Regional innovation ecosystem and S3 governance model in Emilia-Romagna

Event "Benchmarking Study about Regional Innovation Systems"

CCDR-Norte

11th July 2023

The Emilia-Romagna regional innovation ecosystem

The development

2001 ⇨ Reform of Title V of the Italian Constitution: *"Matters of concurrent legislation are those relating to … **scientific and technological research and support for innovation for productive sectors**"*

2001 ⇨ **Pact** between ER Region, Universities and Public Research Institutions, Business Associations, Chamber of Commerce system, for the creation of a **regional ecosystem for research and innovation**

2002 ⇨ Regional Law n. 7/2002 "**Promotion of the regional system of industrial research, innovation and technology transfer activities**"

2002 ⇨ ASTER "Science, Technology, Business" becomes a **consortium among all signatories of the pact**

2003 ⇨ Adoption of the first **Regional Program for Industrial Research, Innovation and Technology Transfer (PRRIITT)**

Enti di ricerca nazionali ed internazionali

CINECA; **CNR** - Consiglio Nazionale delle Ricerche; **INFN** – Istituto Nazionale di Fisica Nucleare; **INAF** – Istituto Nazionale di Astrofisica; **ENEA** – Agenzia Nazionale per le Nuove Tecnologie, l'Energia e lo Sviluppo Sostenibile; **CMCC** - Centro Euro-Mediterraneo sui Cambiamenti Climatici, **INGV** - Istituto Nazionale di Geofisica e Vulcanologia

Infrastrutture di ricerca (47)

sui domini ESFRI:
- E-Infrastructures
- Energy
- Environmental sciences
- Health and food
- Material and analytical facilities
- Physical Sciences and engineering
- Social science and humanities

Autorità e Agenzie Internazionali

EFSA - European Food Safety Authority; **ECMWF** - European Centre for Medium-Range Weather Forecasts

Università di Bologna

Università di Modena e Reggio Emilia   Università di Cattolica

Università di Ferrara   Politecnico di Milano (Piacenza)

Università di Parma   Università John Hopkins

Il sistema regionale dell'Alta Formazione
- Bologna Business School (Master/MBA)
- PhD and International Data Science Phd
- Scuola di studi avanzati in Food Safety
- MUNER (Motor vehicle in E-R)
- 7 Fondazioni ITS con 27 corsi
- Academy aziendali

Il sistema universitario regionale
- 400 corsi (Lauree triennali e magistrali)
- 153 master
- 126 scuole di specializzazione
- 160 k studenti

Industria 4.0
- Fondazione Big Data e Intelligenza Artificiale
- BI-REX
- Digital Innovation Hub
- PID (Camere di Commercio)

ART-ER
ATTRATTIVITÀ
RICERCA
TERRITORIO
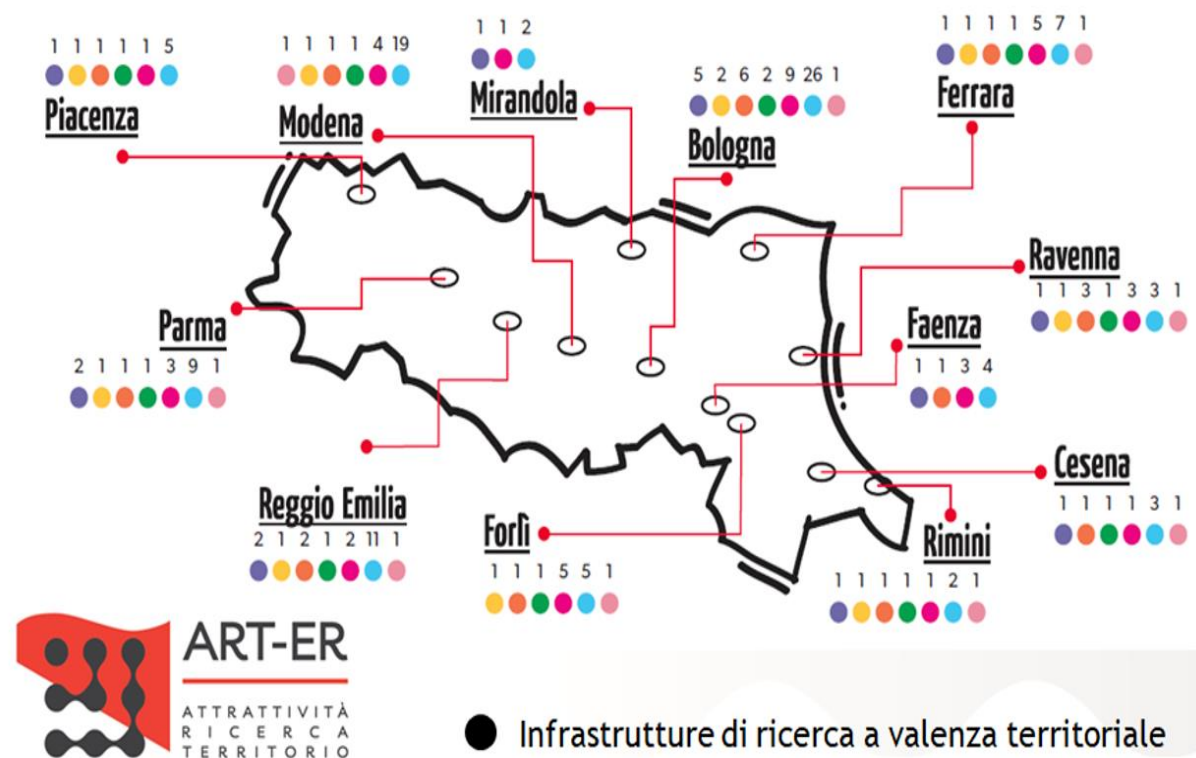
Why a regional dimension for an R&I ecosystem

The regional level is the most appropriate for the creation of an environment which enables **different and independent actors** to develop relationships that maximize the goals of **technological development**, **competitiveness**, **territorial and social impact**, for themselves and for the system as a whole

Promoting **an ecosystem based on collaborative networks**, **coordinated by ART-ER** (Attractiveness, Research, Territory)*

** In 2018 ASTER became ART-ER, the Emilia-Romagna Joint Stock Consortium born with the purpose of fostering the region's **sustainable growth** by developing **innovation** and **knowledge**, **attractiveness** and **internationalisation** of the territory*

A regional ecosystem based on collaborative networks

RETE DEI CLUST-ER
7 Clust-ER S3, Ass Big Data e Muner

RETE DEI TECNOPOLI
10 Infrastrutture
20 Sedi

RETE ALTA TECNOLOGIA
74 Laboratori di ricerca industriale
14 Centri per l'innovazione

RETE DEGLI INCUBATORI
75 strutture pubbliche e private a supporto della creazione e dello sviluppo di impresa

RETE MAK-ER
22 laboratori di fabbricazione digitale e manifattura avanzata

LABORATORI APERTI
10 Spazi attrezzati con soluzione tecnologiche

RETE «SPAZI AREA S3»
10 Spazi ospitati dai Tecnopoli

ITS NETWORK
7 Scuole di Alta Tecnologia e 29 percorsi biennali post-diploma

ART-ER
ATTRATTIVITÀ RICERCA TERRITORIO

● Infrastrutture di ricerca a valenza territoriale

New networks
Professional training institutions
Digital Innovation Hub
Big Data Hub for Public Administration

3 steps of ecosystem development:

2007 ⇨ **High Technology Network**: a network of research labs and innovation centres for industries

2012 ⇨ **Technopoles**: a network of research and innovation infrastructure at local level hosting the HTN

2017 ⇨ **Clust-ER**: thematic communities based on S3 priorities, among HTN research labs, companies, higher education institutions

HTN is the instrument promoted by ER Region to "**organise**" the offer of industrial research in the Region:

✓ **Industrial Research Laboratories** and **Innovation Centres** (public, private, ppp), **106 members** in total, providing competencies, technologies, solutions and equipment to support innovation

✓ **Specialization Areas:** Mechanics, Materials, Agrifood, Construction, Life Science, Digital Technologies, Energy and Sustainability

✓ Members need to be **certified by the Regional Authority** through a process aimed at verifying:

  - the capacity to provide industrial research services to customers
  - a minimum amount of R&D activity (contracts/projects)

https://www.retealtatecnologia.it/en

10 infrastructures in 20 locations throughout the Emilia-Romagna region, hosting and developing activities and services for industrial research, innovation and technology transfer:

✓ **home to the industrial research Laboratories** of the Emilia-Romagna High Technology Network

✓ include **service facilities** for dissemination, demonstration and information activities, as well as premises and facilities to host private research laboratories, innovative companies, and spin-offs

✓ promote the matching between companies and researchers and **access to cutting-edge scientific equipment**

https://www.tecnopoli.emilia-romagna.it

The need for a further step:

➤ direct involvement of **private companies in the governance**

➤ more collaborative projects with wide and **multidisciplinary partnerships**

➤ focus on **strategic project** with impact at regional level

➤ involvement of **higher education organizations**

➤ focus on **RIS3 specialization areas**

Clust-ER Associations are communities of public and private bodies that share ideas, skills, tools, and resources to support the competitiveness of the most important production systems in Emilia-Romagna

The **Clust-ER network** is the most recent "component" of the regional innovation ecosystem, built with the aim of further integrating companies, research and Higher Education system

https://en.art-er.it/clust-er

The Emilia-Romagna
S3 Governance Model

✓ Based on a wide and inclusive **co-design process**, involving **all the actors and networks** of the regional innovation ecosystem

✓ Taking into consideration
- ⇨ the outcomes of RIS3 2014-2020
- ⇨ the evolution of technology, markets, regional innovation ecosystem
- ⇨ the overall objectives of regional policies and strategic programmes
- ⇨ the new global challenges (EU Cohesion Policy 2021-2027, Agenda 2030)

A **new approach**:

more challenge based

less technology driven

mainly focused on green and digital transition

Emilia-Romagna S3 2021-2027

Industrial specialisation systems

- Agrifood
- Constructions and buildings
- Mechatronics and motoring
- Health and wellness industries
- Creative and cultural industries
- Tourism
- Energy and sustainable growth
- Innovation in the services

Smarter Europe · **Greener Europe** · **More connected Europe** · **More social Europe** · **Closer to its citizens Europe**

15 Cross sector areas

1. Clean, safe and accessible energy
2. Circular economy
3. Climate and natural resources
4. Blue growth
5. Innovation in materials
6. Digitalisation and artificial intelligence
7. Manufacturing 4.0
8. Ground and space-based connectivity of systems
9. Sustainable and innovative mobility
10. Cities and communities of the future
11. Territorial heritage and regional identity, Made in E-R
12. Well-being of the person, diet and lifestyle
13. Health
14. Social innovation and participation
15. Inclusion and social cohesion
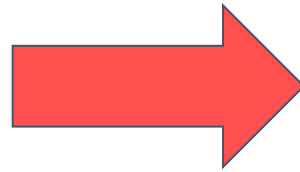
High growth potential areas

- Aerospace economy
- Critical infrastructures
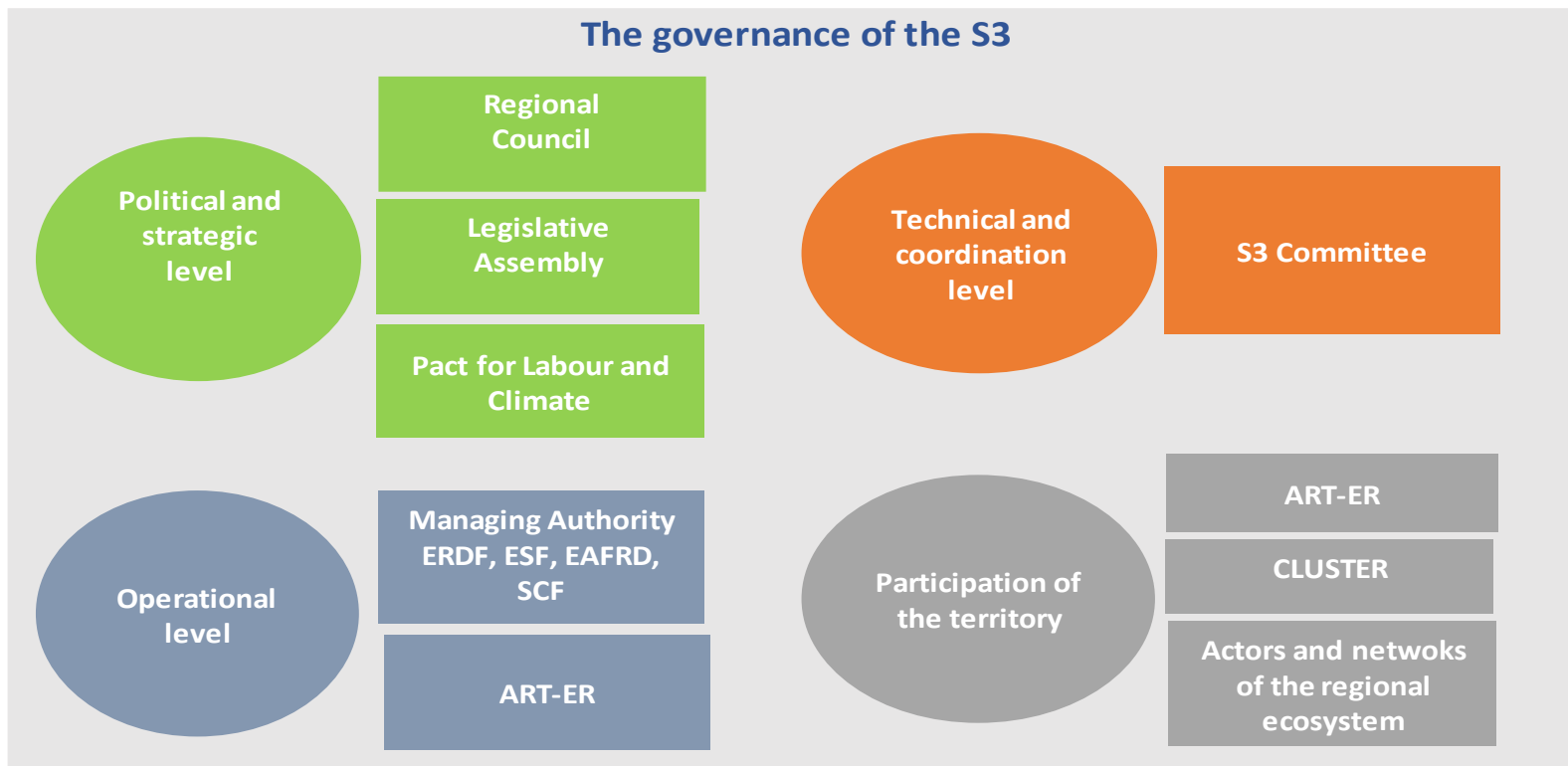
**Entrepreneurial
discovery process** → **Open
discovery process**

The S3 Governance Model

An **inclusive** and **participatory** Governance model
(formally institutionalised through a regional official act, in 2021)

The S3 Governance Model

✓ Public Administration

    Political level

    Technical level

✓ Universities and research centres

✓ Private companies and other actors involved in innovation activities

✓ Clust-ER, Technopoles, High Technology Network and other intermediary agents

✓ Citizens

POLITICAL and STRATEGIC LEVEL

TECHNICAL and COORDINATION LEVEL

PARTICIPATION of the TERRITORY

The **Regional Council** and the **Legislative Assembly**, in close collaboration with the **Pact for Work and the Climate**, are responsible for:

⮷ defining the overall vision of the Strategy

⮷ providing political guidelines

⮷ approving the document and any revisions

⮷ involving Local Authorities

Technical and Coordination Level

The **S3 Committee** (made up of representatives of the different Directorates General of the Emilia-Romagna Region and of the main regional agencies and in-house companies), chaired by the DG Managing Authority of ERDF and ESF, is responsible for:

- ensuring the S3 implementation

- promoting synergies between the various regional strategic programmes

- providing guidelines for revisions of the S3 to the Regional Council

- overseeing the evaluation and monitoring processes

- providing inputs for the S3 Communication Plan and Stakeholder Engagement Plan

Participation of the territory

↳ Promotion of the open discovery process

↳ Public engagement: active involvement of the civil society and the territory

↳ Input for the implementation of the Strategy and for mid-term updates and reviews

↳ Coordination and involvement, through the support of ART-ER, of all the actors of the regional innovation ecosystem (labs and centers of the High Technology Network, Technopoles, innovative startups, incubator networks, ITS network, ...)

↳ Particular involvement by the regional Clust-ERs as thematic oversight of the S3 specialization areas

⇨ As defined in the **S3 Stakeholder Engagement Plan**

EROI
Emilia-Romagna Open Innovation

The **Open Innovation Platform** of Emilia-Romagna Region

https://emiliaromagnaopeninnovation.art-er.it/

Forum S3

Meetings for discussion, open to **all the actors of the regional innovation system**, with the aim of proposing updates and revisions of the S3 Strategy and suggesting policies and intervention tools inputs for a more effective implementation of the Strategy

Thank you!

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