AEIT
1897
SEZIONE di PALERMO

ORDINE DEGLI INGEGNERI
DELLA PROVINCIA DI PALERMO

AICT
Society AEIT per la Tecnologia
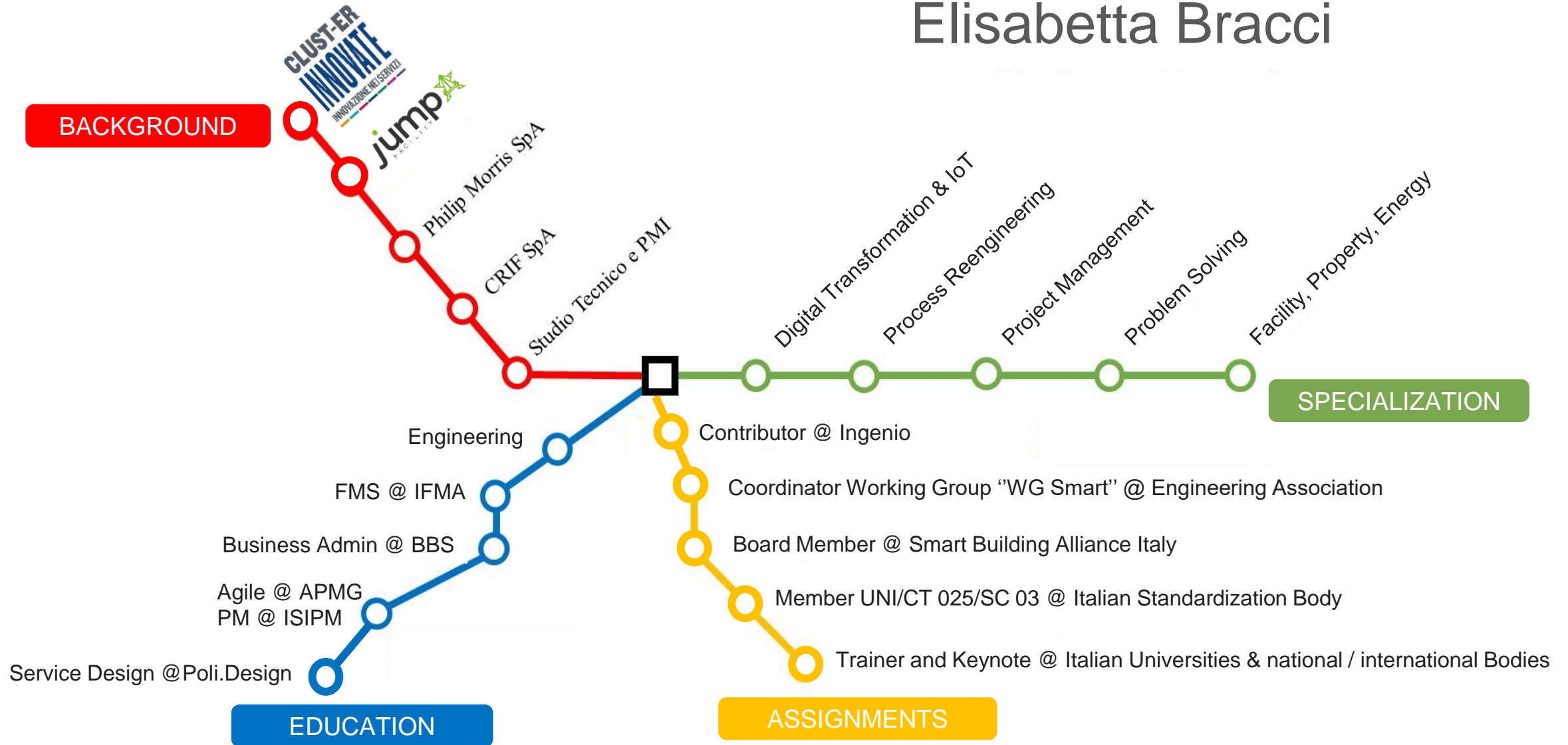dell'Informazione e delle Comunicazioni

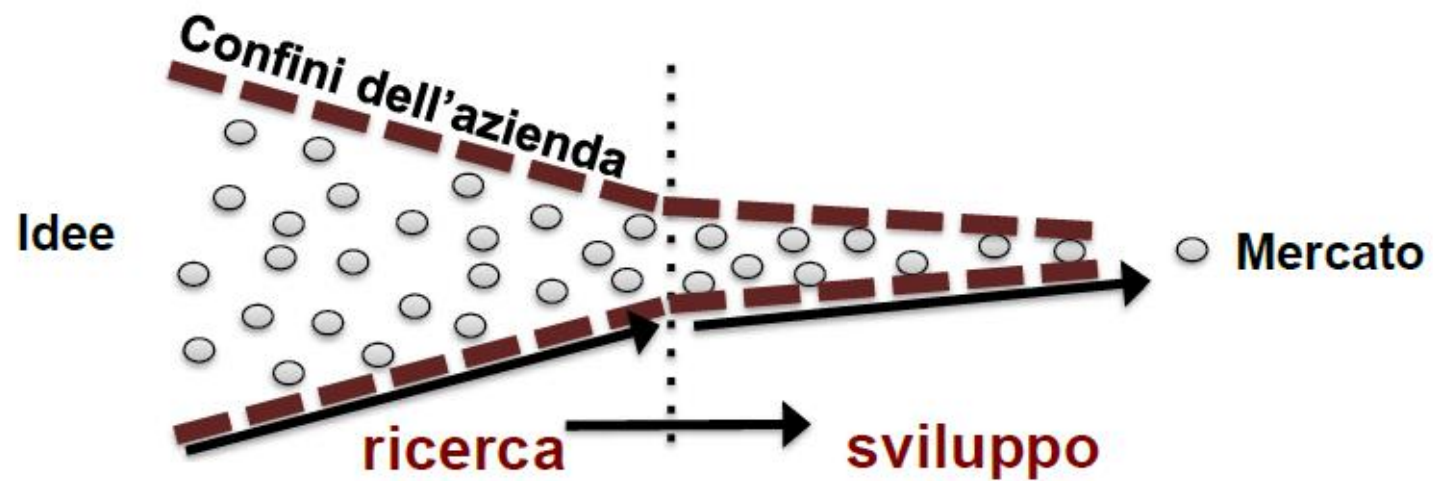## *IL PNRR PER LA DIGITALIZZAZIONE DEL PAESE*
24 maggio 2023

Stakeholder management e identità di territorio: le chiavi per una innovazione efficace e sostenibile

Dott. Ing. Elisabetta Bracci
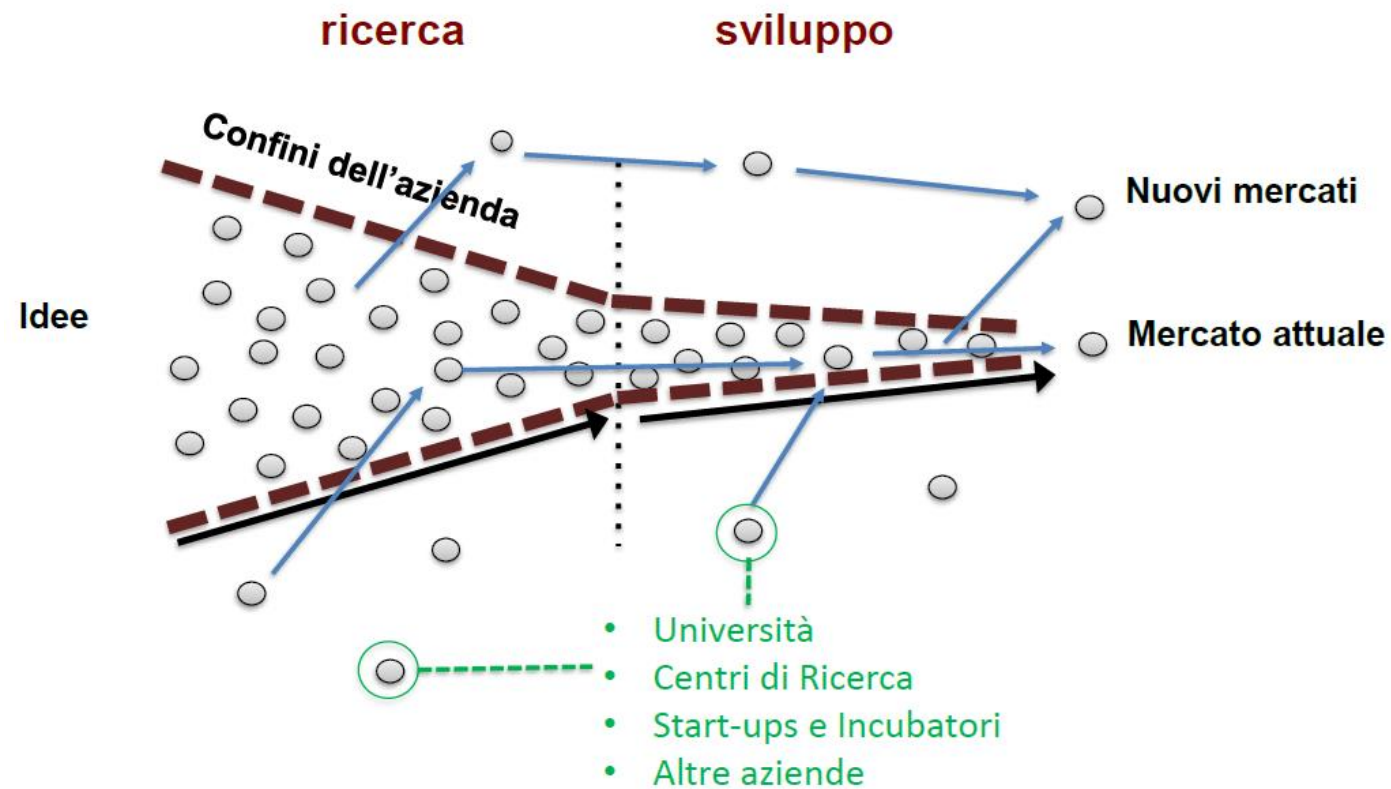**Manager Clust-ER Innovate Regione Emilia-Romagna**

CLUST-ER
INNOVATE
INNOVAZIONE NEI SERVIZI

COESIONE
ITALIA 21-27
EMILIA-ROMAGNA

Cofinanziato
dall'Unione europea

Regione Emilia-Romagna

Elisabetta Bracci

BACKGROUND

CLUST-ER INNOVATE — INNOVAZIONE NEI SERVIZI

jump

Philip Morris SpA

CRIF SpA

Studio Tecnico e PMI

SPECIALIZATION

- Digital Transformation & IoT
- Process Reengineering
- Project Management
- Problem Solving
- Facility, Property, Energy

EDUCATION

- Engineering
- FMS @ IFMA
- Business Admin @ BBS
- Agile @ APMG
- PM @ ISIPM
- Service Design @Poli.Design

ASSIGNMENTS

- Contributor @ Ingenio
- Coordinator Working Group ''WG Smart'' @ Engineering Association
- Board Member @ Smart Building Alliance Italy
- Member UNI/CT 025/SC 03 @ Italian Standardization Body
- Trainer and Keynote @ Italian Universities & national / international Bodies

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Innovazione chiusa o aperta

Idee

Confini dell'azienda

ricerca → sviluppo

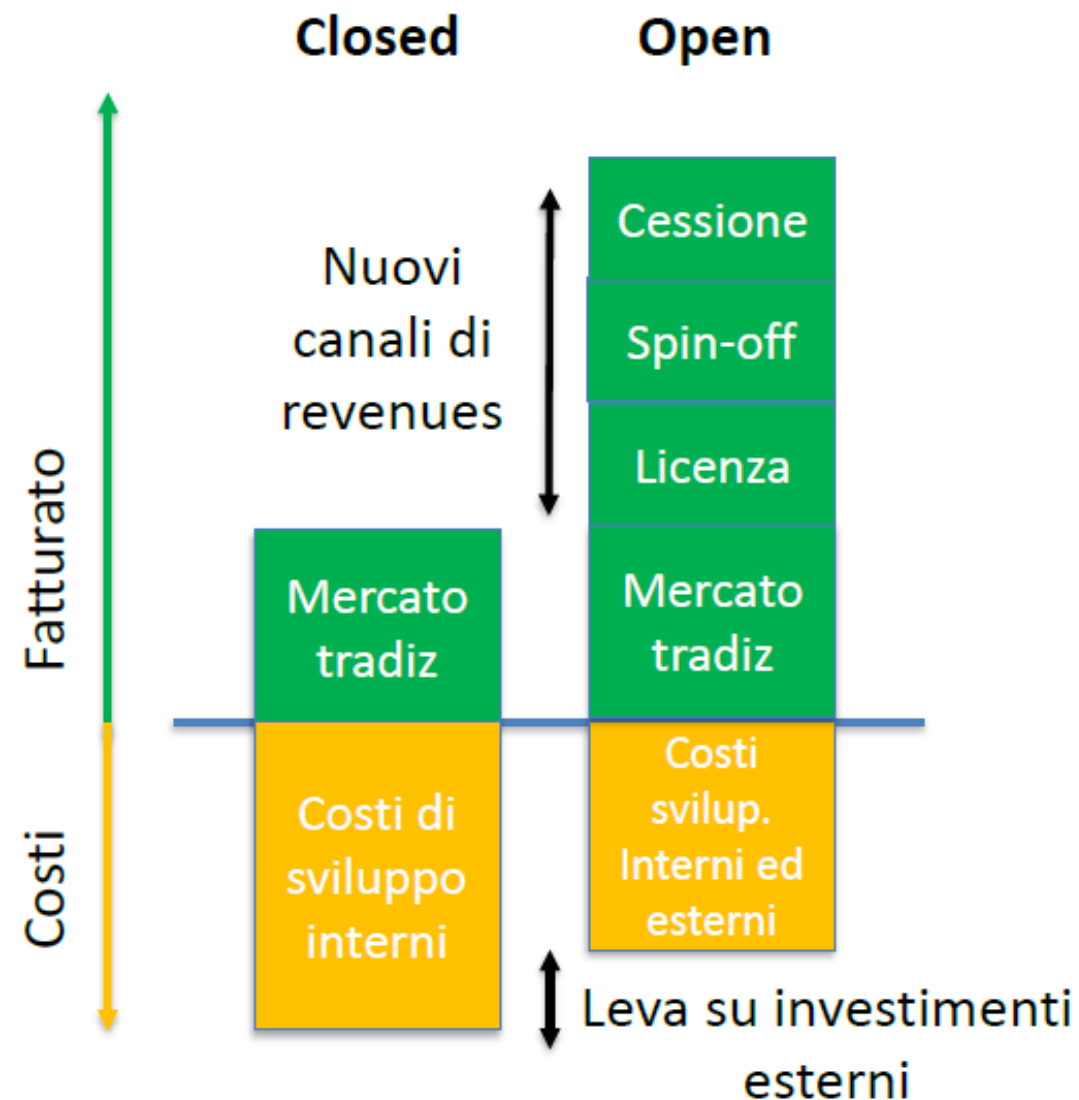Mercato

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Innovazione chiusa o aperta
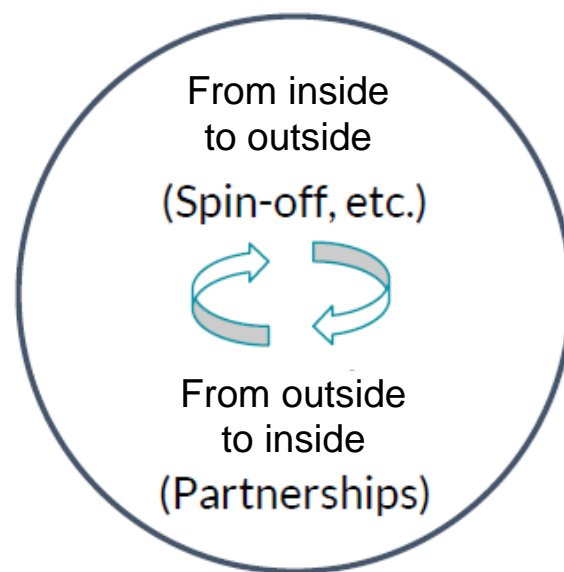
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Innovazione chiusa o aperta

- Offset del costo dell'errore minimizzandolo

- L'errore è accettato come portatore di valore aggiunto nel percorso innovativo
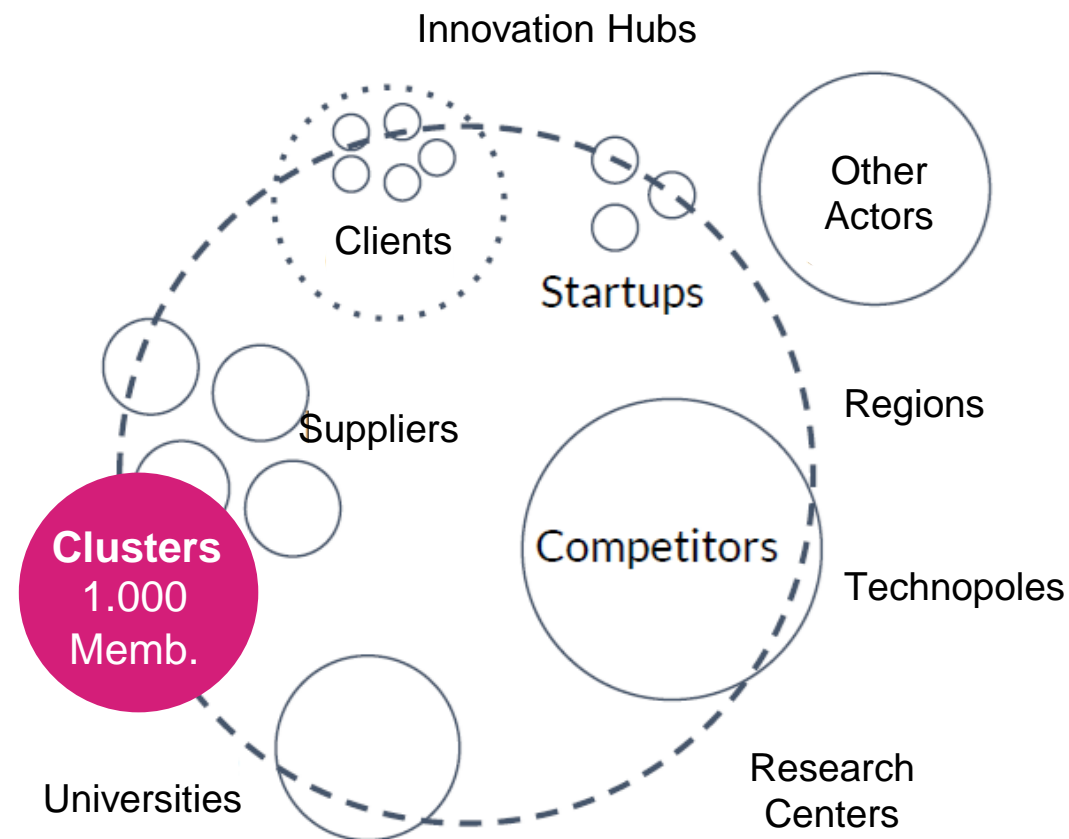
- L'esperienza è condivisa e massimizzata

Closed **Open**

Fatturato

Nuovi canali di revenues

Cessione

Spin-off

Licenza

Mercato tradiz

Mercato tradiz

Costi

Costi di sviluppo interni

Costi svilup. Interni ed esterni

Leva su investimenti esterni

Ecosistemi di innovazione

INTERNAL

Operations
R&D
HR
Facility
Legal
Purchase

EXTERNAL

From inside to outside
(Spin-off, etc.)

From outside to inside
(Partnerships)

ECOSYSTEM

Innovation Hubs
Clients
Startups
Other Actors
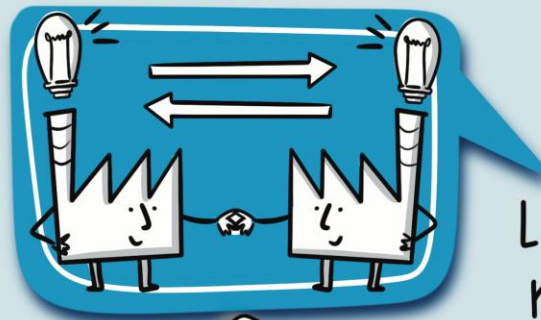Clusters 1.000 Memb.
Suppliers
Regions
Competitors
Technopoles
Universities
Research Centers

L' innovazione aperta è il processo di innovazione ripartito **TRA PIÙ PARTI** coinvolte e basato su una gestione dello **SCAMBIO** di conoscenze che **ATTRAVERSA** i confini dell'organizzazione, che sfrutta sia meccanismi che prescindono dalla **RETRIBUZIONE** sia quelli che comportano uno scambio di denaro in base al modello di business dell' organizzazione*
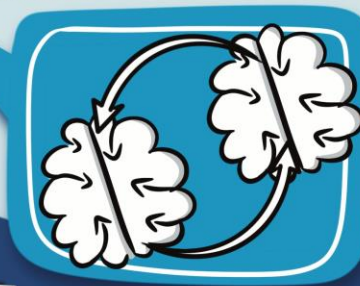
OPEN INNOVATION

* Chesbrough & M. Bogers (2014) "Explicating Open Innovation: Clarifying an Emerging Paradigm for Understanding Innovation". In H. Chesbrough, W. Vanhaverbeke, and J. West, eds. New Frontiers in Open Innovation. Oxford Scholarship Online (pp. 3-28).

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INNOVATE
INNOVAZIONE NEI SERVIZI

INNOVATION CULTURE

- **INNOVATION CULTURE** : not to survive but to compete

- What can **I GIVE** to the ecosystem

- **KNOW THE ECOSYSTEM** , not only my competitors or clients

- Start from **NEEDS**, not from technology

- **BE OPEN**

Emilia-Romagna Region overview

4.5 Millions Inhabitans

365.765
COMPANIES
in E-R as of 2020

1.6 M
WORKERS
in E-R as of 2020

2.539
ACTIVE STARTUPS
in E-R as of 2022

98
LABS &
INNOVATION CENTERS

1.600
RESEARCHERS

400 M€
PROJECTS SINCE 2009

170.000
UNIVERSITY STUDENTS
in E-R as of 2020

13.400
FOREIGN
UNIVERSITY STUDENTS
in E-R as of 2020

9.100
PROFESSORS & RESEARCHERS
in E-R as of 2020

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Emilia-Romagna: innovation in its DNA

1 Emilia-Romagna is home to ancient and prestigious universities, important national research institutes, large world-leading companies, specialized and competitive small and medium-sized enterprises, and innovative start-ups.

2 An ideal environment to promote the circulation of scientific and technological knowledge and the development of businesses, people, and territories. A region that competes with the most advanced regions in the world and attracts international investments and talents. A region of excellence.

1st Region in Italy for innovation
Source: EC-RIS, 2021 and the Transatlantic Subnational Innovation Competitiveness Index 2022

Data Valley
with supercomputers among the most powerful in the world

Higher R&D expenditure per capita
compared to the national and EU27 average.
Source: Eurostat, 2020

1st Region in Italy to adopt an innovation law
Regional Law 7/2002

1st Region in Italy to adopt a law on talent attraction
Regional Law 2/2023

Emilia-Romagna: innovation in its DNA

12,217	3.621,75 M€	1.883,86 M€
Financed R&D projects	**Total investment**	**Public funds**
		[Source: Monitoring of ER S3 (Smart Specialisation Strategy)](#)
1st in Italy for R&D personnel per 1,000 inhabitants *Source: ISTAT, 2020*	1st in Italy for patent applications per capita filed with the EPO (European Patent Office, and among the top twenty in Europe. 2nd in Italy for the number of patents filed in 2021 *Source: EPO, 2021*	2nd in Italy for the incidence of R&D expenditure on GDP. *Source: ISTAT, 2020*
2nd in Italy for the incidence of business expenditure on R&D on GDP *Source: ISTAT, 2020*	2nd in Italy for the number of researchers employed in companies as a percentage of total employees *Source: ISTAT, 2020*	2nd in Italy for employees in high-tech and medium/high-tech manufacturing sectors *Source: Eurostat, 2021*

The regional university system

7 Universities

- University of Bologna, "Alma Mater Studiorum", with campuses in Bologna, Forlì, Cesena, Ravenna, and Rimini. It is the oldest in the Western world and the first in Italy according to the World University Rankings 2023
  Source: THE - Times Higher Education

- University of Modena and Reggio Emilia

- University of Ferrara
- University of Parma
- Catholic University of Piacenza
- Piacenza Campus of Politecnico di Milano
- Johns Hopkins University - SAIS Europe

the numbers

+160,000 students (including 12,810 international students)
Source: MIUR 2020/21
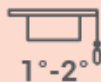
+490 degree courses (first and second cycle)
1°-2°

+240 master's courses (first and second level)
Source: Almalaurea - University of Bologna, Ferrara, Modena and Reggio Emilia, Parma

+100 PhD programs
Source: websites of the University of Bologna, Ferrara, Modena and Reggio Emilia, Parma

The High Technology Network

what is it?

It is the tool promoted by the Emilia-Romagna Region to organize the regional industrial research offer.

It is composed of Industrial Research Laboratories and Innovation Centres.
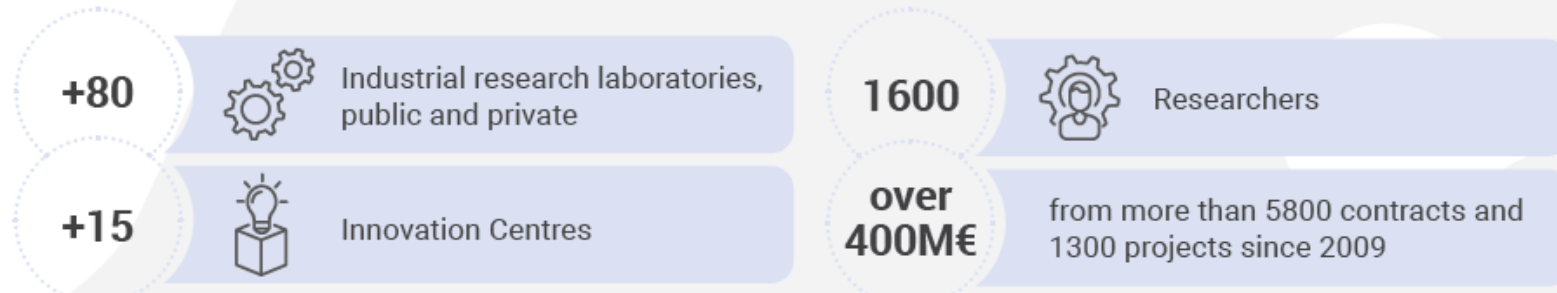
The High Technology Network

activities

It provides expertise, technologies, solutions, and equipment for business innovation.

Areas of specialization:

- Mechatronics
- Materials
- Agri-food
- Health
- Well-being

- Building and Construction
- Culture
- Digital
- Energy
- Sustainability

the numbers

+80 Industrial research laboratories, public and private

1600 Researchers

+15 Innovation Centres

over 400M€ from more than 5800 contracts and 1300 projects since 2009

Watch the video

Visit the website

The Technopoles Network

what is it?

Promoted by the Emilia-Romagna Region in collaboration with regional Universities, Research Centres, and local Institutions, the Technopoles host and organize activities and services for industrial research, experimental development, and technology transfer to support innovation of companies, individuals, and the territory.

Data Valley - Emilia-Romagna

Data Valley Emilia-Romagna

Emilia-Romagna qualifies as an international **Data Valley**, boasting state-of-the- art supercomputers and data centres, unique organizations in the field of big data, policies to support new investments, and a dynamic entrepreneurial environment that aims to put Europe on par with giants such as the USA and China.

TOP INFRASTRUCTURE

TECNOPOLO MANIFATTURA DATA VALLEY HUB

COMPUTING POWER

CINECA
LEONARDO
INFN
SUPER M4X

SYNERGIES AMONG TOP ACTORS

associazione BigData from volume to value
bi-rex

FOCUS

INDUSTRY 4.0

CLIMATE, WEATHER AND SUSTAINABILITY

LIFE SCIENCE AND HEALTHCARE

SMART CITIES, SMART MOBILITIES

EDUCATION AND TRAINING

MASTER DEGREES / AI ACADEMY

MUNER / PHD COURSES

RESEARCH FELLOWSHIPS BD&AI

DATA LAB

INTERNATIONAL ORGANIZATION

ECMWF

ARTIFICIAL INTELLIGENCE

iFAB
AImage
AIRI

ACCELERATING PROGRAMS

ER STARTUPS INCUBATOR PROGRAMME
MOTOR VALLEY ACCELERATOR
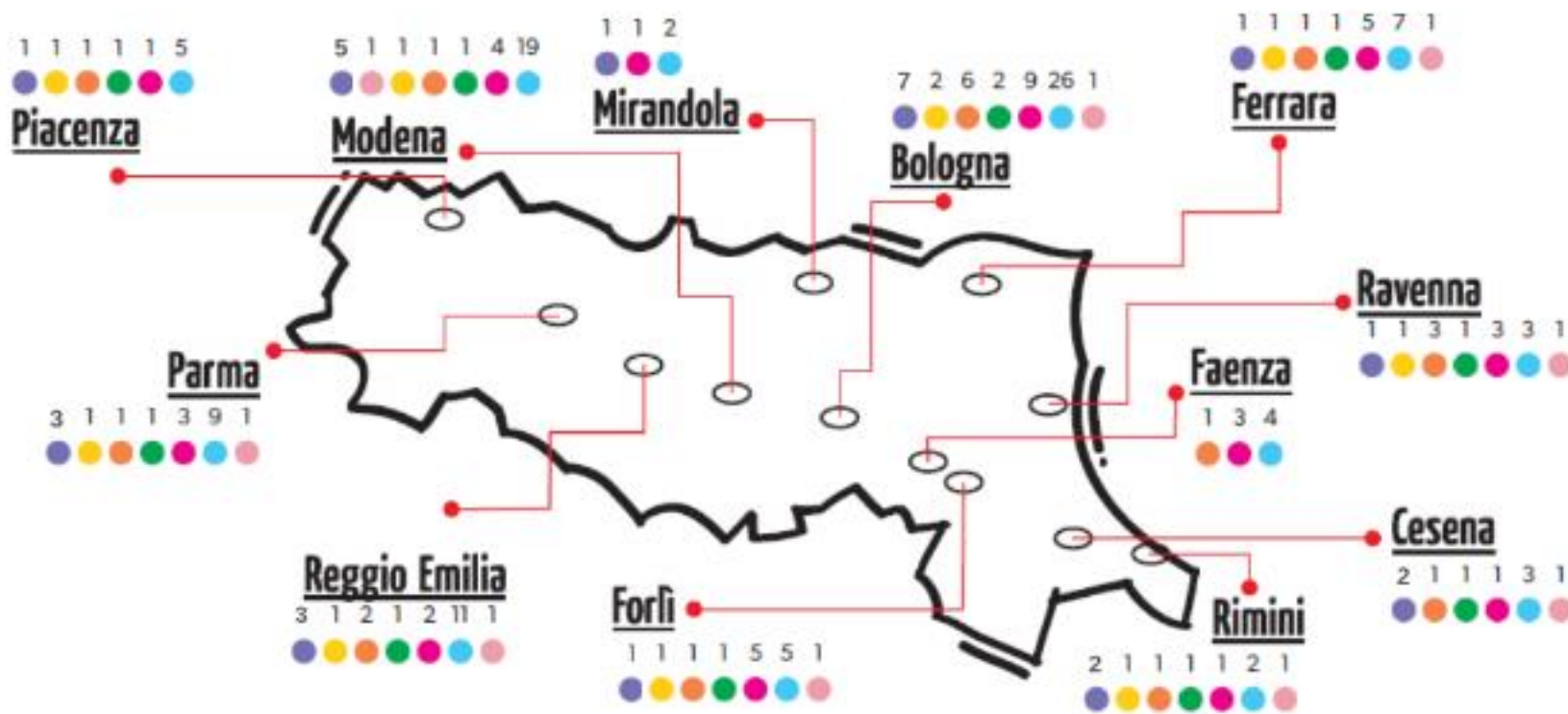LAUNCHPAD ACCELERATOR

ECOLOGICAL TRANSITION

THE TECHNOLOGY TRANSFER INNOVATION PROGRAMME (TTIP) OF

ecosister

Regional Innovation System

CLUST-ER
9 Clust-ER S3, Ass Big Data e Muner

TECHNOPOLES (high technology activities)
10 Infrastructures
20 Headquarters

HIGH TECHNOLOGY NETWORK (Rete Alta Tecnologia)
82 Labs for industrial research
14 Innovation Centers

INCUBATORS
75 private and public structures

MAKERs
22 Labs for advanced manufacturing

OPEN LABS
10 Open Labs for digital-citizenship

S3 AREAS NETWORK
10 Areas insideTechnopoles

ITS NETWORK
7 High Technology Schools and > 30 biannual paths

Clust-ER Network

1.000+ Members

Research centres, companies and training institutions working together to share ideas, skills, tools and resources.

The **Emilia-Romagna Region** finances and collaborates with **Clust-ERs** as the subjects capable of multiplying innovation opportunities through a cooperative approach, as they focus on strategic R&D sectors.

Together with the Technopoles and the High Technology Network laboratories, we are a key player in the regional innovation ecosystem coordinated by **ART-ER**, the Emilia-Romagna consortium for innovation and technology transfer.

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ART-ER

ART-ER Attractiveness Research Territory is 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**

ART-ER promotes the internationalization of the research system through **participation in European and international networks and the development of collaborative projects**, to promote knowledge exchanges and enhance regional skills and experiences.

To increase the participation of companies and researchers in European Union funding programs and help make regional stakeholders' access to the resources deployed by Horizon 2020 more effective, we have activated an **office in Brussels** that carries out networking, partner research and strategic alliances.

Our Members: composition

Companies and Startups	**65%**
Research Labs and Innovation Centers	**24%**
ITS Foundations and training institutions	**6%**
Other (CINECA, Lepida, INFN, ITL, ...)	**5%**

65%

24%

5%

6%
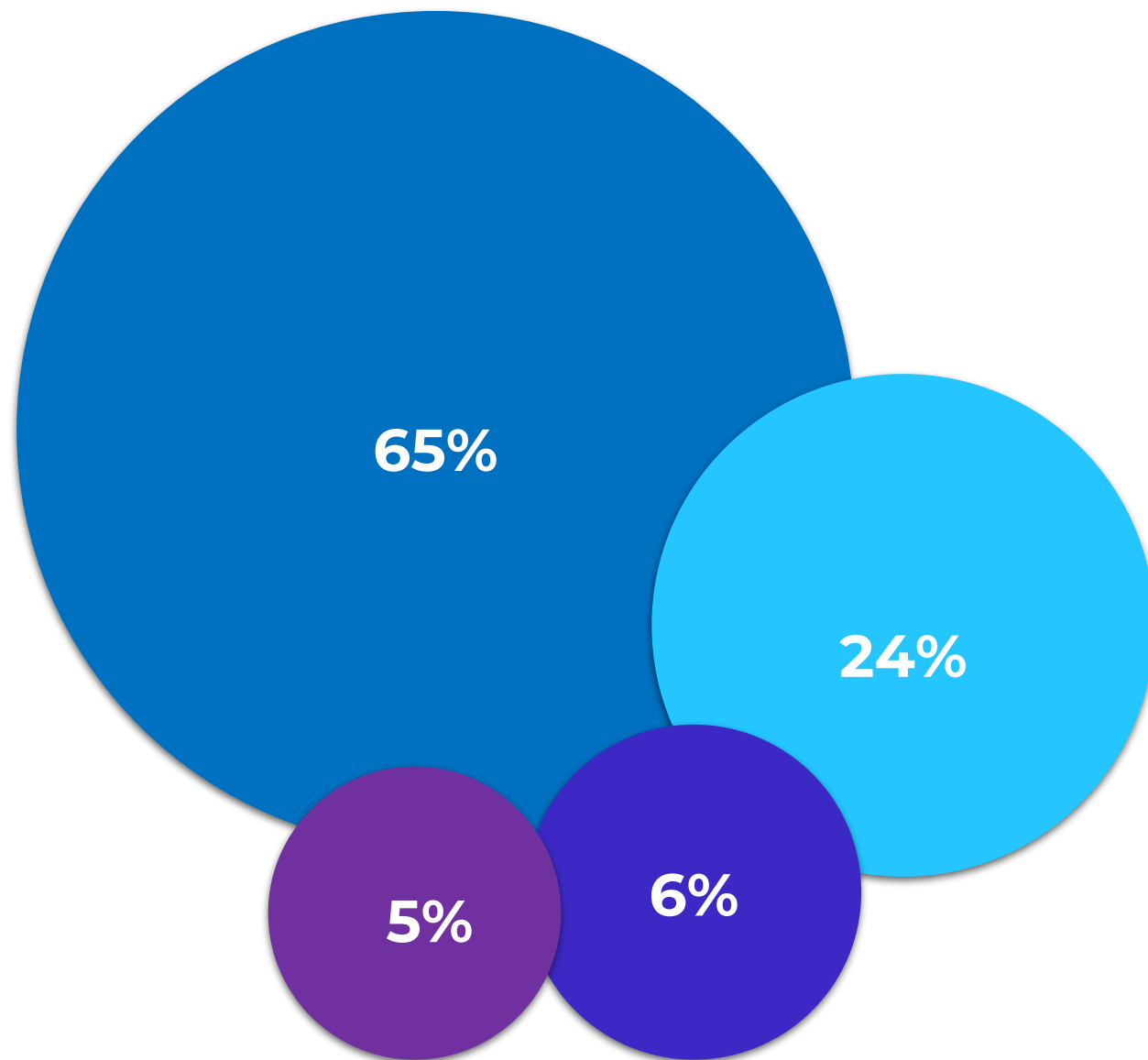
Main Partners

Competence Centers, Innovation Centers, Research Centers, Universities

Board of directors

President
Antonio Corradi
Prof.
University of Bologna

Vice-President
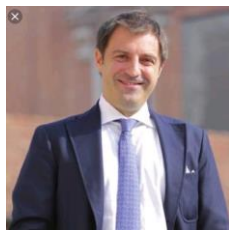**Filippo Bosi**
Ing.
Imola Informatica

Member
Roberto Vezzani
Prof.
University of Modena and Reggio Emilia
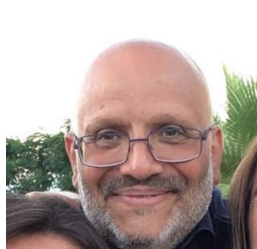
Member
Cesare Stefanelli
Prof.
University of Ferrara

Member
Andrea Bardi
Dott.
Fondazione Istituto Trasporti e Logistica

Member
Gianluca Ortolani
Ing.
Net Service S.p.a.

Member
Stefano Maccaferri
Dott.
Phorma Mentis

Member
Anna Lisa Minghetti
Ing.
Lepida S.c.p.a.

Member
Cesare Valenti
Ing.
Itway S.p.a.

Team

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International Partnerships**

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Innovation Manager**

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**Head of Relations between
Clust-ER Innovate and ART-ER**

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STRATEGIC GUIDELINES
VALUE FOR DV DATAVALLEY

VALUE CHAINS

SCALABLE BIG DATA INFRASTRUCTURE **SCABIS**
SERVICE PLATFORM FOR IOT **ER-IoT**
CYBERSECURITY **CySEC**
INTELLIGENT IT SERVICES **Intell_ITS**
LOGISTICS **Log-ER**
DIGITAL ETHICS **Dig-Eth**

Critical Infrastructures
Green Data Center
Logistics 4.0
Tourism 4.0
Cyber Security 4SME
Aerospace Downstream
Digital Skills
AgriTech
Digital Heritage

WORKING GROUPS

STRATEGIC FUNCTIONS

INTERNATIONALIZATIONS & CALLS
EVENTS & COMMUNICATION

CORE VALUES
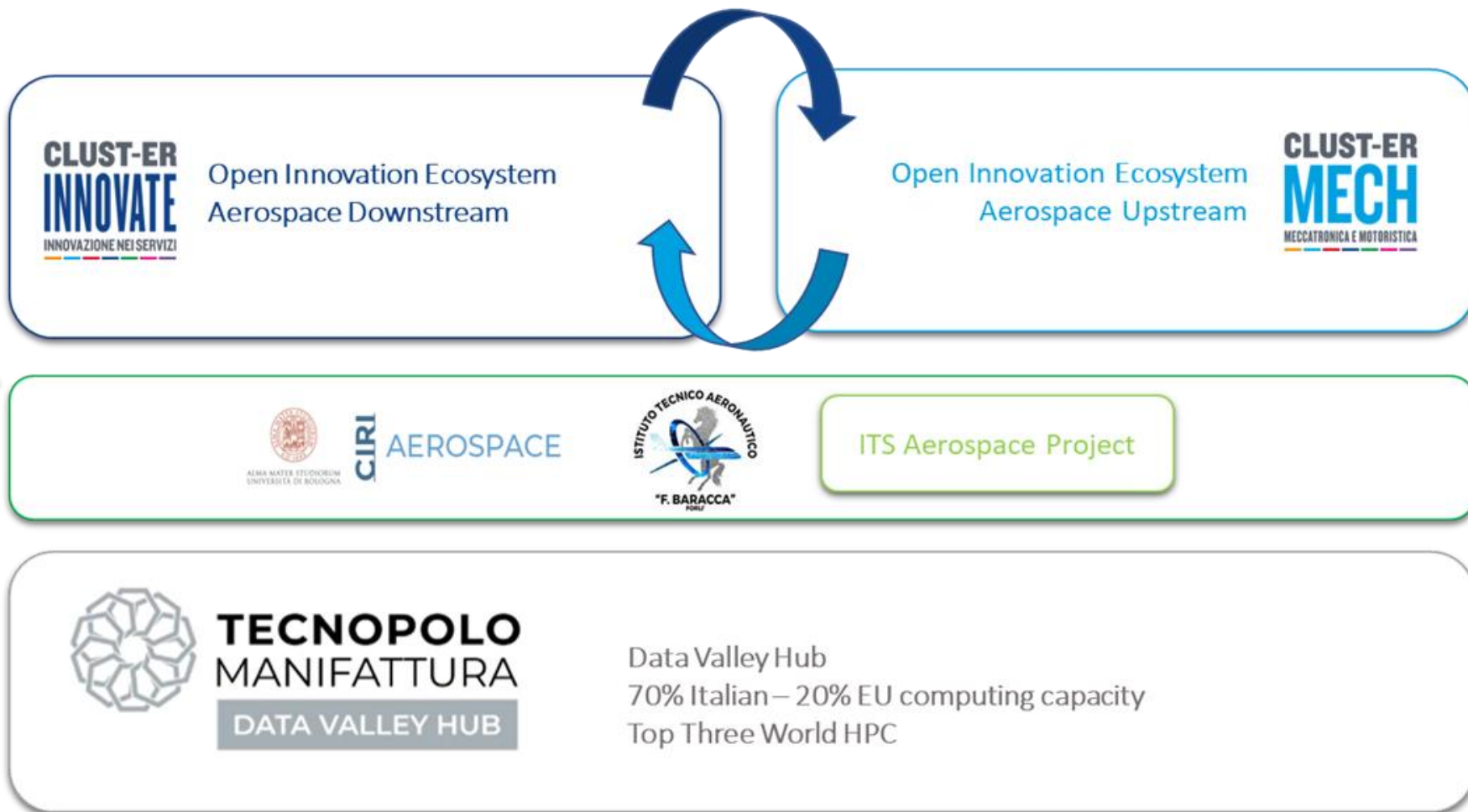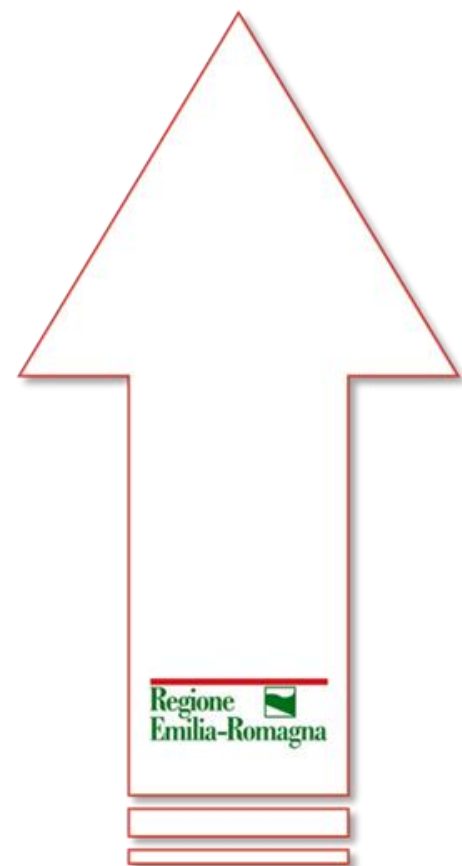
COOPETITION
CONTAMINATION
VALUE DRIVEN APPROACH

VALUE MODEL

people, skills & technologies LEVERAGING DIGITAL TRANSFORMATION

CLUST-ER INNOVATE
INNOVAZIONE NEI SERVIZI

join Clust-ER as a Member

OPPORTUNITIES : being a member of the Clust-ER will give you privileged access to many opportunities

STRATEGY: contribute to the definition of regional development strategies

KNOWLEDGE: receive the latest sectoral science, technology and business news from regional, national and international sources, best practices sharing

NETWORK: leverage the network of international partners to build consortia for research and innovation projects

PARTNERSHIP: reach new business sectors and create national and international partnership

INNOVATION: share ideas and innovate your business / find new research themes

ECOSYSTEM: keep in touch with the regional innovation ecosystem

CLUST-ER
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