping 2. Impact analysis 3. Set thresholds	Sustainability-focused sectors	Costly, complex data needs	Acquaye et al. (2015)
External Benchmarking Certification	1. Benchmark comparison 2. Certification 3. Award label	Existing strong standards	Requires constant benchmark updates	Wallwiener et al. (2012); Brenner et al. (2019)
Blockchain-Based Certification	1. Register quality data on blockchain 2. Decentralized verification 3. Immutable quality proof label	High-tech industries, transparent supply chains	High technical setup cost, limited standards	Abuhashim et al. (2021); Lee et al. (2022); Regueiro & Urquizu (2024)

Method	Steps	Conditions	Limitations	Source
AI-Audited Quality Certification	1. Set quality parameters 2. Use AI tools for automatic auditing 3. AI-validated label issuance	High-volume, data-rich industries	Potential algorithm bias, needs human oversight	Cayirtepe & Senel (2022)
Digital Twin-Based Verification	1. Create a digital replica 2. Simulate quality tests 3. Validate outcomes virtually and issue label	Engineering, automotive, complex machinery sectors	Very high initial cost, complexity of models	Shoaib et al. (2024)

Source: Own elaboration.

Third-Party Certification Scheme

Third-party certification schemes involve defining strict quality standards, establishing an independent certification body, and conducting impartial audits to verify compliance. Once organizations meet all criteria, they are awarded a quality label, and ongoing compliance is monitored. These schemes are essential for ensuring consumer trust but can be costly and bureaucratic.

Source: Mazé et al., 2016; Chkanikova & Kogg, 2018; Vince & Haward, 2019.

Self-Declaration (First-Party Labelling)

Self-declaration allows companies to define their own quality labels and publicly claim compliance without external auditing. It is fast and cost-effective, suited for low-risk products, but faces credibility challenges due to the potential for self-serving claims.

Source: Dekhili & Akli Achabou, 2014; Rossi & Rivetti, 2020.

Multi-Criteria Labelling

This method evaluates products across multiple quality dimensions, each weighted by importance. A composite score is calculated to determine if the product earns a quality label. This method is ideal for products with complex value propositions but can confuse consumers if not clearly communicated.

Source: Hashemi et al., 2020; Cárdenas et al., 2025.

Participatory Labelling

Participatory labelling involves multiple stakeholders—producers, consumers, certifiers—in co-creating quality standards and audit procedures. It ensures broad acceptance and fairness but can slow down label development due to political negotiations.

Source: Fujita et al., 2012; Lemeilleur & Sermage, 2020.

Lifecycle Assessment (LCA)-Based Labelling

LCA-based labelling assesses a product's total environmental, social, and economic impacts across its lifecycle. Labels are awarded based on meeting minimum sustainability thresholds. Despite their scientific rigour, these labels require costly data collection and technical expertise.

Source: Acquaye et al., 2015.

External Benchmarking Certification

This approach measures an organization's or product's performance against established external standards or competitors. Quality labels are awarded to those exceeding or matching benchmarks. It ensures industry relevance but requires frequent updates to maintain value.

Source: Wallwiener et al., 2012; Brenner et al., 2019.

Blockchain-Based Certification

Blockchain-based certification records all quality-related transactions on an immutable decentralized ledger. This enhances transparency and security for quality labels, particularly in industries like agriculture and pharmaceuticals. However, initial implementation costs are high and require digital maturity.
Source: Abuhashim et al., 2021; Lee et al., 2022; Regueiro & Urquizu, 2024.

AI-Audited Quality Certification

AI systems can audit quality parameters automatically, processing vast datasets to detect compliance or anomalies. Labels are issued based on AI-verified results, making this method suitable for industries with frequent quality checks. Risks include algorithm bias and the need for human oversight.

Source: Cayirtepe & Senel, 2022.

Digital Twin-Based Verification

Digital twins replicate real-world products or processes in a virtual environment, enabling simulation-based quality testing. If the digital twin passes all scenarios, the physical product is awarded a quality label. This method is highly accurate but expensive and technically demanding.

Source: Shoaib et al., 2024.

At one end of the spectrum, *third-party certification schemes* stand out for their high level of credibility and formal structure. These methods rely on independent audits conducted by accredited bodies, offering strong assurance of quality and impartiality. However, they come with significant costs and administrative burdens, making them more demanding to implement.

In contrast, *self-declaration models* are simple and low-cost, allowing organizations to define and claim compliance with their own standards. While easy to adopt, these models often lack external validation and are therefore less trusted, particularly in high-stakes or policy-sensitive environments.

Participatory labelling methods emphasize stakeholder co-creation, ensuring that criteria are jointly developed and widely accepted. This approach fosters inclusiveness and social legitimacy but can be

politically sensitive and time-consuming. Similarly, *multi-criteria and lifecycle assessment-based labels* allow for nuanced evaluations – especially around sustainability – but require detailed data and can be difficult to communicate clearly to broader audiences.

Innovative models such as *blockchain-based certification, AI-audited labelling*, and *digital twin-based verification* bring modern technologies into the certification process. These approaches enhance transparency, automation, and predictive validation. Yet, their applicability is often limited to digitally mature sectors and can involve high initial investment and technical complexity – barriers that may not align with the diversity of regional innovation ecosystems.

The comparison reveals that each method carries inherent trade-offs. Simpler methods offer ease but lack trust; participatory models offer legitimacy but require time; and high-tech models offer innovation but need advanced infrastructure. Within this landscape, the *third-party certification model offers the most balanced solution* – combining credibility, adaptability, and alignment with international standards – making it the preferred foundation for the ERA_FABRIC Quality Label.

Third-Party Certification Scheme – concept

ERA_FABRIC project revised the available approaches and decided to continue with the third-party certification scheme.

1. Define the standards

The assessment wheel contains three dimensions, thirty-five criteria, and a 0-4 assessment scale. The standard specifies each criterion, the required evidence and the scoring guidance so that the expectations for all applicants are identical. The standard is reviewed at least every four years, or sooner if policy or scientific advances justify an update, to ensure its continued relevance and credibility.

2. Conduct independent audits

Certification activities are delegated to an accredited, not-for-profit body: the ERA_FABRIC Certification Body (EFCB) that complies with ISO/IEC 17065 and Regulation (EC) 765/2008. The EFCB appoints impartial, trained auditors and maintains clear segregation of roles: field auditors gather evidence, and a separate Certification Committee verifies consistency and makes decisions. Audits start with a desk review of the applicant's self-assessment, followed by an on-site (or hybrid) visit that combines documents, interviews, and observations.

3. Award label

Once the audit confirms that the ecosystem meets or exceeds the performance thresholds (including all 'mandatory' criteria), the Certification Committee will issue a digital certificate and grant the ERA FABRIC Quality Label for a period of four years. The EFCB publishes the name of the ecosystem in a public register and, with the consent of the ecosystem, publishes a short audit summary. If non-conformities are minor, a conditional certificate may be issued for up to twelve months to allow corrective action.

4. Monitor compliance

Throughout the certification cycle, the EFCB conducts annual surveillance. The ecosystem submits a progress report and evidence of closed actions and participates in a remote interview. Serious changes (e.g. governance restructuring) trigger an extraordinary audit. Complaints or misuse of the label are handled by an independent Appeals Panel and may result in suspension or withdrawal. Before the end of year four, the ecosystem undergoes a full re-audit to renew the label, thereby ensuring continuous improvement and safeguarding stakeholder trust.

ERA_FABRIC as Certification Body

ERA_FABRIC proposes to establish an independent Certification Body (hereinafter referred to as ERA_FABRIC Certification Body, or EFCB) which could be accredited by an accreditation body (European Commission) operating in accordance with SO/IEC 17065 and relevant EU regulations. ERA_FABRIC will have no vested interest in the ERA Hubs itself, its stakeholders and external parties. ERA_FABRIC's role would be to provide an objective and unbiased assessment.

A breakdown of the three parties involved:

1. First Party: This is the ecosystem managers like national/ regional/ local authorities, agencies or ecosystems managers, that manage or implement the process/system in the research and innovation ecosystems. They are the ones seeking the certification.
2. Second Party: These are the stakeholders that use research and innovation ecosystems services/ systems. They might perform their own audits, but this is not considered third-party certification.
3. Third Party: EFCB is the independent certification body.

Key characteristics of the ERA_FABRIC in certification:

1. Independence: ERA_FABRIC will be separate from both the organization being certified and the potential ecosystem managing organisation. This independence is crucial for credibility.
2. Impartiality: ERA_FABRIC will conduct its assessments without bias, ensuring that the certification is based solely on objective evidence and adherence to standards.
3. Competence: ERA_FABRIC will possess the necessary expertise, knowledge, and accreditation to conduct the assessments effectively and reliably. They often adhere to international standards for certification bodies (e.g., ISO/IEC 17021 for management system certification[2]).
4. Accreditation: ERA_FABRIC could be accredited by an accreditation body (e.g., European Commission). This adds another layer of confidence in their competence and impartiality.

ERA_FABRIC Certification Body (EFCB) values

- Credibility and Trust: Its independence lends significant credibility to the certification, building trust among stakeholders and regulatory bodies.

[2] https://www.iso.org/standard/61651.html

- Objectivity: It provides an objective assessment, which can be more reliable than self-declarations (first party) or stakeholders' audits (second party).
- Market Access: ERA Hubs require third-party certification as a prerequisite for doing research and innovation by stakeholders.
- Risk Reduction: It helps to mitigate risks associated with product quality, safety, environmental impact, or ethical practices.

The EFCB will be accredited to international standards like ISO/IEC 17021 (for management systems), ISO/IEC 17065 (for products, processes, and services), or ISO/IEC 17024 (for persons), has a common structure, organization, and set of processes designed to ensure impartiality, competence, and consistency in their certification activities.

Common Structure and Organization

1. Legal Entity and Governance
    - EFCB will be a legally established entity as a non-profit organization.
    - EFCB will have a governance structure that ensures impartiality. This often involves a board or committee that oversees the certification activities and safeguards against conflicts of interest. For instance, decisions on granting, suspending, or withdrawing certification will be made by individuals independent of the auditing team.
2. Top Management Commitment
    - Strong commitment from top management to impartiality and the integrity of the certification process is essential.
    - They will be responsible for developing policies, supervising their implementation, and ensuring adequate resources for certification activities.
3. Organizational Chart and Personnel
    - A clear organizational structure will define roles, responsibilities, and lines of authority.
    - Management: Will Include the CEO, technical managers, quality managers, and other administrative staff.
    - Auditors/Assessors: These are the core personnel who conduct the actual audits and assessments. They will possess specific competencies (knowledge, skills, experience) relevant to the standards they audit. EFCB will employ a mix of internal staff and external, contracted auditors.
    - Technical Experts: Specialists will provide specific industry or technical knowledge to support audit teams, especially for complex or niche areas.
    - Certification Committee: A dedicated committee, independent from the audit team, who will review audit findings, make final decisions on certification, and ensure impartiality throughout the process. It will monitor any potential conflicts of interest and safeguards the objectivity of certification decisions.

4. Quality Management System
    - A EFCB will operate under its own robust quality management system (QMS), aligned with ISO 9001, to ensure consistent and high-quality service delivery. This QMS covers all aspects of their operations, from application review to certification decision and surveillance.
5. Resource Management
    - This will include managing human resources (competence, training, performance monitoring of auditors), infrastructure (office space, IT systems), and financial resources to ensure the sustainability and effective operation of the EFCB.

Implementation

Submission process

The submission process initiates formal engagement with the ERA Hub assessment. Ecosystems must complete and upload the following documents:

a. A structured assessment aligned with the ERA-FABRIC criteria,
b. Relevant evidence (e.g. policies, strategic documents, partnership agreements),

The application must be submitted via the online portal by the announced deadline. Once received, it is reviewed by a lead auditor to confirm completeness and eligibility. Late or incomplete submissions may be disqualified unless justified by exceptional circumstances and approved by the Certification Body. If the submission is validated, the ecosystem proceeds to the evaluation phase, beginning with the lead auditor's screening and followed by the full audit process. If disqualified, resubmission is possible within a designated timeframe prior to the next evaluation cycle.

Evaluation and Awarding

An ERA Hub is assessed in four cascading layers, turning evidence into transparent certification decisions.

1. Scoring logic

Each criterion in the assessment wheel is mandatory and is scored on a scale of 0 to 4, where:

0 – None (no recognisable practice or evidence),
1 – Initial (ad hoc or embryonic practice),
2 – Defined (documented and repeatable practice),
3 – Advanced (well-established and systematically applied practice),
4 – Optimised (state-of-the-art practice that is continuously improved).

Auditors assign whole numbers only. The scores for all criteria belonging to the same dimension are averaged and then converted into a percentage of the maximum (average ÷ 4 × 100). The overall score is the mean of the three-dimension percentages, which preserves equal weighting for the Knowledge Ecosystem, the Multi-Stakeholder Platform and the Policy Co-Creation Toolbox.

2. Performance tiers

Four intuitive label tiers communicate maturity:

0 – an initial ecosystem has an overall result below 30%
1 – an emerging ecosystem has an overall result of ≥40% and no dimension below 30%.
2 – a developing ecosystem has an overall score of at least 60% and all dimensions of at least 50%.
3 – a mature ecosystem has an overall result ≥ 80% and all dimensions ≥ 70%. This tier carries the formal 'ERA FABRIC Quality Label'.
4 – a flagship ecosystem tier recognises international benchmark performance. It requires an overall score of ≥90% and all dimensions of ≥85%.

If any mandatory criterion (flagged as such in the assessment wheel) scores below 3, the 'knock-out' rule applies and certification is withheld, regardless of the averages.

3. Evaluation workflow

The process begins with an online questionnaire (ANNEX 1), in which the ecosystem uploads a self-assessment, supporting documents, and a declaration of impartiality. A lead auditor then screens the submission for completeness and requests any necessary clarifications. Two independent auditors then conduct an on-site or hybrid assessment (ANNEX 2), triangulating interviews, records, and observations to produce a provisional score. The report is then sent to the ERA_FABRIC Certification Body's Committee, who check for consistency and risk before making a formal decision. Certificates are issued digitally for a four-year term, and the ecosystem's entry appears in a public register together with a short audit synopsis (subject to consent from the ecosystem).

4. Awarding decision rules

A certificate is granted when the ecosystem meets the tier thresholds and all mandatory criteria score ≥3. Up to three minor non-conformities may still allow a conditional certificate, which is valid for twelve months. During this time, corrective actions must be completed. Four or more non-conformities, or any mandatory criterion below 3, result in refusal. Disputes are handled by an independent Appeals Panel.

5. Monitoring and renewal

During years one, two and three, the ecosystem submits an annual progress report and participates in a short remote interview to verify evidence of improvements or major organisational changes. Serious issues can trigger an extraordinary audit or suspension. A full reassessment is required before the end of year 4 to renew the label, ensuring that continuous improvement remains at the heart of the ERA_FABRIC scheme.

Monitoring

To ensure the continued credibility and relevance of the ERA__FABRIC Quality Label, certified ecosystems are subject to regular monitoring throughout the four-year certification period. The monitoring process is designed to verify sustained performance, encourage continuous improvement, and detect significant changes that may affect certification status.

Certified ecosystems are required to:

- submit a brief annual report summarising key achievements, changes, and progress on any previous recommendations;
- participate in a remote follow-up interview with an auditor in years 1, 2, and 3 to validate the report, discuss major changes, and provide evidence of ongoing improvement.
- report the Certification Body of any changes that could affect compliance within 30 days.

If monitoring reveals non-conformities, ERA_FABRIC Certification Body may request a focused follow-up audit or impose corrective actions. In rare cases, certification may be suspended.

Conclusions

This deliverable presents the ERA_FABRIC Quality Label – a new third-party certification scheme designed to elevate and standardise quality across European research and innovation ecosystems (ERA Hubs). Based on a review of quality label approaches, a rigorous third-party certification model was selected to ensure credibility and trust. Clear standards were defined, and an independent certification process was created. ERA_FABRIC acts as a neutral Certification Body with no vested interests, ensuring objectivity, potentially under formal European accreditation.

The process begins with a formal application and a self-assessment, where ecosystems provide documentation via an online questionnaire. A lead auditor performs an initial review, followed by a thorough evaluation conducted by independent auditors through site or hybrid visits, interviews, and evidence analysis. A standardized scoring system was developed based on multi-criteria indicators spanning three core dimensions: knowledge ecosystem capacity, multi-stakeholder platform effectiveness, and policy co-creation ability. Ecosystems receive a transparent overall score and are assigned to one of four performance tiers. Only those scoring ≥80% overall and ≥70% in all dimensions receive the ERA_FABRIC Quality Label, valid for four years. Certified ecosystems receive a digital certificate, and their results are published in a public register. The scheme includes follow-up mechanisms: annual progress reports, periodic interviews, and full reassessment after four years to ensure continued improvement.

The ERA_FABRIC Quality Label introduces several strengths. It provides an evaluation method, enhancing trust and legitimacy. As an independent and potentially accredited body, ERA_FABRIC ensures objective, evidence-based assessments. The criteria offer a comprehensive view of performance, covering regional capacity, collaboration, and governance. The tiered structure encourages growth by allowing ecosystems to move from emerging to mature status, fostering a culture of learning. The label signals trust and readiness to external partners, helping attract investment and talent. For policymakers and funders, it serves as a transparent tool for identifying high-performing ecosystems and directing support. It fills a governance gap in place-based R&I systems and complements broader EU programs by ensuring growth is both high-quality and aligned with European values. Alignment with international certification standards (e.g., ISO) reinforces credibility and cross-border recognition.

However, challenges also exist. Third-party certification is resource-intensive – requiring expert auditors, evidence review, and coordination. This can lead to audit fatigue or bureaucratic burden, so

the process must remain efficient and user-friendly. Diverse regional contexts in Europe may also create inconsistencies in application, despite standardized guidelines. To address these limitations, the project proposes support strategies like dedicated funding, local facilitator training, and phased implementation. Acknowledging these issues helps ensure fairness and sustainability. Despite the challenges, the Quality Label holds strategic value. It sets a common benchmark for excellence and fosters mutual learning among ecosystems through shared practices and structured collaboration.

As the project concludes, focus shifts to fully operationalizing and integrating the scheme into the wider innovation landscape. This includes scaling adoption across Member States, refining the process based on feedback, and aligning with EU initiatives. Governance elements like the EFCB and regular reviews will safeguard integrity.

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ANNEX 1. ERA_FABRIC Quality Label Applicant Questionnaire

Instructions: For each criterion, please answer the main question and then address the sub-questions based on the detailed descriptions for your region/knowledge ecosystem.

Dimension: #ERAHubs as Knowledge Ecosystems

Captures the structural, strategic, and operational capacity of a region to foster impactful research and innovation (R&I) in alignment with broader policy and market contexts. Its assessment is grounded in five interrelated criteria.

1. Strategic Transformation Alignment (STA)

General Description: Evaluates the ecosystem's ability to align its R&I priorities with EU-level missions and long-term transformation goals, ensuring relevance and responsiveness to systemic challenges.

Question: To what extent does your knowledge ecosystem actively align its R&I activities and priorities with EU strategies, ensuring a focus on long-term, systemic transformations over incremental improvements?

Sub-questions:

- Does the knowledge ecosystem actively align its R&I activities and priorities with EU strategies?
- Does a knowledge ecosystem prioritize long-term, systemic transformations over incremental improvements?

2. Transnationalised R&I Execution (TRE)

General Description: Reflects the extent to which the ecosystem translates strategic visions into high-level, cross-border R&I collaborations, enhancing global competitiveness and resource integration.

Question: How effectively does your knowledge ecosystem translate strategic visions into actionable R&I projects, engaging in interregional or transnational collaborative projects, sharing infrastructures, pooling resources, and attracting foreign partners, investments, and talent to enhance its international recognition?

Sub-questions:

- Are mechanisms in place to ensure that the vision is translated into actionable R&I projects?
- Does the Knowledge Ecosystem engage in interregional or transnational collaborative projects, sharing infrastructures and pooling resources?
- Is the knowledge ecosystem recognized internationally for its R&I strengths, attracting foreign partners, investments, and talent?

3. Formalisation of Cooperation Framework (FCF)

General Description: Captures the presence of institutionalized agreements and regulatory mechanisms that enable structured, barrier-free collaboration across regions and countries.

Question: Does your knowledge ecosystem have a clear strategy for establishing partnerships with other regions or countries on shared R&I priorities, including formal agreements to coordinate R&I efforts and actively working to reduce regulatory barriers to R&I collaboration?

Sub-questions:

- Is there a clear strategy for establishing partnerships with other regions or countries on shared R&I priorities?
- Are formal agreements (e.g., Memorandum of understandings, Letters of Commitment) in place to coordinate R&I efforts with other regions?
- Does the knowledge ecosystem actively work to reduce regulatory barriers to R&I collaboration?

4. R&I Infrastructure Accessibility (RIA)

General Description: Assesses whether the ecosystem provides sufficient research facilities, labs, and testbeds to meet the operational needs of both public and private stakeholders.

Question: Does your knowledge ecosystem offer sufficient research facilities, labs, or testbeds to cover the main needs of local public and private actors?

Sub-questions:

- Does the knowledge ecosystem offer sufficient research facilities, labs, or testbeds to cover the main needs of local public and private actors?

5. Collaborative Innovation Capacity (CIC)

General Description: Measures the strength of local academia–industry cooperation and the capability to form interdisciplinary consortia that generate advanced R&I projects.

Question: How active and mutually beneficial is the collaboration between local universities/research centres and industries (including SMEs), demonstrating a strong culture and capacity to form consortia and launch advanced R&I projects leveraging multiple disciplines?

Sub-questions:

- Is collaboration between local universities/research centres and industries (including SMEs) active and mutually beneficial?
- Is there a strong culture and capacity to form consortia and launch advanced R&I projects, leveraging multiple disciplines?

Dimension: #ERAHubs as Multi Stakeholder Platforms

Evaluates the inclusiveness, coherence, and effectiveness of collaboration across actors and governance levels within an innovation ecosystem. It captures how societal needs, public policy, and diverse stakeholder perspectives are structurally embedded into the ecosystem's strategy, leadership, and operations.

6. Societal Aligned R&I Strategy (SAS)

General Description: Ensures that the ecosystem mobilizes stakeholders around shared R&I goals that address both economic and societal challenges through joint agenda setting.

Question: To what extent does your knowledge ecosystem have a clear strategy for mobilizing public and private stakeholders around shared R&I objectives, ensuring research priorities are well-aligned with industry and civil society needs through ongoing dialogue and joint agenda setting, and explicitly encouraging sustainable and inclusive innovation?

Sub-questions:

- Is there a clear strategy for mobilizing public and private stakeholders around shared R&I objectives?
- Are research priorities, industry needs, and civil society needs well-aligned, driven by ongoing dialogue and joint agenda setting?
- Do R&I strategies explicitly encourage sustainable and inclusive innovation, balancing economic growth with societal benefits?

7. Societal Aligned R&I Vision (SAV)

General Description: Reflects the existence of a common, challenge-oriented vision that aligns global societal needs with national and regional priorities.

Question: Does your R&I vision focus on addressing societal and global challenges, and is it a jointly agreed vision that aligns with national and local priorities?

Sub-questions:

- Is the R&I vision focused on addressing societal and global challenges?
- Is there a jointly agreed vision for R&I that aligns with national and local priorities?

8. Participatory R&I Governance (PRG)

General Description: Assesses the extent of active and continuous involvement of public, private, and civil society actors in shaping R&I initiatives and strategic reforms.

Question: Do regional stakeholders (public authorities/government, businesses, academia, civil society) regularly come together to update strategic goals, and are researchers, businesses, the public sector, and civil society actors routinely and actively involved in designing and implementing R&I projects, policy reforms, or strategic initiatives, including the engagement of civil society groups in shaping sustainability objectives?

Sub-questions:

- Do regional stakeholders (public authorities/government, businesses, academia, civil society) regularly come together to update strategic goals?
- Are researchers, businesses, the public sector, and civil society actors routinely and actively involved in designing and implementing R&I projects, policy reforms, or strategic initiatives?
- Is there engagement of civil society groups (e.g., NGOs, citizen panels) in shaping sustainability objectives?

9. Public Governance Alignment (PGA)

General Description: Captures the integration of multi-level public administration in setting direction and ensuring transparent, evidence-based governance of R&I investments.

Question: Are the different levels of the Public Administration directly or indirectly involved through formal and informal practices in giving an overall directionality to the R&I investment strategy of the regional ecosystems, and are governance decisions (e.g., priority-setting, project selection) made based on clear data, open criteria, and objective assessment?

Sub-questions:

- Are the different levels of the Public Administration directly or indirectly involved through formal and informal practices in giving an overall directionality to the R&I investment strategy of the regional ecosystems?
- Are governance decisions (e.g., priority-setting, project selection) made based on clear data, open criteria, and objective assessment?

10. Inclusive Leadership Framework (ILF)

General Description: Evaluates the presence of formal or informal leadership bodies that include a balanced representation of stakeholder types and governance levels.

Question: Are the ecosystem's leadership and decision-making processes transparent, collaborative, and inclusive of multiple levels of governance, with formal or informal leadership groups that represent diverse types of stakeholders?

Sub-questions:

- Are the ecosystem's leadership and decision-making processes transparent, collaborative, and inclusive of multiple levels of governance?
- Are there formal or informal leadership groups that represent diverse types of stakeholders?

11. Culture of Trust & Collaboration (CTC)

General Description: Reflects the quality of social capital within the ecosystem, where frequent, open, and trust-based interactions facilitate meaningful cooperation.

Question: Is there an established culture of trust, with frequent partnerships and open exchange among key stakeholders within your knowledge ecosystem?

Sub-questions:

- Is there an established culture of trust, with frequent partnerships and open exchange among key stakeholders?

Dimension: #ERAHubs as a Policy Co-Creation Toolbox

Evaluates the structural and procedural capacities of an innovation ecosystem to co-design, implement, and adapt R&I policies that are impactful, inclusive, and forward-looking. It focuses on the tools, mechanisms, and frameworks that enable evidence-informed and participatory policymaking for sustainable innovation.

12. Impact Oriented Monitoring (IOM)

General Description: Ensures that R&I outcomes are systematically assessed and tracked through clear KPIs, providing essential feedback for adaptive policy design and strategic learning.

Question: Are there mechanisms to assess/monitor that R&I outcomes are translated into economic and societal impact, and are there clear metrics or KPIs to track the environmental and societal impact of R&I projects?

Sub-questions:

- Are there mechanisms to assess/monitor that R&I outcomes are translated into economic and societal impact?
- Are there clear metrics or KPIs to track the environmental and societal impact of R&I projects?

13. Strategic Foresight & Alignment (SFA)

General Description: Captures the ecosystem's capacity to anticipate future challenges and collaboratively align R&I strategies through joint roadmaps and long-term visioning.

Question: Does your ecosystem actively engage in foresight exercises to identify future R&I priorities, and does it have joint R&I roadmaps or strategies that align public and private actors around major societal challenges?

Sub-questions:

- Does your ecosystem actively engage in foresight exercises to identify future R&I priorities?
- Does it have joint R&I roadmaps or strategies that align public and private actors around major societal challenges?

14. Innovation Enabling Environment (IEE)

General Description: Assesses the presence of frameworks, infrastructure access, and support services that facilitate public–private collaboration and empower diverse stakeholders to contribute to policy co-creation.

Question: Are there policies or frameworks that facilitate public-private collaboration, is access to infrastructures transparent with clear procedures and cost models, and are professional innovation support services (e.g., TTOs, accelerators, incubators) available to academic, industry, and civil society partners?

Sub-questions:

- Are there policies or frameworks that facilitate public-private collaboration?
- Is access to the infrastructures transparent, with clear procedures and cost models for all (e.g., SMEs, universities)?
- Are professional innovation support services (e.g., TTOs, accelerators, incubators) available to both academic, industry and civil society partners?

15. Criterion: Talent Mobility & Development (TMD)

General Description: Reflects the ecosystem's ability to build and retain innovation-relevant human capital by supporting researcher, student, and entrepreneur mobility and professional growth.

Question: Are there mechanisms to facilitate the mobility of researchers, students, and entrepreneurs between your region/knowledge ecosystem and external partners, and are there targeted programs and training to develop and retain skilled staff (researchers, entrepreneurs, innovation support staff)?

Sub-questions:

- Are there mechanisms to facilitate the mobility of researchers, students, and entrepreneurs between your region/knowledge ecosystem and external partners?
- Are there targeted programs and training to develop and retain skilled staff (researchers, entrepreneurs, innovation support staff)?

16. Outcome Valorisation & Transfer (OVT)

General Description: Evaluates the effectiveness of mechanisms for translating research results into societal, economic, and public sector impact, supported by co-creation and broad stakeholder engagement.

Question: Are there mechanisms for transferring research outputs (e.g., products, prototypes, services) to the market or into public use, ensuring a smooth connection between basic and applied research and research and business innovation? Are civil society organizations and end-users frequently engaged in knowledge valorisation activities through co-creation, living labs, and pilot projects, and are research or project results widely communicated to stakeholders and the community?

Sub-questions:

- Are there mechanisms for transferring research outputs (e.g., products, prototypes, services) to the market or into public use as well as a smooth connection between basic and applied research and research and business innovation?
- Are civil society organizations and end-users frequently engaged in knowledge valorisation activities through co-creation, living labs, and pilot projects?
- Are research or project results widely communicated to stakeholders and the community, improving knowledge flow and ecosystem awareness?

17. Sustainable R&I Orientation (SRO)

General Description: Ensures that policy tools prioritize environmental sustainability and promote models like the circular economy, embedding long-term societal value into research and innovation trajectories.

Question: Do policies or funding mechanisms prioritize environmentally sustainable R&I projects, and is the promotion of a circular economy or other sustainable economic models actively pursued through R&I activities?

Sub-questions:

- Do policies or funding mechanisms prioritize environmentally sustainable R&I projects?
- Is the promotion of a circular economy or other sustainable economic models actively pursued through its R&I activities?

ANNEX 2. Reviewer assessment tool

Dimension I

#ERAHubs as Knowledge Ecosystems

The Knowledge Ecosystem dimension captures the structural, strategic, and operational capacity of a region to foster impactful research and innovation (R&I) in alignment with broader policy and market contexts. Its assessment is grounded in five interrelated criteria. These criteria provide a comprehensive and multi-scalar evaluation of a knowledge ecosystem's maturity, connectivity, and capacity to drive innovation in a strategically aligned, collaborative, and well-resourced environment.

Criterion - general description

STA: Strategic Transformation Alignment

Criterion evaluates the ecosystem's ability to align its R&I priorities with EU-level missions and long-term transformation goals, ensuring relevance and responsiveness to systemic challenges.

TRE: Transnationalism R&I Execution

Criterion reflects the extent to which the ecosystem translates strategic visions into high-level, cross-border R&I collaborations, enhancing global competitiveness and resource integration.

FCF: Formalisation of Cooperation Framework

Criterion captures the presence of institutionalized agreements and regulatory mechanisms that enable structured, barrier-free collaboration across regions and countries.

RIA: R&I Infrastructure Accessibility

Criterion assesses whether the ecosystem provides sufficient research facilities, labs, and testbeds to meet the operational needs of both public and private stakeholders.

CIC: Collaborative Innovation Capacity

Criterion measures the strength of local academia–industry cooperation and the capability to form interdisciplinary consortia that generate advanced R&I projects.

Criterion - detail description

STA

I1 Knowledge ecosystem actively aligns its R&I activities and priorities with EU strategies

I3 A knowledge ecosystem prioritizes long-term, systemic transformations over incremental improvements

Scoring

0 – No alignment of R&I activities and priorities with transformation strategies or EU missions

1 – Initial references to transformation or EU missions appear in R&I documents, but without implementation mechanisms

2 – Formal strategic alignment exists, but long-term systemic transformation goals are only partially integrated into activities. Transformation is secondary to incremental improvements.

3 – Strategies and actions are aligned with EU-level missions; transformation objectives guide project selection and monitoring with emphasis on systemic transformation over incremental change.

4 – Systemic and long-term transformation and EU goals are fully embedded; priorities are revised based on foresight and performance indicators.

TRE

I2 Mechanisms in place to ensure that the vision is translated into actionable R&I projects.

I7 Knowledge Ecosystem engages in interregional or transnational collaborative projects, sharing infrastructures and pooling resources.

I8 Knowledge ecosystem is recognized internationally for its R&I strengths, attracting foreign partners, investments, and talents.

Scoring

0 – The knowledge ecosystem has no alignment with a strategic vision and does not engage in cross-border R&I activities. Projects are confined to the local or national level, with no infrastructure sharing, international cooperation, or global visibility.

1 – The knowledge ecosystem occasionally participates in isolated international R&I projects. These initiatives are not part of a broader strategic approach and typically lack continuity, resource pooling, or infrastructure integration. Engagement in transnational activities is opportunistic rather than planned.

2 – Formal mechanisms exist to translate strategic vision into international R&I activities; cross-border collaborations are structured and goal-oriented but limited in scope and duration.Infrastructure sharing and recognition by international partners are emerging but not yet systematic.

3 – The knowledge ecosystem regularly initiates and leads transnational or interregional R&I collaborations, aligned with strategic priorities. It participates in shared infrastructure projects and resource pooling mechanisms. International partners contribute significantly to project design and implementation, and cooperation is becoming institutionalised.

4 – The knowledge ecosystem is internationally recognised for its research and innovation capacity. It maintains mature, well-funded, and mission-driven transnational partnerships. These collaborations are fully aligned with strategic goals, involve shared infrastructures and co-investments, and attract top global talent, funding, and institutional commitment from multiple countries.

FCF

I4 A clear strategy for establishing partnerships with other regions or countries on shared R&I priorities

I5 Formal agreements (e.g., Memorandum of understandings, Letters of Commitment) to coordinate R&I efforts with other regions

I6 Knowledge ecosystem actively works to reduce regulatory barriers to R&I collaboration

Scoring

0 – The knowledge ecosystem has no cooperation agreements or strategic orientation toward cross-regional or international collaboration. There is no evidence of efforts to address regulatory barriers.

1 – The knowledge ecosystem occasionally engages in cooperation with external regions or countries, but interactions are informal and project-based with no structured agreements. Regulatory issues are handled reactively and on a case-by-case basis

2 – The knowledge ecosystem has developed a clear strategy for international or interregional cooperation. Formal agreements are in place, but there is limited alignment or follow-through. Work to reduce regulatory barriers has started but remains fragmented.

3 – The knowledge ecosystem maintains active and structured partnerships across regions or countries through formal agreements. A proactive approach is in place to identify and address regulatory obstacles, and regulatory alignment is pursued systematically to support joint R&I activities

4 – The knowledge ecosystem operates within a fully institutionalised and barrier-free cooperation framework. Long-term agreements are jointly governed, and regulatory harmonisation mechanisms are embedded to enable seamless transnational collaboration

RIA

I9 Knowledge ecosystem offers sufficient research facilities, labs, or testbeds to cover the main needs of local public and private actors

Scoring

0 – The knowledge ecosystem lacks dedicated research infrastructure. No functional labs, testbeds, or technology platforms are available to support R&I activities. Public and private actors are fully dependent on external or foreign infrastructure.

1 – The knowledge ecosystem possesses limited or outdated R&I infrastructure, often confined to individual institutions. Access is informal or restricted, and external stakeholders have minimal opportunities to benefit from it. Coordination between actors regarding facility usage is rare.

2 – The knowledge ecosystem provides basic but functional research infrastructure that meets core needs of local stakeholders. Access mechanisms are in place, though often fragmented or underutilised. Initial steps toward shared use and cross-sector access are underway.

3 – The knowledge ecosystem offers modern and accessible research infrastructure used jointly by public and private actors. Transparent access procedures exist, and infrastructures (e.g., labs, pilot lines, testbeds) support experimentation, co-development, and applied R&I projects. Usage is tracked and coordinated.

4 – The knowledge ecosystem provides high-quality, inclusive, and strategically governed infrastructure that supports cutting-edge R&I. Facilities are co-financed, co-governed, and fully accessible across sectors. Access is promoted proactively, and infrastructure sharing aligns with innovation priorities and long-term capacity building

CIC

I10 Collaboration between local universities/research centres and industries (including SMEs) is active and mutually beneficial.

I11 Strong culture and capacity to form consortia and launch advanced R&I projects, leveraging multiple disciplines

Scoring

0 – No collaboration exists between academic institutions and industry. Research activities are carried out independently, with no interaction or shared innovation initiatives.

1 – Occasional cooperation takes place through individual projects or informal contacts. Partnerships are ad hoc, limited in scope, and lack strategic intent or long-term planning. Interdisciplinary engagement is minimal.

2 – Formal cooperation mechanisms have been established, including joint research centres or technology transfer offices. Some interdisciplinary consortia are emerging, but involvement is inconsistent or project-dependent.

3 – Strong and recurring collaboration exists between academia, industry, and other innovation actors. Interdisciplinary consortia are formed regularly to implement advanced R&I projects, supported by shared governance structures, funding instruments, and intellectual property frameworks.

4 – Collaboration is fully integrated into strategic planning and innovation governance. Interdisciplinary consortia address high-impact challenges and deliver results at scale. Cooperation is long-term, co-financed, and yields measurable value for both academic and industrial partners.

Dimension II

#ERAHubs as Multi Stakeholder Platforms

The Multi-Stakeholder Platforms dimension evaluates the inclusiveness, coherence, and effectiveness of collaboration across actors and governance levels within an innovation ecosystem. It captures how societal needs, public policy, and diverse stakeholder perspectives are structurally embedded into the ecosystem's strategy, leadership, and operations. The criteria provide a comprehensive basis for

assessing how well an innovation ecosystem enables collective intelligence, legitimacy, and alignment in R&I governance - factors essential for systemic innovation and resilient territorial development.

Criterion - general description

SAS: Societal Aligned R&I Strategy

Criterion ensures that the ecosystem mobilizes stakeholders around shared R&I goals that address both economic and societal challenges through joint agenda setting.

SAV: Societal Aligned R&I Vision

Criterion reflects the existence of a common, challenge-oriented vision that aligns global societal needs with national and regional priorities.

PRG: Participatory R&I Governance

Criterion assesses the extent of active and continuous involvement of public, private, and civil society actors in shaping R&I initiatives and strategic reforms.

PGA: Public Governance Alignment

Criterion captures the integration of multi-level public administration in setting direction and ensuring transparent, evidence-based governance of R&I investments.

ILF: Inclusive Leadership Framework

Criterion evaluates the presence of formal or informal leadership bodies that include a balanced representation of stakeholder types and governance levels."

CTC: Culture of Trust & Collaboration

Criterion reflects the quality of social capital within the ecosystem, where frequent, open, and trust-based interactions facilitate meaningful cooperation."

Criterion - detail description

SAS

II1 A clear strategy for mobilizing public and private stakeholders around shared R&I objectives

II4 Research priorities, industry and civil society needs are well-aligned, driven by ongoing dialogue and joint agenda setting.

II12 R&I strategies explicitly encourage sustainable and inclusive innovation, balancing economic growth with societal benefits

Scoring

0 – There is no formal R&I strategy, and priorities are set internally. There is also no evidence of stakeholder mobilisation or consideration of sustainability.

1 – The strategy is still not formalized. There are isolated initiatives and ad hoc external input. Stakeholder engagement is minimal. Sustainability is mostly viewed as a compliance requirement.

2 – A formal R&I strategy has been approved by the lead organisation. Stakeholder input is largely consultative. The sustainability aspect is rather declarative, with few concrete actions.

3 – A formal R&I strategy has been endorsed by key stakeholders. The stakeholders demonstrate a high level of engagement. The research priorities are demonstrably aligned with industry needs and citizen input. Clauses on sustainability and inclusivity are present and applied.

4 – A formal R&I strategy is created and owned jointly by public, private and civil actors. Priorities are updated annually through a documented, multi-stakeholder agenda-setting process. Success KPIs, which include societal and environmental impact, are reported publicly.

SAV

II2 R&I vision is focused on addressing societal and global challenges

II3 Jointly agreed vision for R&I that aligns with national, and local priorities

Scoring

0 – There is no coherent, formalised R&I vision.

1 – R&I vision fragments appear in various documents. These documents make superficial reference to societal needs.

2 – There is a draft R&I vision, but it is not formally linked to national or regional priorities.

3 – A written R&I vision, which is publicly available, has been signed by key stakeholders. Aligned with global challenges, it is regularly consulted by stakeholders.

4 – A written R&I vision explicitly addresses specific societal challenges and aligns with EU mission objectives. It is updated annually through structured foresight exercises.

PRG

II5 Regional stakeholders (public authorities/government, businesses, academia, civil society) regularly come together to update strategic goals

II10 Researchers, businesses, the public sector, and civil society actors are routinely and actively involved in designing and implementing R&I projects, policy reforms, or strategic initiatives.

III13 Engagement of civil society groups (e.g., NGOs, citizen panels) in shaping sustainability objectives

Scoring

0 – All decisions are made internally, with no participation from external stakeholders.

1 – External actors have no influence on decisions. However, there are occasional outreach activities, mainly focused on sharing information.

2 – Advisory groups exist. Stakeholder views are collected, but their influence on decisions is limited.

3 – There are regular participatory meetings, at least twice a year. On these, external stakeholders hold at least 20% of the seats and can be shown to influence outcomes.

4 – Structural governance bodies are jointly managed by stakeholder representatives. Decisions are made by consensus and are based on open and well-known criteria.

PGA

II6 The different levels of the Public Administration are directly or indirectly involved through formal and informal practices in giving an overall directionality to the R&I investment strategy of the regional ecosystems

II9 Governance decisions (e.g., priority-setting, project selection) are made based on clear data, open criteria, and objective assessment

Scoring

0 – There is no evidence of any strategic coordination with the public administration.

1 – Contacts with the public administration are ad hoc and not strategic. Collaboration is limited to individual events or projects.

2 – Informal alignment channels exist, such as informal links (contact persons and joint workshops), but there are no joint KPIs or budgets.

3 – The Memorandum of Understanding (MoU) establishes a joint roadmap that is aligned with EU policies, and shared KPIs inform funding decisions.

4 – The MoU fully harmonises the planning, budgeting and evaluation cycles. Joint decisions are data-driven, transparent, clear and publicly audited.

ILF

II7 Ecosystem's leadership and decision-making processes are transparent, collaborative, and inclusive of multiple levels of governance

II8 Formal or informal leadership groups that represent diverse types of stakeholders

Scoring

0 – There is no identified leadership structure or set of governance principles.

1 – The leadership is dominated by one organisation. There are sporadic external advisory boards.

2 – Stakeholder representatives have been appointed, but there is no formal governing board or procedures.

3 – There is a formal governing board that includes members from the public, private, academic and civic sectors. Diversity targets are monitored internally.

4 – The leadership organisation is gender-balanced and diverse. Rotation and term limits are in place. All decisions are clear and transparent.

CTC

II11 An established culture of trust, with frequent partnerships and open exchange among key stakeholders

Scoring

0 – There is no culture of collaboration. Actors work in isolation and there are no joint activities.

1 – Collaboration is incidental and confined to individual projects. Competition is the norm.

2 – Cooperation is limited to short-term projects or informal knowledge exchange.

3 – Frequent co-publications and joint pilots are carried out. Clear and transparent rules are also in place for NDAs, IP licences and data sharing.

4 – There are long-term co-funded projects and shared intellectual property. Partners share data under a framework agreement. A high level of mutual trust exists.

Dimension III

#ERAHubs as a Policy Co-Creation Toolbox

The Policy Co-Creation Toolbox dimension evaluates the structural and procedural capacities of an innovation ecosystem to co-design, implement, and adapt R&I policies that are impactful, inclusive, and forward-looking. It focuses on the tools, mechanisms, and frameworks that enable evidence-informed and participatory policymaking for sustainable innovation. Together, these criteria provide a comprehensive basis for assessing how well an ecosystem supports evidence-based, inclusive, and future-ready innovation policymaking. This dimension reflects the maturity of the ecosystem's capacity to co-create and operationalize policies that foster systemic innovation and long-term impact.

Criterion - general description

IOM: Impact Oriented Monitoring

Criterion ensures that R&I outcomes are systematically assessed and tracked through clear KPIs, providing essential feedback for adaptive policy design and strategic learning.

SFA: Strategic Foresight & Alignment

Criterion captures the ecosystem's capacity to anticipate future challenges and collaboratively align R&I strategies through joint roadmaps and long-term visioning.

IEE: Innovation Enabling Environment

Criterion assesses the presence of frameworks, infrastructure access, and support services that facilitate public–private collaboration and empower diverse stakeholders to contribute to policy co-creation.

TMD: Talent Mobility & Development

Criterion reflects the ecosystem's ability to build and retain innovation-relevant human capital by supporting researcher, student, and entrepreneur mobility and professional growth.

OVT: Outcome Valorisation & Transfer

Criterion evaluates the effectiveness of mechanisms for translating research results into societal, economic, and public sector impact, supported by co-creation and broad stakeholder engagement.

SRO: Sustainable R&I Orientation

Criterion ensures that policy tools prioritize environmental sustainability and promote models like the circular economy, embedding long-term societal value into innovation trajectories.

Criterion - detail description

IOM

III1 There are mechanisms to assess/monitor that R&I outcomes are translated into economic and societal impact

III2 Clear metrics or KPIs to track the environmental and societal impact of R&I projects

Scoring

0 – No post-project follow-up; environmental, economic or social effects are never defined, measured or reported.

1 – Anecdotal success notes and self-chosen metrics appear in scattered reports; data lack comparability and rarely inform decisions.

2 – Standard indicator list exists and every project files a closing impact sheet, yet compliance quality and portfolio-level analysis remain patchy.

3 – Dedicated impact office validates KPI data yearly, publishes aggregated dashboards and adjusts funding criteria in light of demonstrated outcomes.

4 – Live, open dashboards stream verified KPI data; adaptive algorithms reallocate resources toward initiatives delivering highest socio-economic and environmental returns.

SFA

III3 Actively engages in foresight exercises to identify future R&I priorities

III4 Joint R&I roadmaps or strategies that align public and private actors around major societal challenges.

Scoring

0 – Priorities mirror historic strengths; no structured horizon scanning or shared roadmaps with industry.

1 – One-off trend workshop produced a non-binding memo; separate public and private plans persist.

2 – Three-year foresight cycle feeds draft thematic roadmaps, but timelines, budgets and governance remain loosely aligned.

3 – Annual scanning unit plus multistakeholder council update integrated roadmaps, assign co-funded milestones and monitor progress twice a year.

4 – Always-on trend platform crowdsources weak signals; mission councils revise integrated roadmaps on demand, synchronising regional, national and EU resources within months.

IEE

III5 Policies or frameworks that facilitate public-private collaboration

III7 Access to the infrastructure is transparent, with clear procedures and cost models for all (e.g., SMEs, universities).

III8 Professional innovation support services (e.g., TTOs, accelerators, incubators) available to both academic, industry and civil society partners.

Scoring

0 – Regulations deter joint work; labs closed to outsiders and no incubation or TTO support exists for potential innovators.

1 – Single grant line and one incubator serve limited audiences; external lab access negotiated case-by-case, prices unclear.

2 – Template contracts, cluster vouchers and published facility rates appear alongside multiple professional support services, though coordination is still patchy.

3 – Tax incentives, innovation procurement and an online booking portal normalise cross-sector R&D; connected incubator–accelerator pipeline guides ideas from lab to scale-up.

4 – One-stop “collaboration-by-default” portal unifies policies, open-facility network and 360° support services; KPIs show high utilisation and joint projects are the ecosystem norm.

TMD

III6 Mechanisms to facilitate the mobility of researchers, students, and entrepreneurs between our region/knowledge ecosystem and external partners

III9 Targeted programs and training to develop and retain skilled staff (researchers, entrepreneurs, innovation support staff)

0 – No fellowships or exchange schemes; up-skilling left to individual institutions, brain drain significant.

1 – Isolated bilateral exchanges and short workshops benefit few; reintegration or retention incentives absent.

2 – Formal mobility fellowships, industrial PhD tracks and targeted training grants launched, improving early-career retention modestly.

3 – Well-funded two-way mobility packages with visa, housing and dual-career support plus regional excellence grants cut talent loss and attract diaspora.

4 – Holistic talent strategy spans schools to senior leaders, integrates mobility, continuous learning and lifestyle perks; metrics show sustained inflow, high retention and rising skill levels across sectors.

OVT

III10 Mechanisms for transferring research outputs (e.g., products, prototypes, services) to the market or into public use as well as a smooth connection between basic and applied research and research and business innovation

III11 Civil society organizations and end-users are frequently engaged in knowledge valorisation activities through co-creation, living labs, and pilot projects

III12 Research or project results are widely communicated to stakeholders and the community, improving knowledge flow and ecosystem awareness

Scoring

0 – Patents languish unlicensed; citizens uninvolved; results remain in technical reports behind paywalls or unpublished at all

1 – Few spin-offs and late-stage user surveys; press releases highlight major wins but feedback scarcely shapes projects.

2 – Proof-of-concept vouchers, living-lab pilots and a plain-language portal share findings; two-way dialogue still limited outside funded projects.

3 – Stage-gated transfer pipeline converts patents to prototypes and pilots; NGOs and citizens co-design iterations; multi-channel comms with Q&A loops insights into new calls.

4 – Integrated lab-to-market platform, networked living labs and open-data festival embed users in every major project; real-time feedback continuously refines innovation agendas and heightens public trust.

SRO

III13 Policies or funding mechanisms that prioritize environmentally sustainable R&I projects.

III14 Promotion of a circular economy or other sustainable economic models through its R&I activities

Scoring

0 – Environmental impact ignored; linear (non-circular) models dominate regional R&I.

1 – Calls merely “encourage” green aims; isolated recycling studies receive small, standalone grants.

2 – Dedicated green calls and sector-specific circular-economy pilots launched; sustainability now carries bonus points in mainstream programmes.

3 – Most funding lines mandate climate-impact assessment; industrial symbiosis zones and circular demonstrators receive joint public-private backing and annual reviews.

4 – Entire budget aligned with EU green taxonomy; region recognised as circular-innovation leader, tracking closed-loop metrics, exporting solutions and continuously raising environmental targets.

The results of the assessment can be visualised at the chart. The chart presents three dimensions fo #ERAHubs evaluation and the scores for each criterion (See Chart 1.).

Chart 1. Visuals of the ERA_FABRIC Quality label assessment