

Pietro Rosso – Technology Advisor @DIHP

Dih transition towards Digital Europe Program





Piano nazionale Industria 4.0 2017-2020

Direttrici strategiche di intervento

Direttrici chiave

Investimenti innovativi

- Incentivare gli investimenti privati su tecnologie e beni I4.0
- Aumentare la spesa privata in Ricerca, Sviluppo e Innovazione
- Rafforzare la finanza a supporto di I4.0, VC e start-up



Competenze

- Diffondere la cultura I4.0 attraverso Scuola Digitale e Alternanza Scuola Lavoro
- Sviluppare le competenze I4.0 attraverso percorsi Universitari e Istituti Tecnici Superiori dedicati
- Finanziare la ricerca I4.0 potenziando i Cluster e i dottorati
- Creare Competence Center e Digital Innovation Hub



Infrastrutture abilitanti

- Assicurare adeguate infrastrutture di rete (Piano Banda Ultra Larga)
- Collaborare alla definizione di standard e criteri di interoperabilità IoT



Strumenti pubblici di supporto

- Garantire gli investimenti privati
- Supportare i grandi investimenti innovativi
- Rafforzare e innovare il presidio di mercati internazionali
- Supportare lo scambio salario-produttività attraverso la contrattazione decentrata aziendale



Governance e awareness

- Sensibilizzare sull'importanza dell'I4.0 e creare la governance pubblico privata

Fonte: Cabina di Regia Industria 4.0

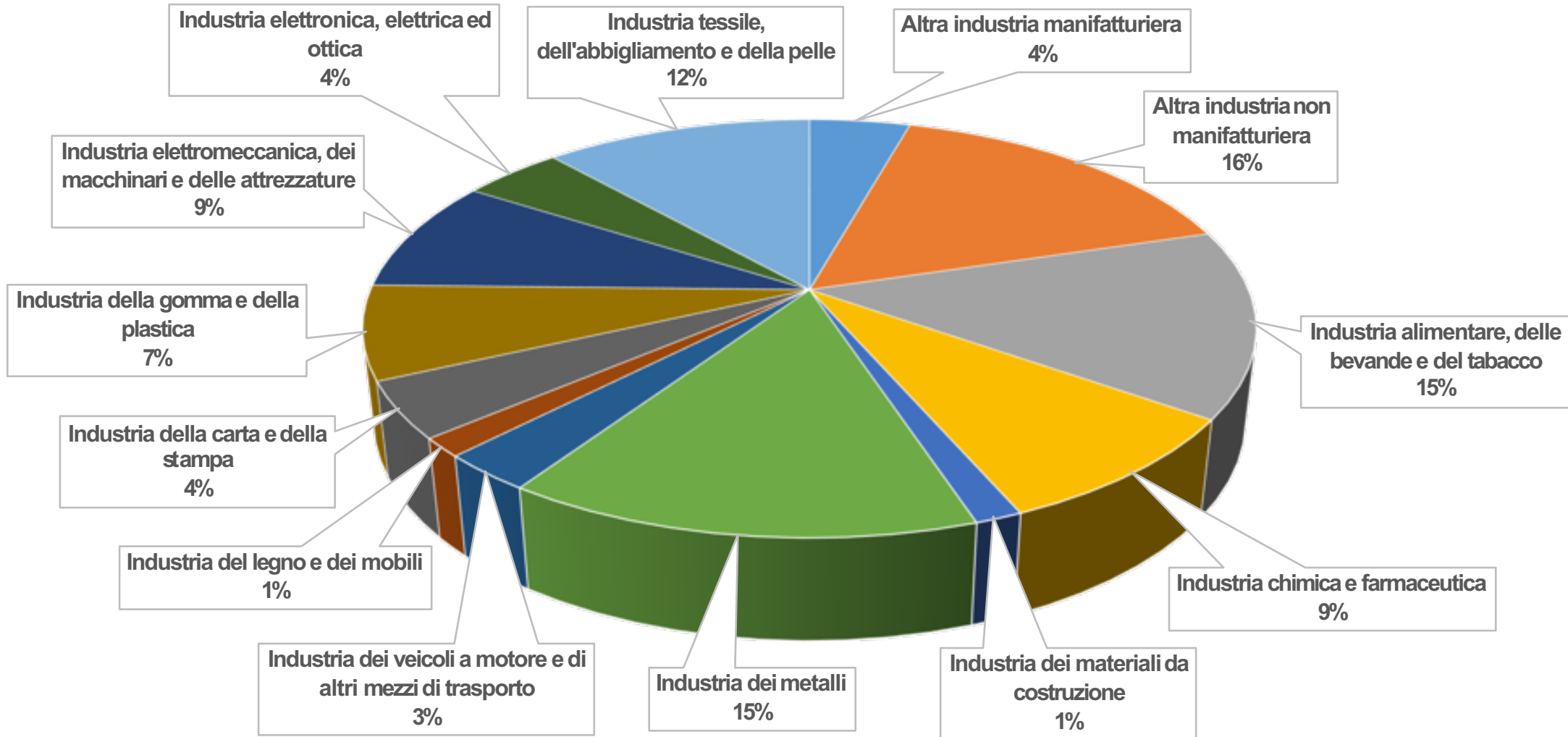
Foundation: 15 june 2017

All the Associations of Confindustria of Piedmont and Aosta Valley are partners

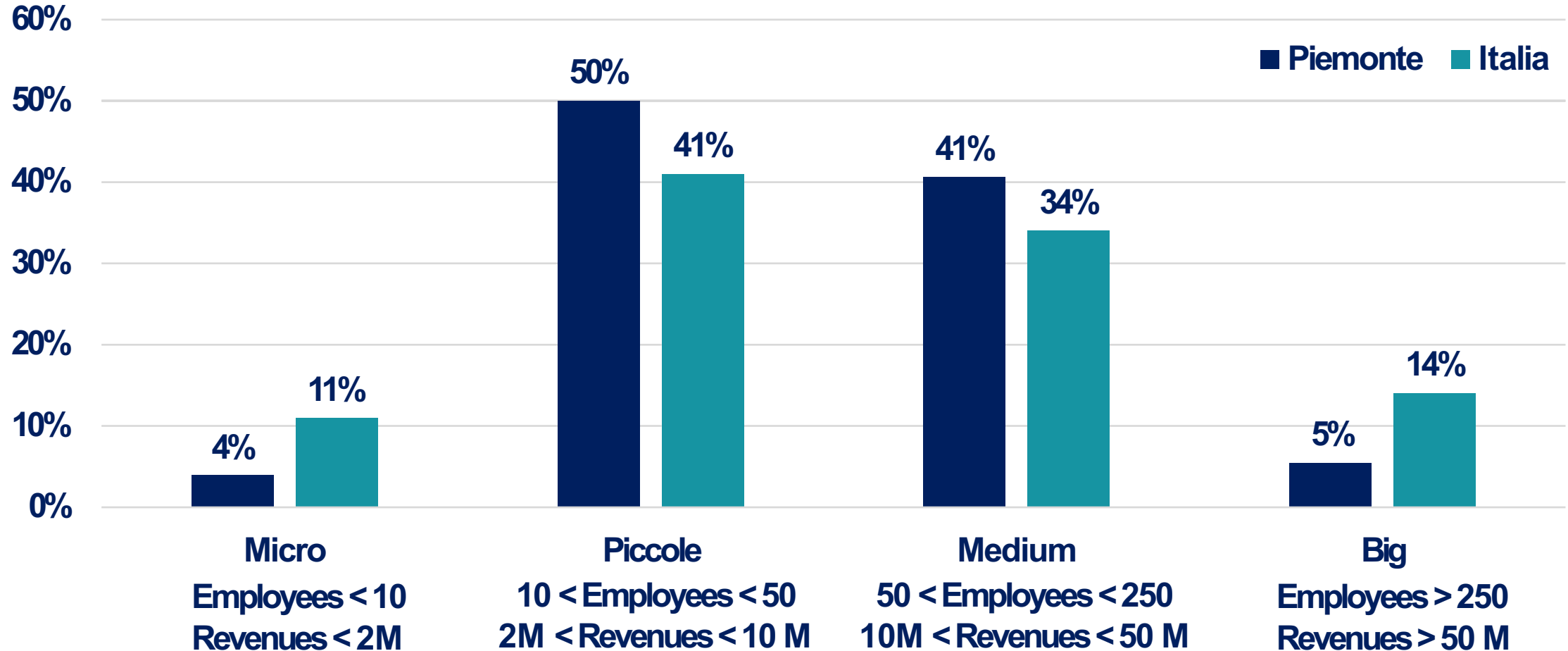


- **Team of 18 digital experts across the region**
- **Direct Network with more than 5400 firms**
- **Full coverage of the North West Region**
- **370 Digital Maturity Assessment in 4 years**

All Industries are involved



The focus is on SMEs



Awareness and access to the ecosystem



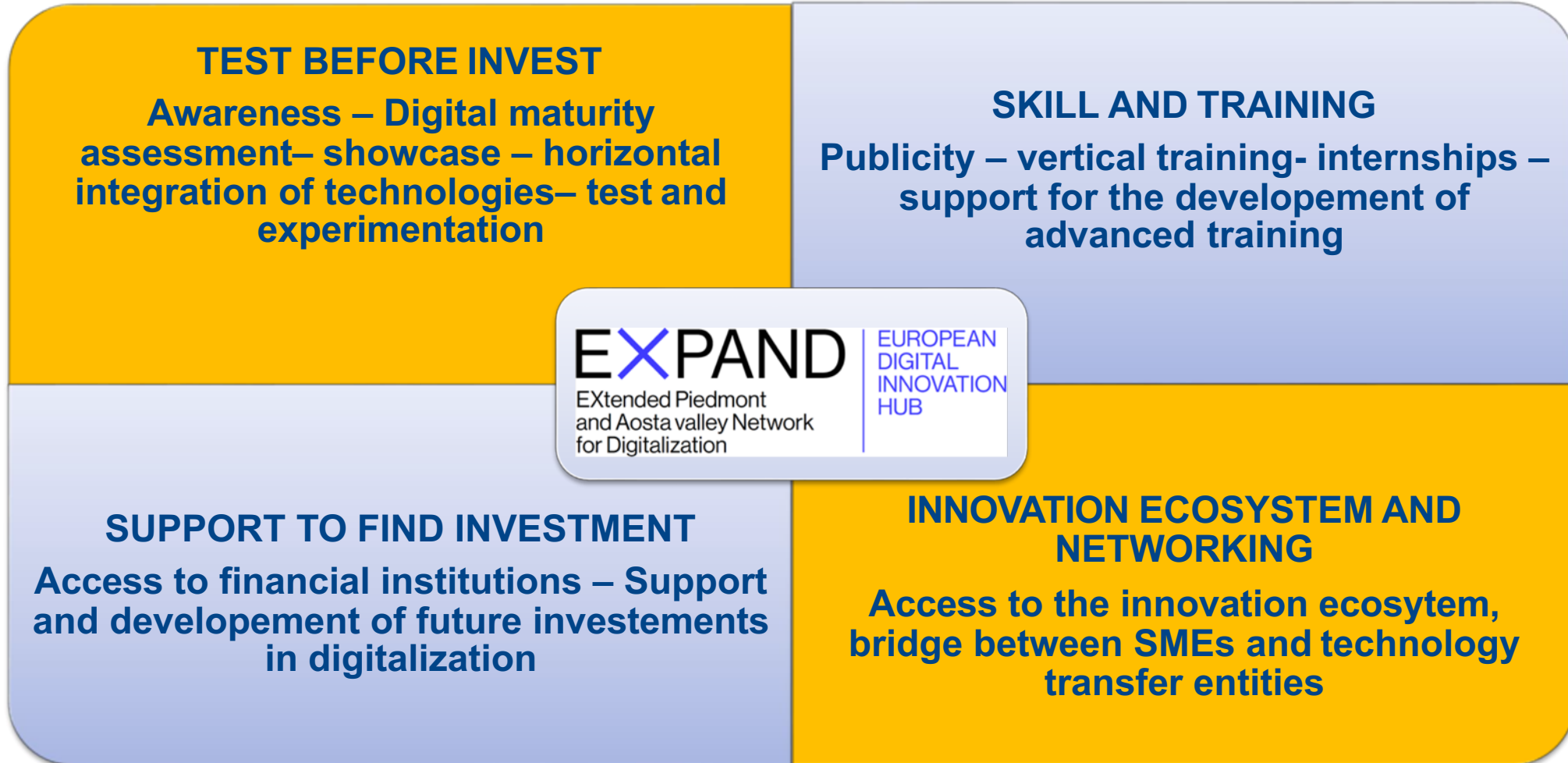
First contact point for Digital and Sustainable transition

European - DIH

The DIHP is honored to participate in the open call for the selection of EDIH. This should be a natural evolution and expansion of activities for the whole network. We already have established relations and received support from international partners.



Where does the DIHP fit



Thank you

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@dihpiemonte

<https://www.linkedin.com/in/pietrorosso/>



Digital Innovation Hub Piemonte

www.dih.piemonte.it



@DihPiemonte

NEURAL

veNEto hUb foR Ai and bLockchain

official EDIH candidate for the Veneto region

Consortium Partners

All relevant entities active on digitalization in Veneto and beyond

SMACT RTOs

Università di Padova / Università di Bolzano / Università di Trento / Fondazione Bruno Kessler / Università di Verona / Università Ca' Foscari / Università IUAV / INFN / Università di Udine / SISSA Trieste / Università di Trieste

DIHs & EEN

DIH Confindustria / DIH Confartigianato / EDI Confcommercio / T2i technology park / Galileo technology park / Unioncamere del Veneto

HIGLY RELEVANT ENTITIES

EIT Manufacturing South / Intesa Sanpaolo Bank / InfoCamere / Area science Park / Univeneto

For successful SMEs

Veneto has a thriving economy built on:

- / 430.000 companies, of which over 99% are SMEs
- / 1.730.000 workers and employees

SMEs that aim at adopting technologies for...

//////////////////// ...flexibility in product portfolio (87,5%)

//////////////////// ...process efficiency (76%)

//////////////////// ...increase international competitiveness (64,6%)

//////////////////// ...reduce costs (49%)

//////////////////// ...increase environmental sustainability (35,4%)

Tech and sectorial focus

technologies for tomorrow



Artificial
Intelligence



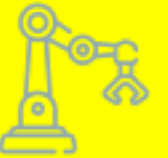
Blockchain

regional RIS3:

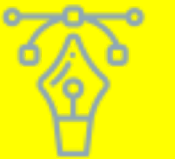
Agrifood



Manufacturing



Creative Industries



Sustainable living

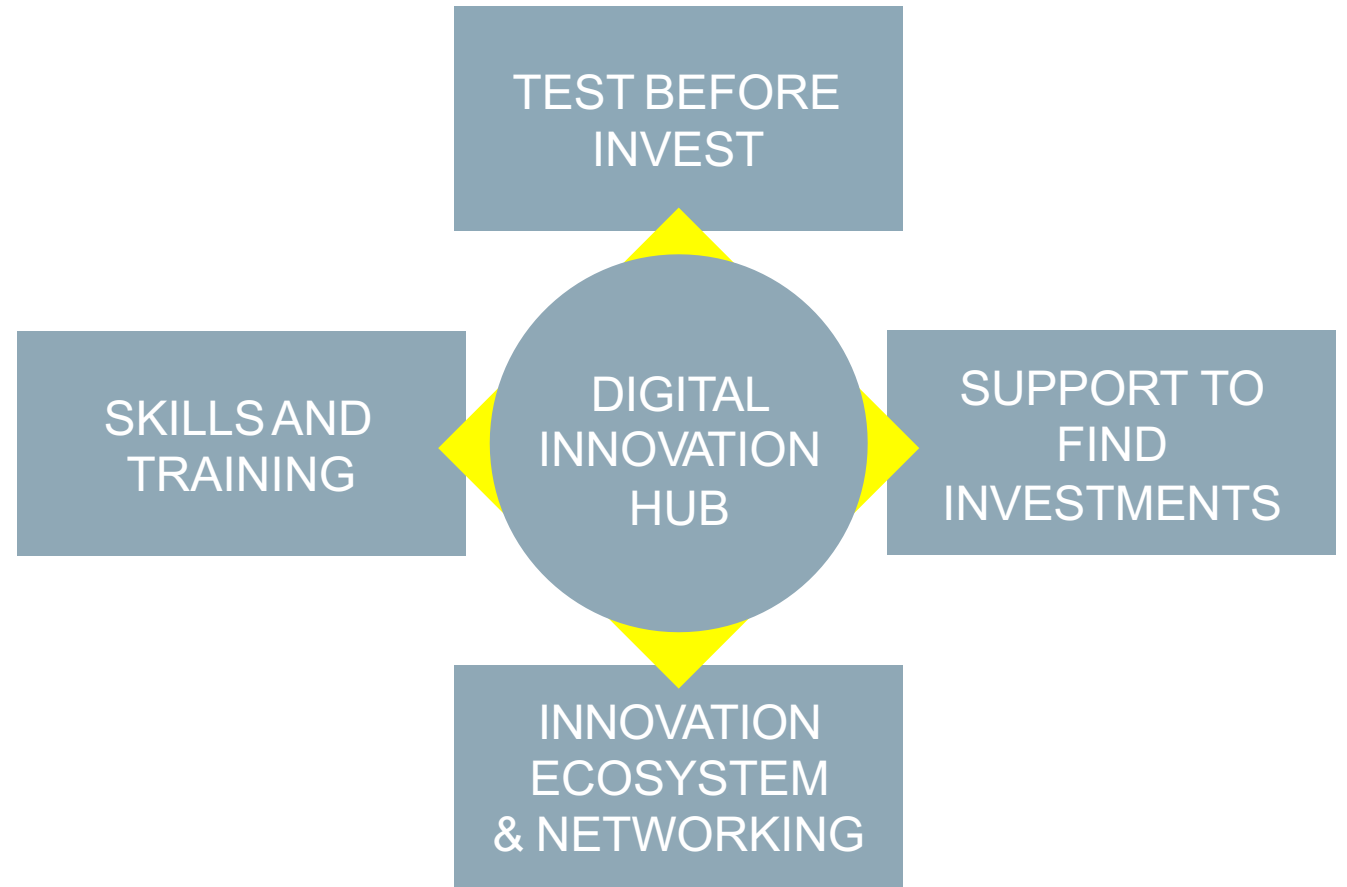


NEURAL aims at facilitating the digital transformation of the regional strategic verticals


Services

The 4 pillars of European digital innovation hubs:

- / Test before invest
- / Support to find investments
- / Innovation ecosystem & networking
- / Skills and training



Heatmap

		technology areas																	
		Photonics	Nanotechnology and micro/nano electronics	Sensory systems	Additive manufacturing	CPS and IoT	Communication networks	Robotics	Artificial intelligence	Cyber security	HPC and cloud computing	Big data, data analytics, data handling	Virtual, augmented and extended reality	Simulation, modelling and digital twins	Gamification	Software systems	Green ICT	Distributed Ledger Technology	Industrial biotech
application areas (sectors)	Agriculture and food			SP3		SP2	SP2	SP1	SP1	SP3	seeking	SP2				SP1	seeking	SP1	
	Maritime and fishery						seeking		SP1		seeking			SP3				SP1	
	Energy and utilities																		
	Construction				SP3	SP2			SP3	SP3	seeking						joined		
	Wholesale and retail								SP3			SP3							
	Tourism (incl. restaurants and hospitality)					SP2	SP2	capacity				SP2				SP1		SP2	
	Transport and logistics								SP1	joined									
	Financial service sector									SP3									
	Public administration									SP3	SP3	SP3							
	Education																		
	Life sciences and healthcare																		
	Manufacturing consumer products					SP1	SP3		SP1		seeking	SP1				SP1		SP1	
	Manufacturing basic materials	SP1			capacity	SP1		SP1	SP1	SP3	seeking	SP1	joined	SP3	SP3	SP1			
	Manufacturing machinery and equipment				capacity	SP1		SP1	SP1		seeking	SP1	joined	SP3	SP3	SP1		SP1	
	Culture and Creative industries				SP2	SP2	SP2					SP2			SP3			SP2	
	Science and research	SP4		SP4	SP4	SP4		SP4	SP4	SP4	SP4	SP4			SP4				SP4
	Defence and security																		
	Telecommunication and ICT																		
Aeronautics and aerospace													SP3						

SP1 Delivery of innovation to industry-leading SMEs in complex / multi-tier supply chains

SP2 Diverse and rich network of market-driven innovator

SP3 Strong ecosystem of technology-driven innovators including scale-ups and SMEs

SP4 Integrated tech transfer ecosystem, including infrastructure for test before invest

Shaping Europe's digital future

E-DIH Manufacturing Network

Stefano Cattorini
BHREX General Director

21st October 2021

bi-REX++
Big Data Innovation & Research Excellence



**WORLD
MANUFACTURING
WEEK**



18 - 22 October 2021

#WMWeek

PARTNER



Multi-Regional Emilia-Romagna, Lombardy, Tri-Veneto, Piedmont

UE CORRIDORS

TARGET

INDUSTRY

SMEs, MIDCAPS
STARTUP

OBJECTIVE

To foster the adoption and the further integration and evolution into process, product and services of 4.0 and advanced digital technologies for sustainable Industry.

HPC&Big Data Processing

Unique mix of Public-Private Capability

Tier0: MARCONI system. 3500 low latency server nodes + 3500 scale out server nodes; ~10 Petabyte of memory RAM; ~20 Petaflops peak performance

Tier0 in PRACE Partnership for Advanced Computing in Europe Eurofusion HPC service facility

Tier1: GALILEO system. 1000 low latency server nodes; ~2 petaflops peak performance

Cloud service: MEUCCI system. 250 low latency server nodes

Openstack virtualization middleware: containers, urgent computing

AI & ML: DAVIDE system. 45 hybrid nodes x 2 Power8 + 4Tesla P100; ~1 petaflops peak performance

STORAGE REPOSITORY: PICO system. 50 server nodes for visualization and data management services; multi tier storage repository.



...a one-stop shops to help companies become more competitive with regard to their business/ providing access to technical expertise and experimentation facility to “test before invest” and innovation services, like training and skills dev., access-to-finance, networking and sustainability (energy consumption and C-emissions).

Draft Partner Roles

70% forseen effort

15% forseen effort

10% forseen effort

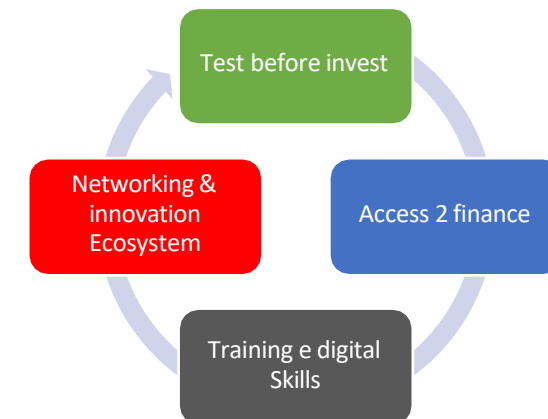
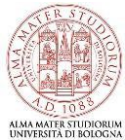
5% forseen effort

«Test Before Invest»
Including Assessment

Networking

Digital Skills and
TRAINING

Access 2
Finance



UE «Corridors» based on HPC Infrastruttura

Photonics and imaging technologies
 Communication networks
 Cyber physical systems
 Robotics
 Internet of things
 Artificial intelligence
 Mobility & Location based technologies
 Cyber security
 Advanced, or high performance computing
 Big data, data analytics, data handling
 Simulation, modelling and digital twins
 Cloud computing
 Additive manufacturing
 Laser based manufacturing
 Logistics
 Internet services
 Distributed ledger technology
 Quantum Computing

DIH4CAT
 - (Barcelona) -

H L R I S
 High-Performance Computing Center | Stuttgart

EDIH HPC-DA
 (Stuttgart)

Structured Corridors
 on Common HPC
 Challenges and
 Business Opportunity

Cyber physical systems
 Robotics
 Internet of things
 Artificial intelligence
 Advanced, or high performance computing
 Big data, data analytics, data handling
 Virtual, augmented and extended reality
 Simulation, modelling and digital twins
 Cloud computing
 New media technologies
 Quantum Computing



Objective of the MoU:

- Common Training
- Common Matchmaking
- Clients exchange
- Best practice & Assessment

AI, Cybersecurity, HPC, Additive Manufacturing, Agriculture & Agri-food, Automation, Automotive, Big Data, Blockchain & Distributed Ledger Technologies, Communication technologies, Health, Interoperability & Public Sector, IoT, Manufacturing, Mobility, Robotics, Skills, Virtual & Augmented Reality, and aerospace

Corridors Based on Manufacturing Industry structure



4 Universities + 1 Public Body
+ 39 Companies

*DEMONSTRATION ISLANDS ON
KEY ENABLING TECHNOLOGIES*

+ CIM4.0

2 Universities + 23
Companies

MANUFACTURING 4.0



SM
ACT

8 Universities + 4 Public Bodies
+ 30 Companies

SOCIAL, MOBILE, ANALYTICS, CLOUD, IOT

bi-REX
Big Data Innovation & Research Excellence

5 Universities + 7 Public Bodies
+ 44 Companies

BIG-DATA and ADDITIVE MANUFACTURING

Collaboration strategy:

- EDIH candidates coordinated by Italian CC
 - Manufacturing industry focus
 - Complementary Technology focus
 - Complementary Geographical scope

Fully Complementarity & Synergic

Industry



Nouvelle Aquitaine (FR)
SouthHesse (DE)
NorthHesse (DE)
Wielkopolska (PL)

**COLLABORATION
CORRIDORS
On Industry Structure**

Public Administration

- Energy and utilities
- Construction
- Tourism
- Transport and logistics
- Public administration**
- Life sciences and healthcare
- Culture and Creative industries
- Education

ECONOMIC SECTORS

- Automotive & Machinery
- Chemestry & Plastics
- Pharma & Bio tech
- Manufacturing & Automation
- Glass, wood, Ceramics, Paper
- Electronics & Photonics
- Aereospace & Mechatronics
- Agri-Food & Beverage

ECONOMIC SECTORS

OUR CONTACTS



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www.facebook.com/BiRexCompetenceCenter/





EDIH Lombardia

EDIH Manufacturing Network
21st October 2021 - WMF, Cernobbio

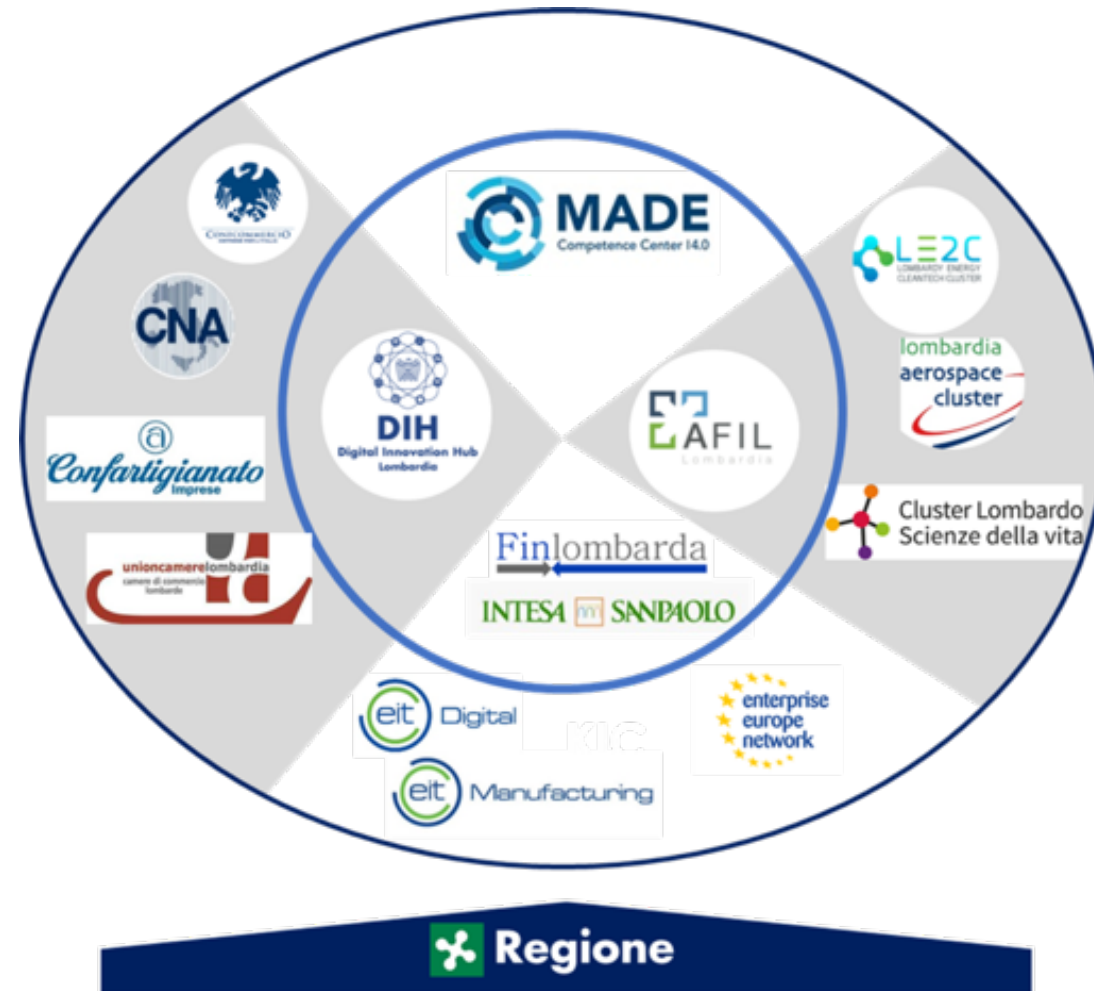
Maria Rossetti
Project Manager, MADE Competence Center

EDIH Lombardia: who we are



15 partner

- 1 Competence Center
- 1 Digital Innovation Hub
- 4 Business Association
- 5 Regional Technology Cluster
- 2 Financial Institutes
- 2 EIT CLC



What we have done



69+

R&I and technology
transfer projects



38,000+

Training dedicated to
workers



400+ Digital maturity
assessment

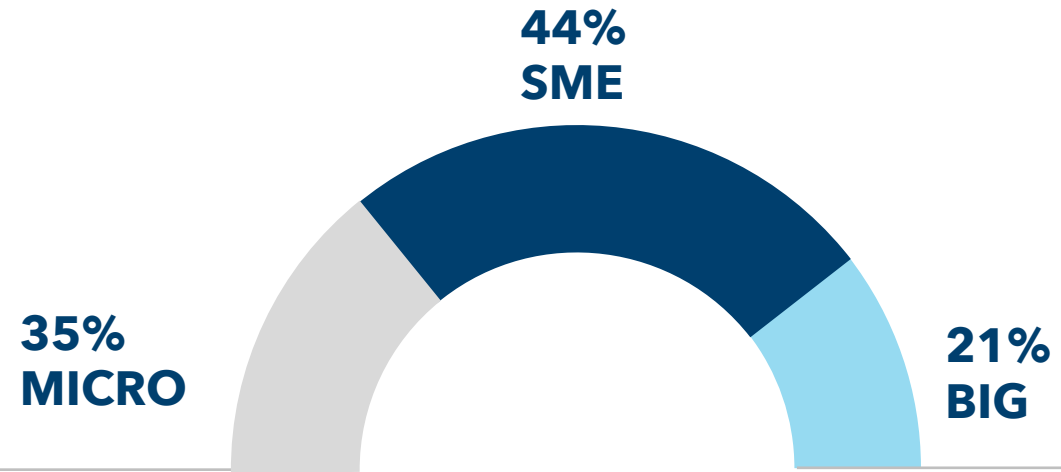
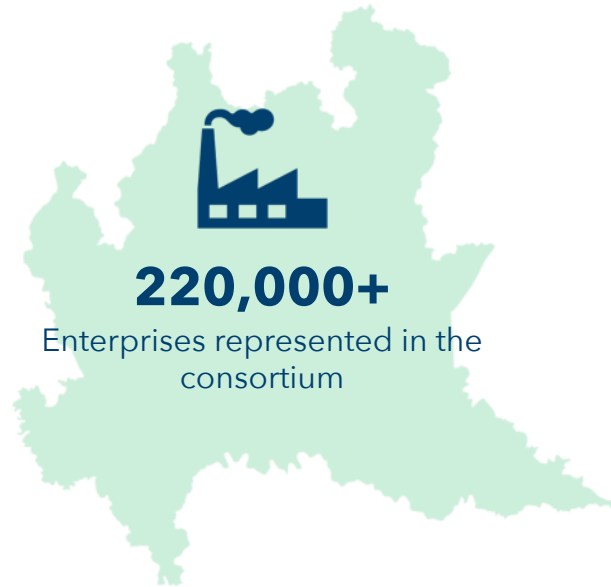
6 Supply chain
management projects

7 International
matchmaking projects



Networking with national
R&I ecosystem DIH
Confindustria, PID, EDI

Our target: companies and sector



30+

SECTORS

Mechanics and machinery



Metallurgy



Precision mechanics



Automotive



Aerospace



Agricultural machinery



White goods



Electronics



Mechatronics

Chemistry and pharma



Chemicals - cosmetics



Chemicals - Cleaning



Pharma

Fashion and textile



Textile



Luxuries and shoes



Wood and paper



Lighting



Furniture

Plastic materials



Tyres and automotive accessories



Rubber and plastic

Agriculture and food



Milk



Water and beverage



Beer and win



Bakery

Others



Metal transformation



Glass



Biotech



Logistic



Energy



Oil&Gas



Life science



Services



Other industries

14.0 Use Cases



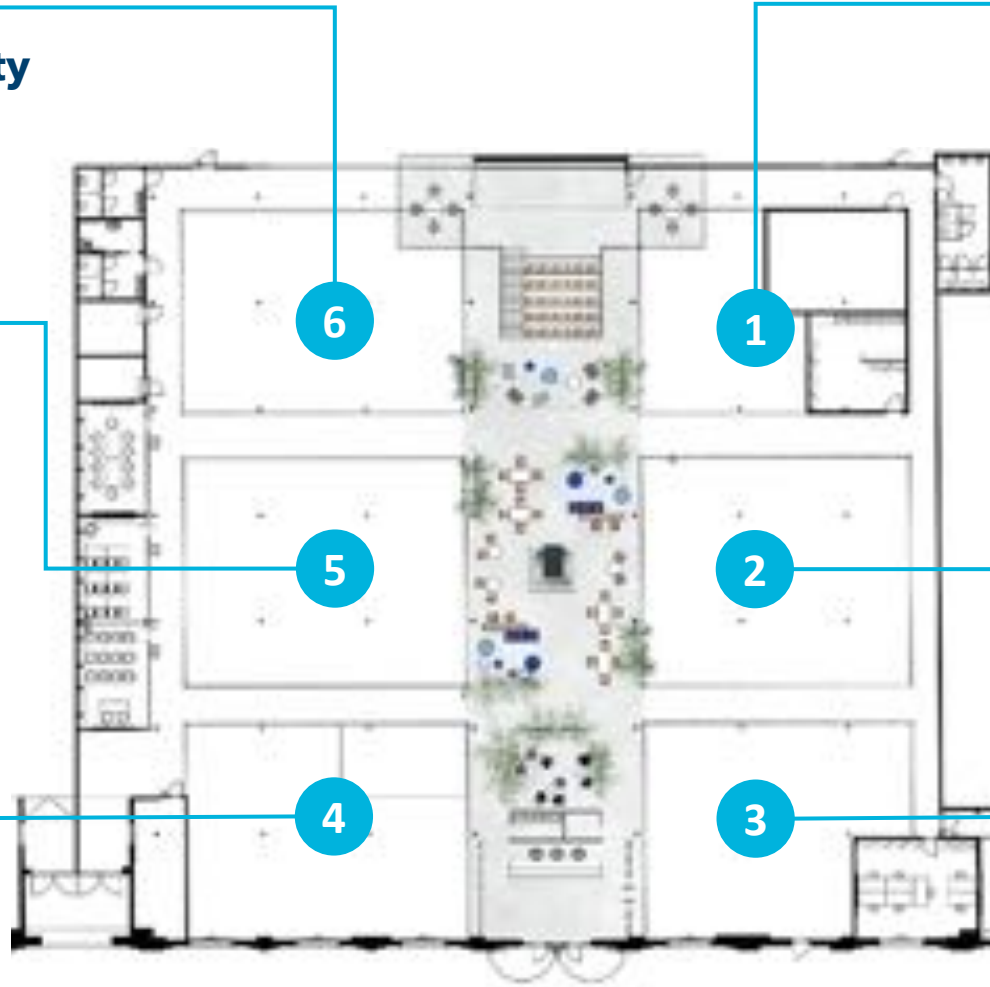
Industrial cybersecurity and Big data analytics



Smart monitoring & control of industrial processes, Smart energy monitoring & control, Smart maintenance



Quality 4.0, Product traceability & Additive manufacturing



Virtual design & Product development



Digital Twin and virtual Commissioning, Lean 4.0, Logistics 4.0



Collaborative robotics and intelligent worker assistance systems



Services and activities



TEST BEFORE INVEST

Enabling implementation and adoption of digital technologies

- Awareness raising
- Digital Maturity Assessment
- Access to technologies infrastructure
- R&I projects(PoC, TestBed)



SKILLS AND TRAINING

Developing and training I4.0 future skills

- Online and on site training course
- Teaching factory
- Train the trainer
- Skill 4.0 assessment



EDIH Lombardia



ACCESS TO R&I FUNDS

Supporting access to regional, national and EU R&I funds and innovative finance

- Call scouting
- Feasibility study and matching projects/funds
- Business development
- Network with EU financial institutions



ECOSYSTEM AND R&I NETWORK

Develop and nurture R&I stakeholder community (University, companies, R&I lab) supporting tech transfer

- Tech scouting
- Technology matchmaking
- Value chain digitisation
- Stakeholder engagement
- EDIH Manufacturing Network

EUROPEAN DIGITAL INNOVATION HUB

DIGITIZATION.BEYOND.BW

WM Forum and Week

21. October 2021



Objectives



Development of the **innovation ecosystem** of digital transformation and increase SMEs **visibility** as innovative entities at **national, European and international levels**.



Offer **access to infrastructure resources** to support high-quality innovative **pilots**, prototyping, scaling-up, testing, and demonstration.



Provide business coaching and training to accelerate **market uptake** and **exploitation of digital technologies**



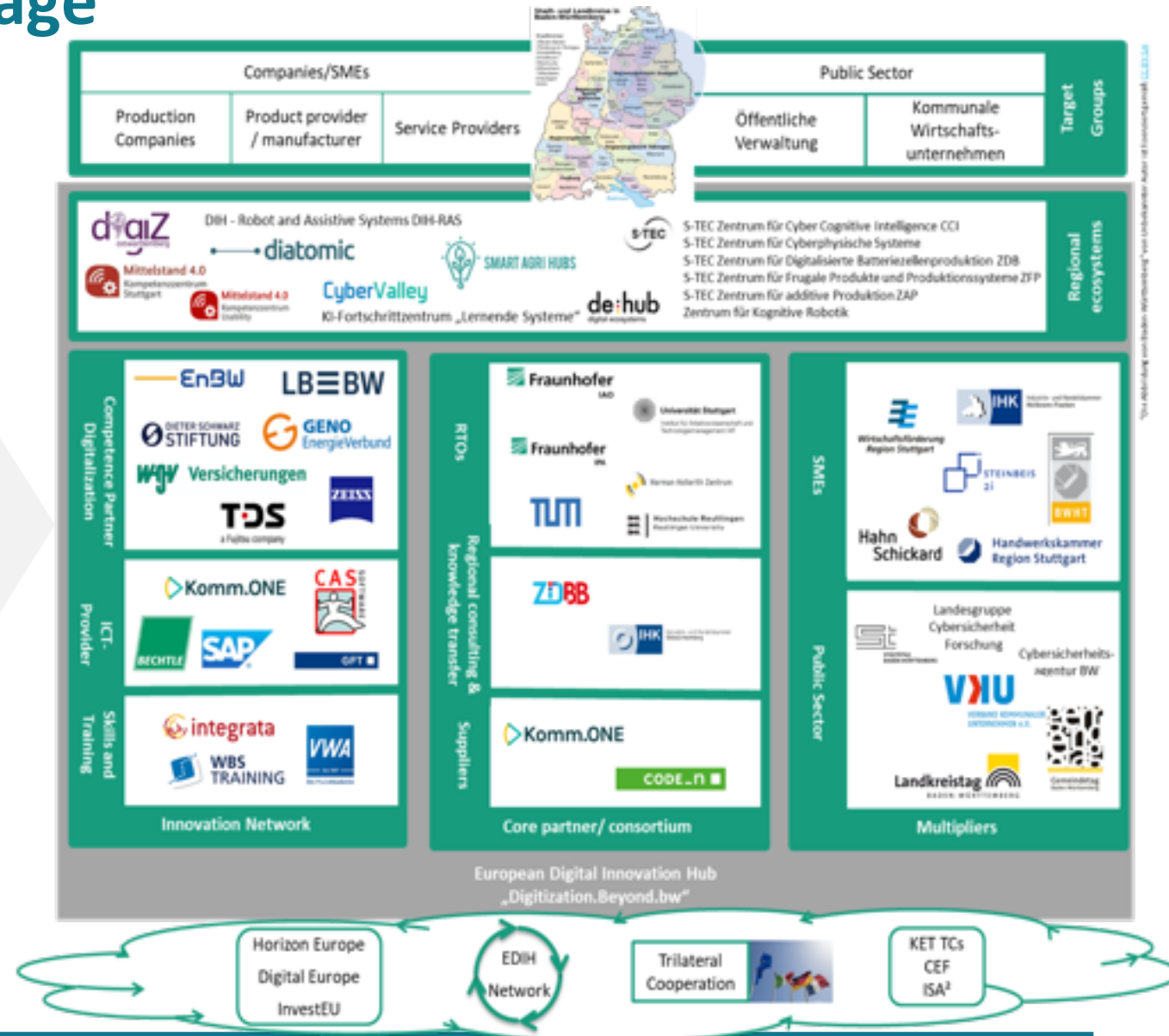
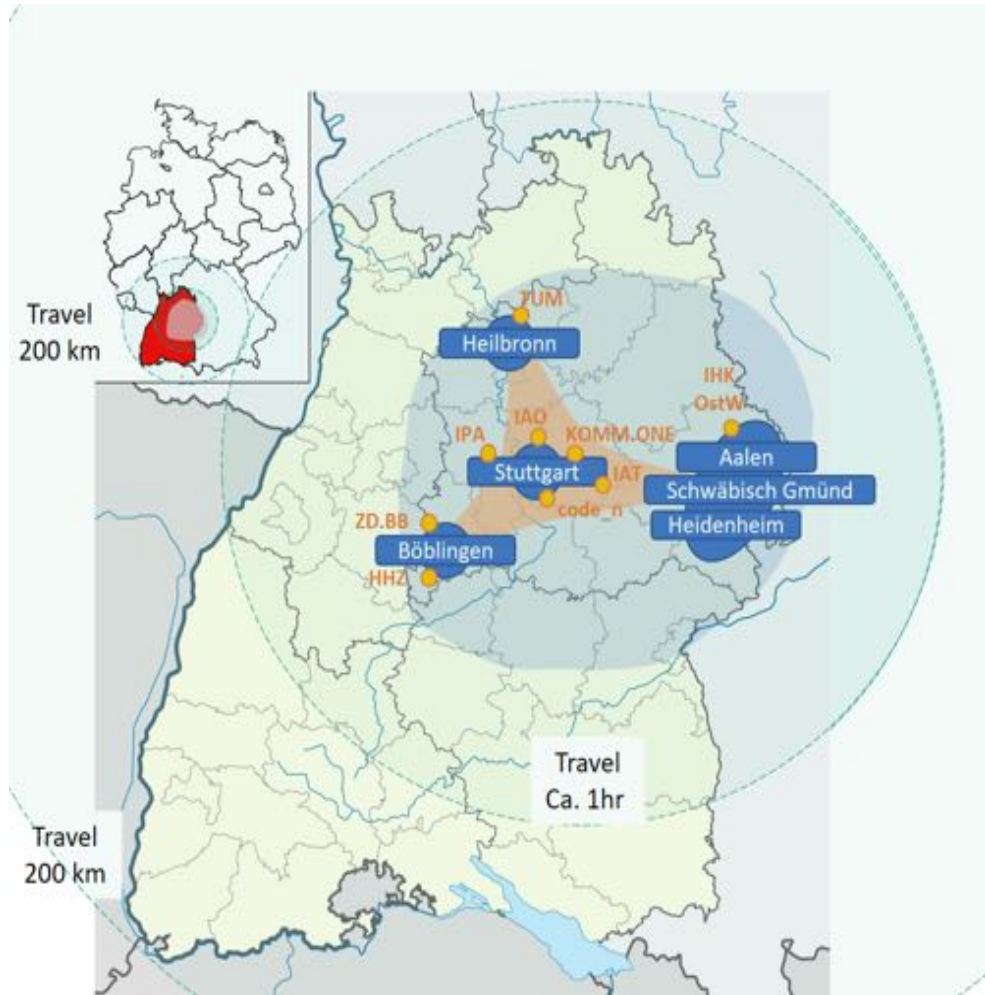
Attract the most talented and knowledgeable **innovation consortia** across the value chain



Foster the **transition from Industry4.0 to Industry5.0**









Ecosystem and Regional Coverage



Customer Journey and Barriers (Blocking Points) – Technology Adopter

Digital Transformation Journey Phases

Barriers

Step 1	Stimulation Search for information		<ul style="list-style-type: none">■ Mindset■ Focus on the business daily processes■ Lack of a corporate vision for digital
Step 2	Awareness Understand benefits and challenges		<ul style="list-style-type: none">■ Map identified technologies in the company's context■ First steps to understand the technology and its changes caused
Step 3	Ideation		<ul style="list-style-type: none">■ Access to Knowledge■ Ecosystem Building■ Setup a business case
Step 4	Experimentation Proof of concept		<ul style="list-style-type: none">■ Lack of technical support■ Pressure on achieving results■ Risk-averse culture
Step 5	Validation Test the prototype in the company's production line		<ul style="list-style-type: none">■ Lack of technical support■ Legacy Systems■ Organisational Issues (e.g. Inability to work across silos)■ Lack of KPIs evidence
Step 6	Deployment Decision to invest in the technical solution		<ul style="list-style-type: none">■ Lack of technical Support■ Maintenance Issues■ Financing Issues

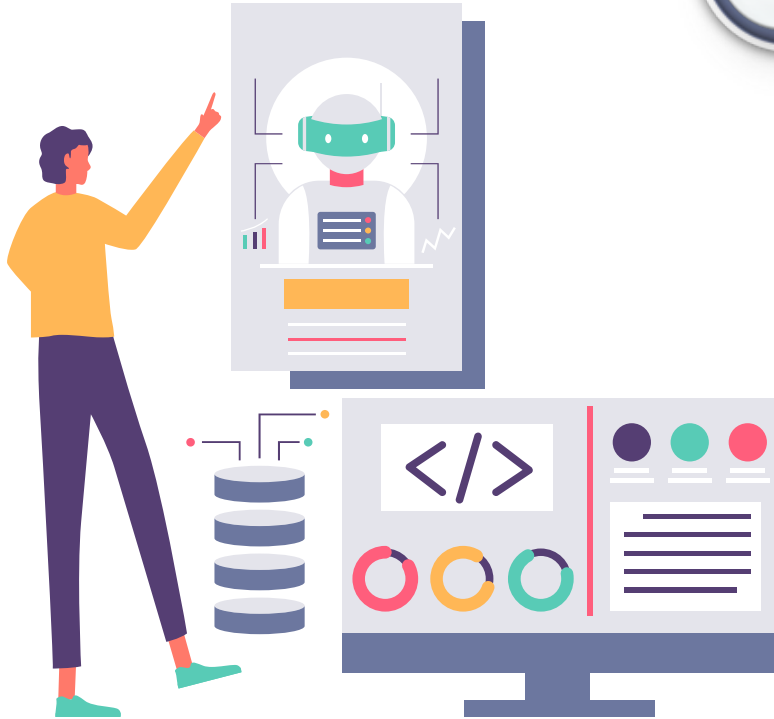
Customer Journeys – Technology Adopter

Test before Invest



Stimulation	Awareness	Ideation	Experimentation	Validation	Deployment
<ul style="list-style-type: none"> Academy Digitization.Beyond - Digital dialogues, webinars and face-to-face events Transfer Factory & Inspiration Tour - On-site Visits and Tours Making Digitisation a Real Experience Guides, checklists, success stories from practice (practical examples), explanatory videos 	<ul style="list-style-type: none"> Maturity/Readiness check for digitisation in general and for special topics Automation potential analysis Further training workshop on digital transformation based on a fictitious company (incl. business models) DeMoBat - Digitalised product life cycle management using the example of the battery Digital capture of customer requirements and product usage information Feasibility study cognitive robotics Quick Check / Potential Analysis AI Readiness Check 	<ul style="list-style-type: none"> Development of digitisation strategy PoC Development MVP/Prototyping Strategic R&D Digital Production Demonstration Lab Live demonstration environment Showcase Industry 4.0 Showroom Future Self Service Smart Retail and Smart Home Lab Future Work Lab Centre for Cyber Cognitive Intelligence (ZCCI) - Use of Machine Learning in Industrial Production Processes Industry-oriented AI lab for in-line quality control using Deep Learning 	<ul style="list-style-type: none"> Hackathons Tech. Demonstration Business model & innovation workshop - from strategy to first prototype DeMoBat, ViPro - Digital Twins - from Business Case to Digital Twin based Business Model Exploring Project & PoC-Prototyp (Proof of Concept) Data testing for concrete use cases DigiBattPro 4.0, ViPro - Digitalisation in battery cell production Makerspace Digital Reality-Lab Smart Retail and Smart Home Lab Centre for Cyberphysical Systems (ZCPS) 5G Pilot Region & Living Lab on Precision Farming & Smart Fertilisation 	<ul style="list-style-type: none"> Concept Validation ENsource (Smart Energy & Resource Efficiency) - Simulation Service Ecosystem-based Business Models Innovations Challenge (3-months Challenge in Mobility, Smart Products & Industry 4.0) Business Model Clash (Strategic Simulation Game) Testing perceived quality of Smart-Service-Systems Smart Retail and Smart Home Lab: Testing PoC, Prototypes Centre for Cyberphysical Systems (ZCPS): Testing, prototyping and infrastructure 5G Pilot Region & Living Lab on Precision Farming & Smart Fertilisation: real test bed services 	<ul style="list-style-type: none"> Access to Infrastructure and tech. platforms AI toolbox Adaptive UX and architecture design of human machine interface systems for machines and plants Roadmapping Contract research (fee-based) Technical support for upscaling & rescaling Organizational measure for boosting internal acceptance of AI 5G Pilot Region & Living Lab on Precision Farming & Smart Fertilisation ÖkoTrans - Organic farming and regional value chains Enterprise Lab

Our Value Proposition



Gateway to a leading manufacturing region in Germany (Baden-Württemberg) and collaboration with **highly-innovative** manufacturing SMEs and technology providers .



Access to high-level **infrastructure** and applied research **know-how** on advanced digital technologies for both manufacturing and public sectors



Active partnerships to develop **digital skills** and train employees in manufacturing SMEs and public municipalities



Ability to work with all organisations at all levels of **digital maturity**



Deeply embedded within our **innovation ecosystem**, with established connections to **regions across the EU**.

Contact Us!



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EDIH in Auvergne-Rhône-Alpes: two candidates



La Région
Auvergne-Rhône-Alpes

EDIH Polytronics



- **Coordinator** : Polymeris Cluster
- **Regional Anchorage** : Auvergne-Rhône Alpes, Bourgogne Franche Comté, Centre Val de Loire
- **Digital Europe Pillar** : Artificial Intelligence
- **Specificity** : Focus on the Polymer industry
- **Contact**: Annabelle Sion, annabelle.sion@polymeris.fr



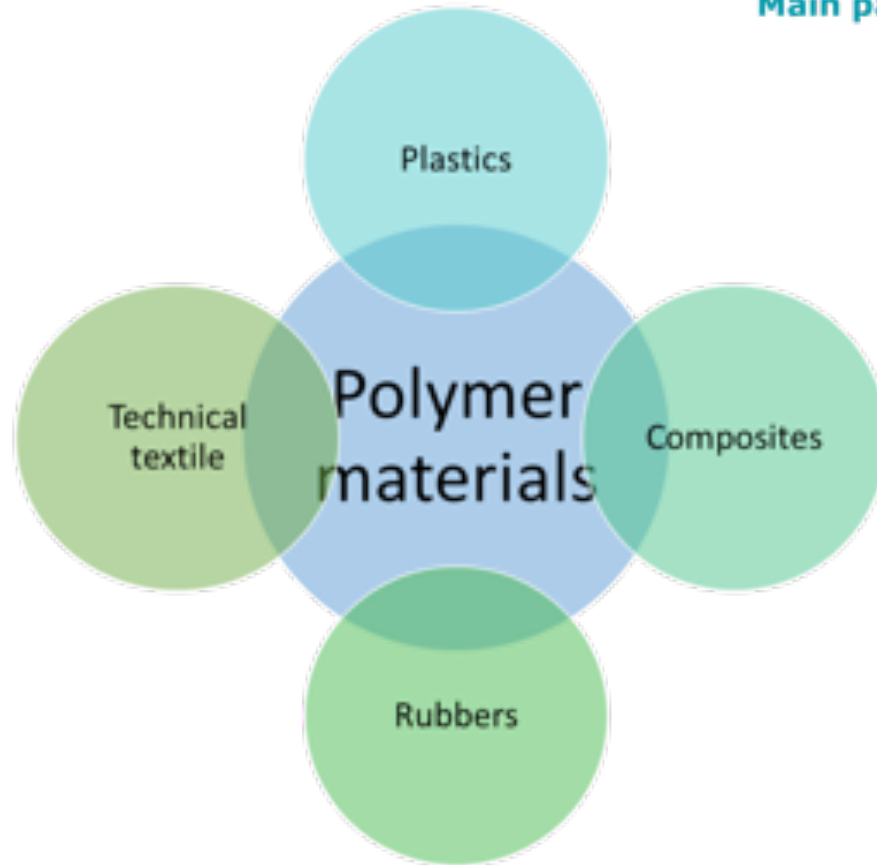
Digital Innovation Hub POLYTRONICS

Background of the project



January 2021

Digital Innovation Hub POLYTRONICS
Sectorial domains



Digital Innovation Hub POLYTRONICS
Main partners

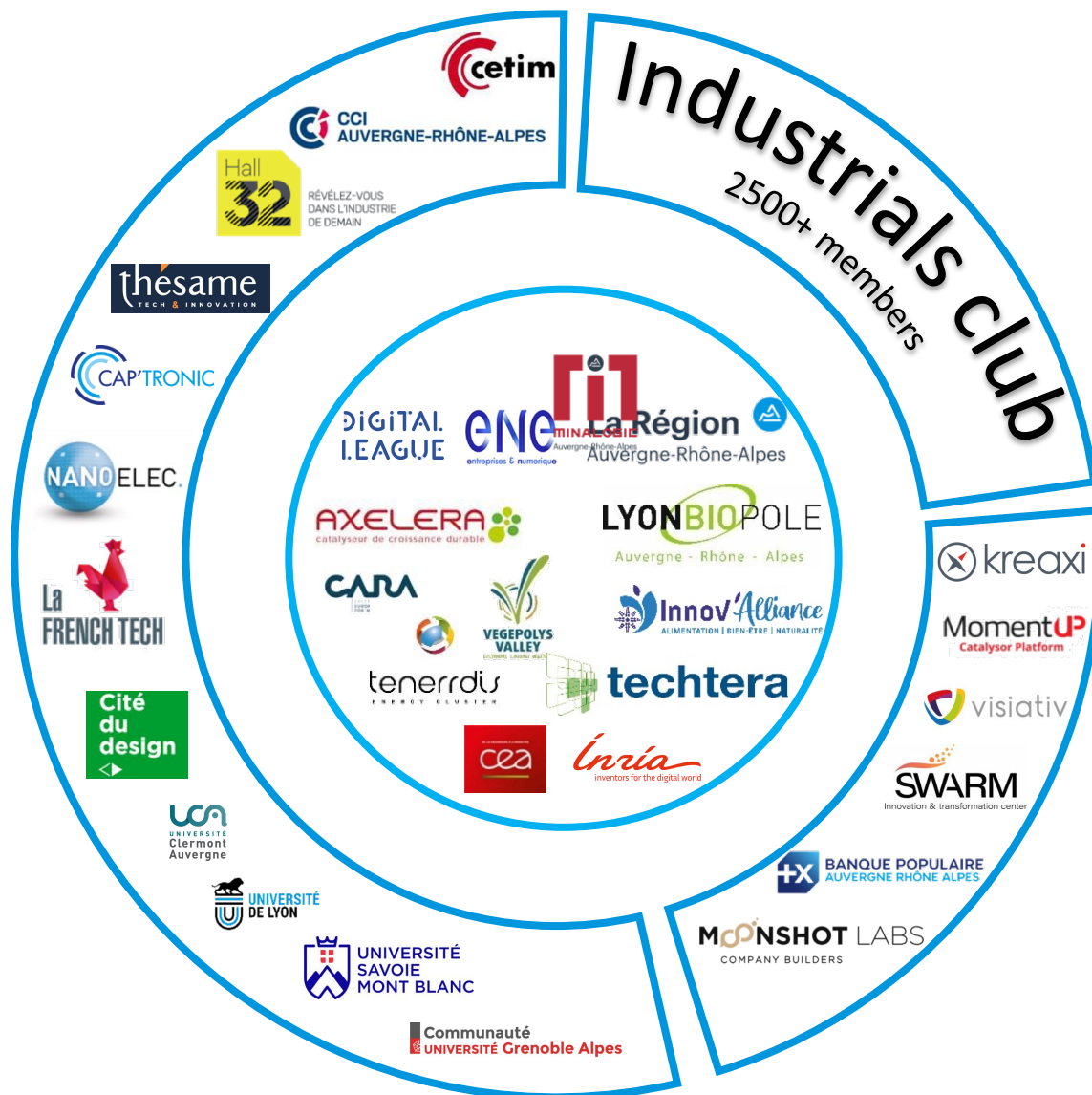


EDIH MinaSmart



- **Coordinator** : Minalogic Cluster
- **Regional Anchorage** : Auvergne-Rhône Alpes
- **Digital Europe Pillar** : Artificial Intelligence (edge), High Performance Computing, Cybersecurity
- **Specificity** :
 - 6 application sectors : Energy, Health, Transportation & smart mobility, Chemistry and environment, Agritech / foodtech, Textile → 7 dedicated clusters
 - MinaSmart is dedicated to industries to digitalise their products, services or processes : “traditional companies” and “tech companies”
- **Contact**: Pierre-Damien Berger, pierre-damien.berger@minalogic.com

EDIH MinaSmart



20 Services within the 4 Workpackages

- Skills and Training
- Innovation ecosystem & networking
- Test Before Invest
- Support to find Investments



*The European Digital
Innovation Hub of Catalonia*

*For the Catalan companies
Digital transformation*

DIH4CAT, Connected network of capacities



DIH4CAT is the **Connected network of Catalonia's assets, infrastructures and knowledge, to accelerate the digital transformation of the Catalan Industry.**

DIH4CAT has created a **non-profit regional innovation ecosystem**, coordinated with the main agents devoted to digital transformation, focusing on satisfying the companies needs (specially SMEs) **and public administrations**, providing services, capacities and solutions (technological and non-technological) to boost their digital and technological transformation.

DIH4CAT works as a **dynamic community**, integrating public administrations, the main RTOs in the region, Universities and suppliers of innovative services and products, as well as SME's employers organizations, industry federations and SME's support networks such as EEN.



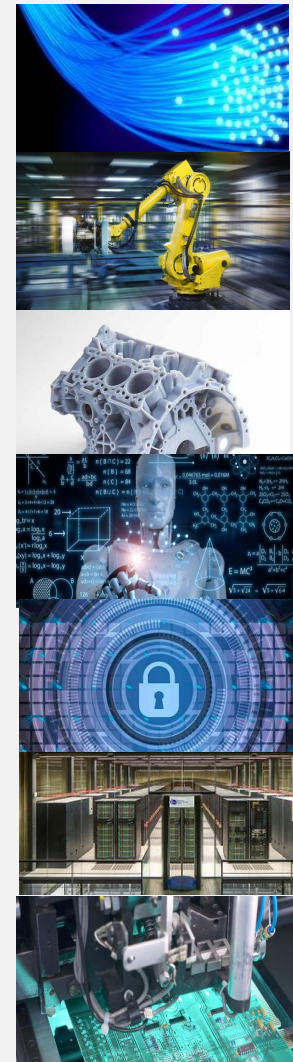
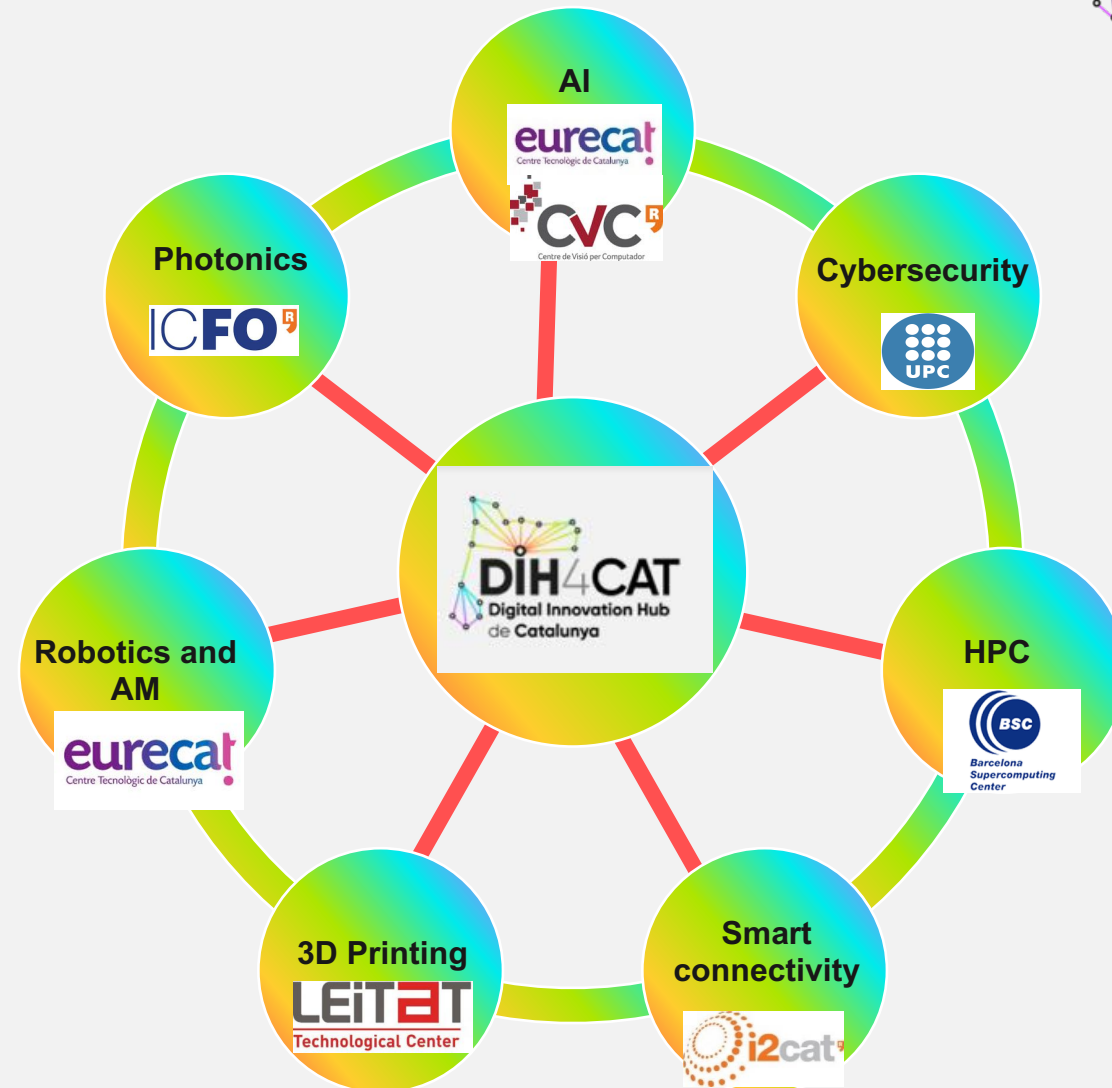
<https://dih4cat.cat/en/>

Technological areas: the digital innovation nodes



The DIH4CAT is composed of 7 nodes of specialization, **7 technological areas** that reflect the **reference capacities available in Catalonia** and with a representative critical mass.

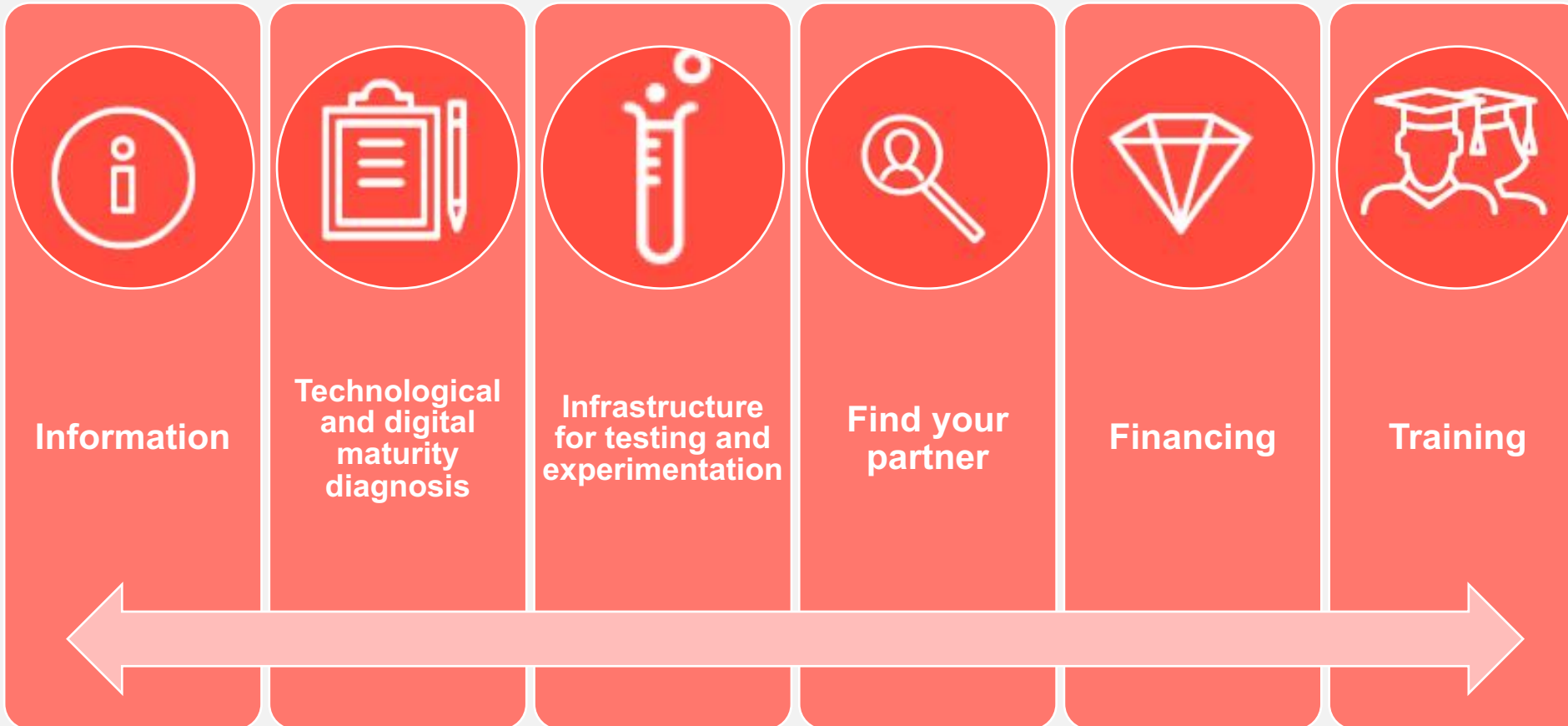
The digital Innovation nodes are **coordinated by RTOs and Universities** of reference in Catalonia and must bring together the main technological capacities in the field of reference.



Services



The service ecosystem allows DIH4CAT to guide and support clients in its process of digital and technological transformation



Customer journeys for:

- SMEs and Industry
- Technology Users
- Technology providers
- Start-ups/scale-ups
- Public administrations

Node: Robotics and Advanced Manufacturing



This node brings together the top leading entities in Catalonia in knowledge generation and technology transfer in the field of advanced manufacturing and robotics. The **goal of the node** is to facilitate the access to the new technologies, specially to industrial SMEs, in order to improve their competitiveness and resilience through digitalization:

- Digitalising products, processes, production lines and sites
- Introducing simulation, digital-twins, robotics, AI and cyberphysical devices in production and manufacturing assets
- Providing digital skills (different programs for different profiles –management, logistics, operator...)
- Stimulating demand side by showing the advantages of digitalisation



Coordinator: Eurecat

Contact:

pepa.sedo@eurecat.org



Thanks!

www.dih4cat.cat

Entitats impulsores

