



Interregional cooperation and international outreach of a regional research and innovation ecosystem

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INNOVATION AND ATTRACTIVENESS IN EMILIA-ROMAGNA

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Emilia-Romagna Research Ecosystem



Regional University System (7 Universities)

- 400 courses (Three-year and magistral degrees)
- 153 2° level Master Courses
- 126 Specialization Courses
- 160.000 students
- Bologna Business School (Master/MBA)
- PhD and International Data Science Phd
- School of Advanced Studies in Food Safety
- MUNER (Motor vehicle UNiversity in E-R)
- High Education Courses (Climate Change, Homeland Security, ...)
- 7 Foundations ITS with 26 courses

National and International Research Centres:

CINECA, CNR - National Research Council, INFN - National Institute for Nuclear Physics, INAF - National Institute for Astrophysics, ENEA - National Agency for New Technologies, Energy and Sustainable Economic Development, CMCC - Euro-Mediterranean Centre on Climate Change, INGV - Istituto Nazionale di Geofisica e Vulcanologia

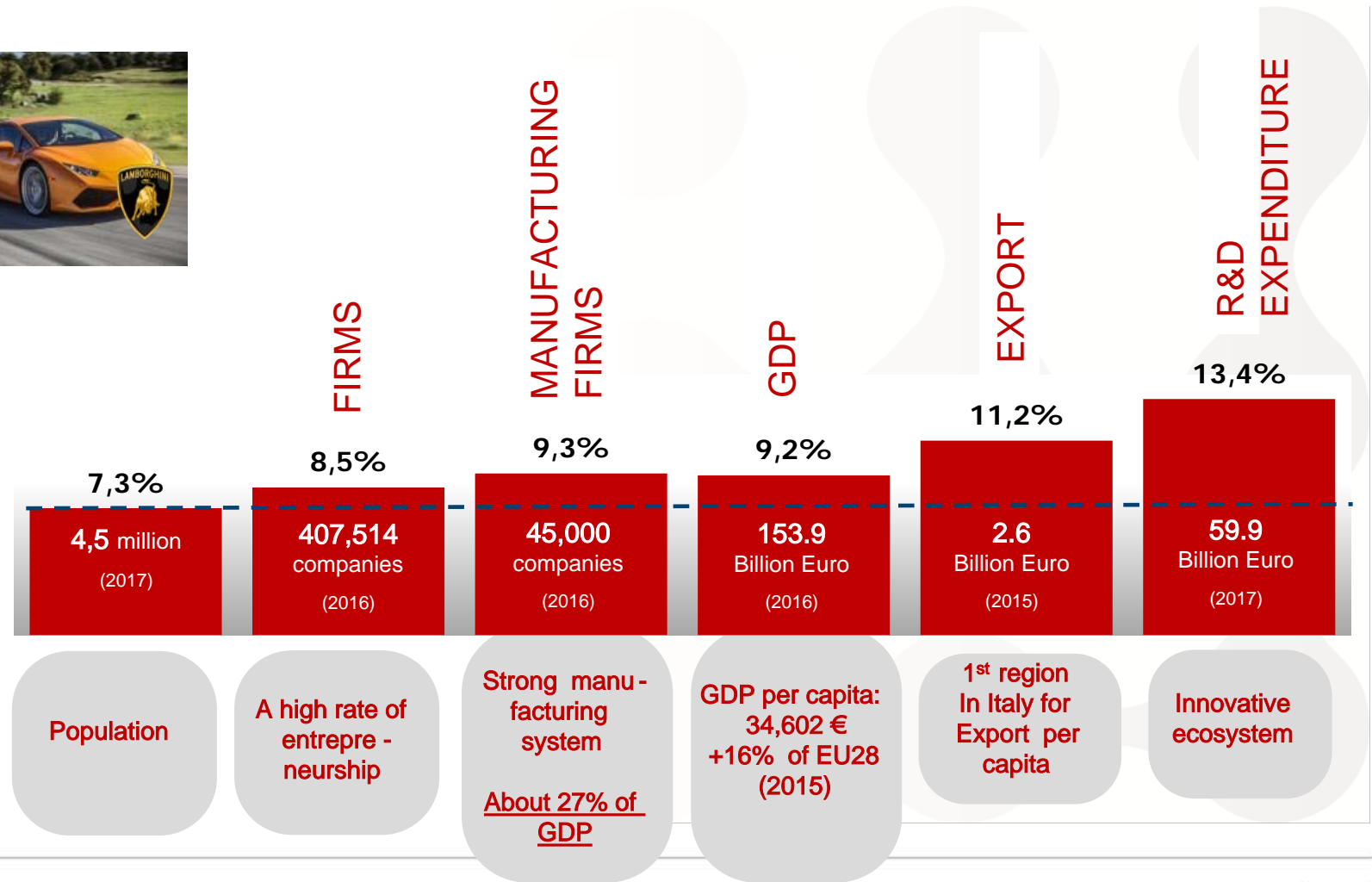
International Authorities/Agencies:

European Food Safety Authority, European Centre for Medium-Range Weather Forecasts

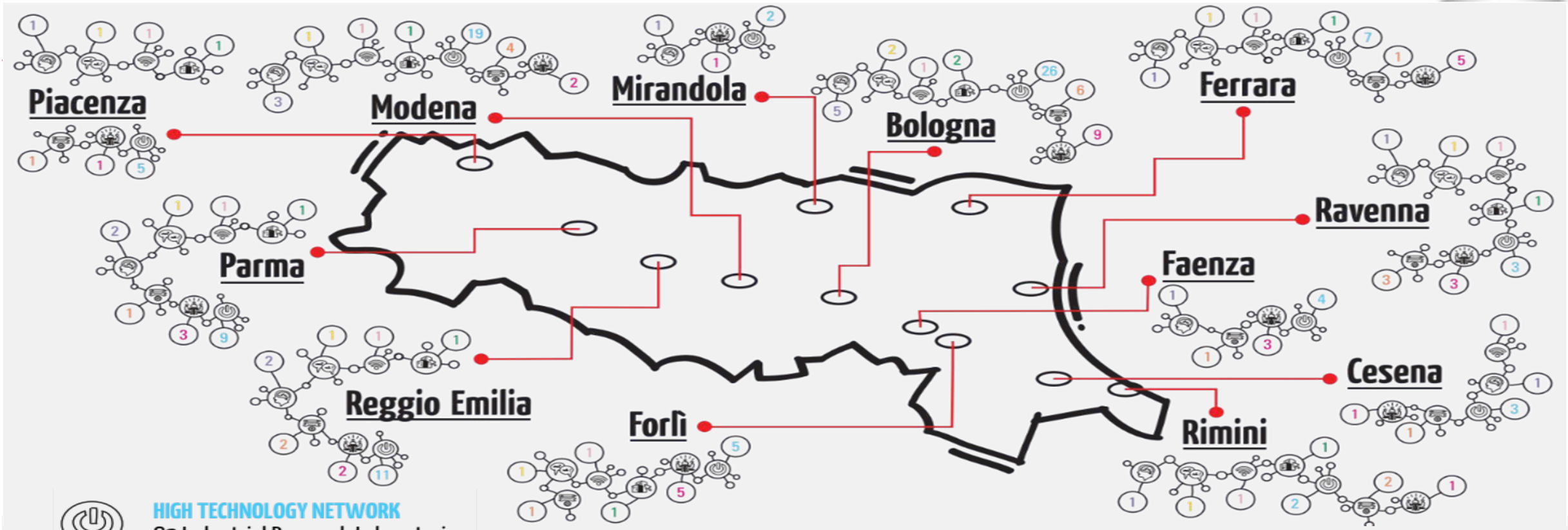
4 Large Research Infrastructure:

Big Data Technopole
 INAF Radio Telescopes
 ENEA Brasimone centre
 CICLOPE

Emilia-Romagna Economy





Innovation Ecosystem: the regional Networks



- 
HIGH TECHNOLOGY NETWORK
 82 Industrial Research Laboratories
 14 Innovation Centres
- 
TECHNOPOLES NETWORK
 10 Infrastructures
 20 Locations
- 
INCUBATORS NETWORK
 75 Public and Private organisations

- 
DIGITAL MANUFACTURING NETWORK MAK-ER
 22 Fab Labs and Maker Spaces
- 
OPEN LABORATORIES NETWORK
 10 Equipped Areas with hi-tech solutions

- 
LOCAL NETWORK "SPAZI AREA S3"
 10 Offices located in the Technopoles to assist highly-skilled (young) people
- 
ITS NETWORK
 7 Hi-Tech Schools

Emilia-Romagna Smart Specialisation Strategy – S3



Increase the competitiveness of Emilia-Romagna businesses

Strengthen the innovative capacity of Emilia-Romagna's traditional and competitive production systems: **agri-food, building and construction, mechatronics and transport.**



Support emerging specialisation areas

Develop high growth potential production systems fostering social innovation: **health and well-being industries, cultural and creative industries.**



Steer change

Increase the regional system's capacity to respond to the societal challenges for **sustainable development, healthy and active living, and information society.**



Develop services of excellence

Strengthen the leading role of **services for the production system: ICT, logistics, high knowledge activities.**

Pillars of the regional economy (% of the total number of employees)



16,7%
AGRI-FOOD



18,8%
BUILDING
AND CONSTRUCTION



18,2%
MECHATRONICS
AND TRANSPORT



Over **1 million** EMPLOYEES,
more than **50%** of regional employment



80% OF REGIONAL EXPORT

Emerging areas with high growth potential (% of the total number of employees)



8,9%
HEALTH AND WELL-BEING INDUSTRIES



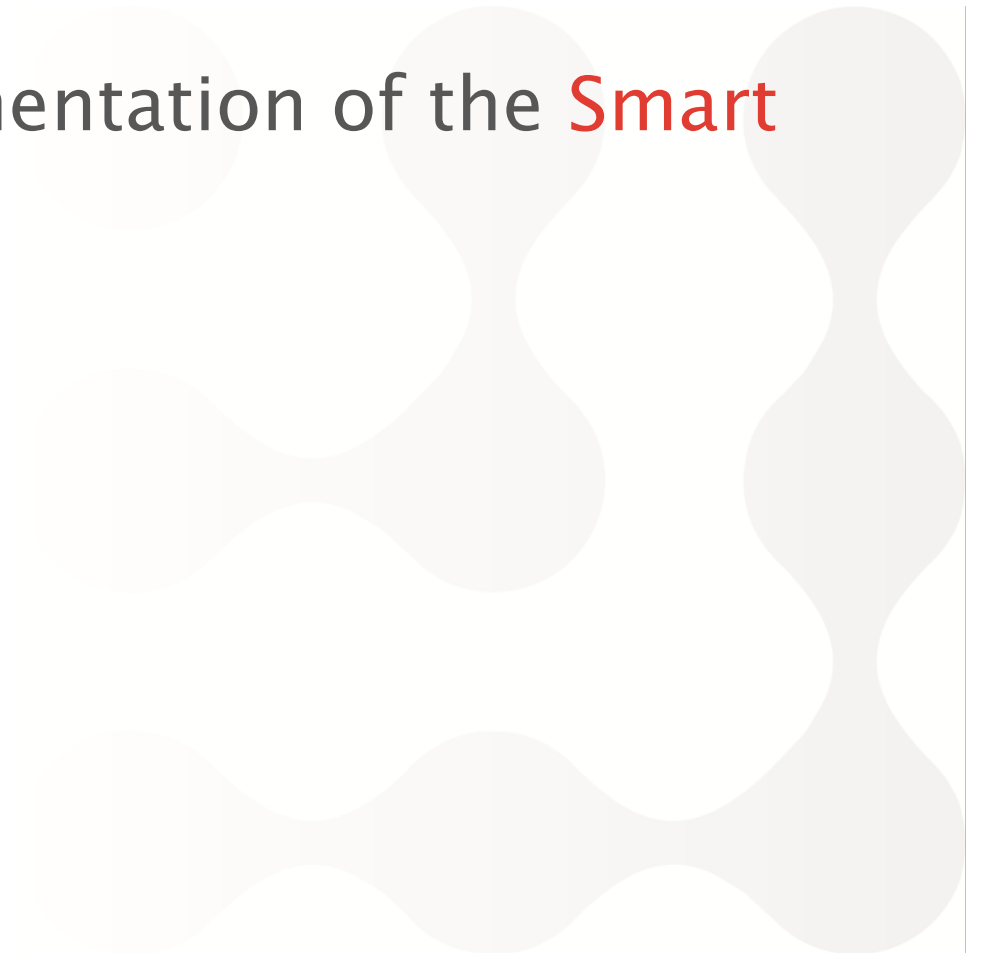
6,9%
CULTURAL AND CREATIVE INDUSTRIES



Over **300,000** EMPLOYEES,
more than **15%** of regional employment

ART-ER and the Smart Specialisation Strategy

- Support in the definition and implementation of the **Smart Specialisation Strategy**:
 - Entrepreneurial discovery process
 - Governance
 - Monitoring and evaluation
 - Update (and upgrade)





Emilia-Romagna CLUST-ERs

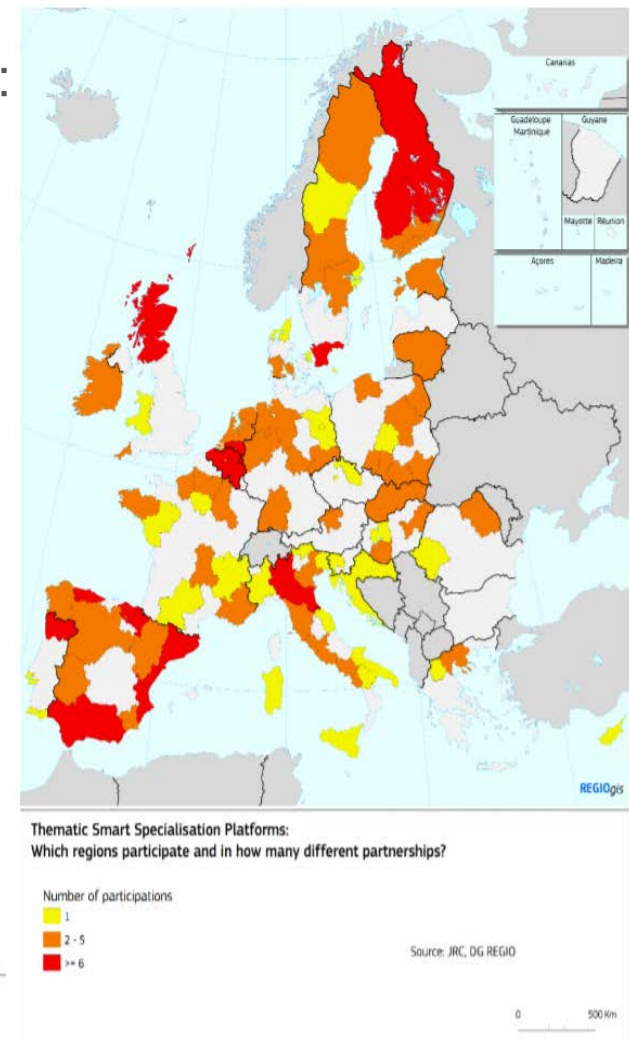
- Contribute to the definition of regional trajectories for research and innovation in S3 domains, of technological priorities, pilot actions, ...
- Design high impact strategic projects for the development of the industrial system, e.g. research and innovation projects, infrastructural projects, demo plants,...
- Represent the regional industrial system at national and international level



Regional participation to the S3 Thematic Platforms

Emilia-Romagna partnerships participation:

- 13 in the INDUSTRIAL MODERNISATION Platform (2 co-led)
- 4 AGRI-FOOD Platform (1 led)
- 2 ENERGY Platform



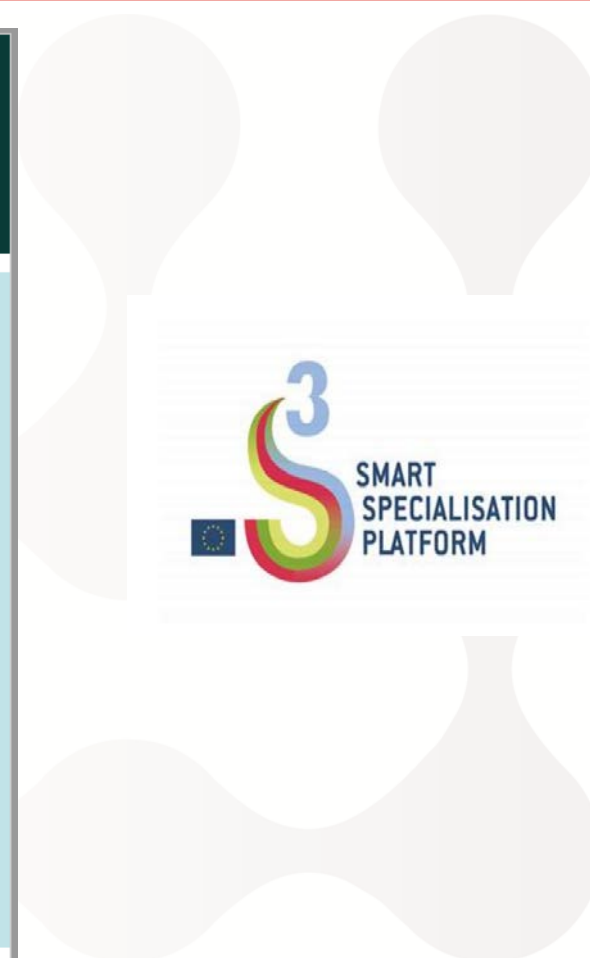
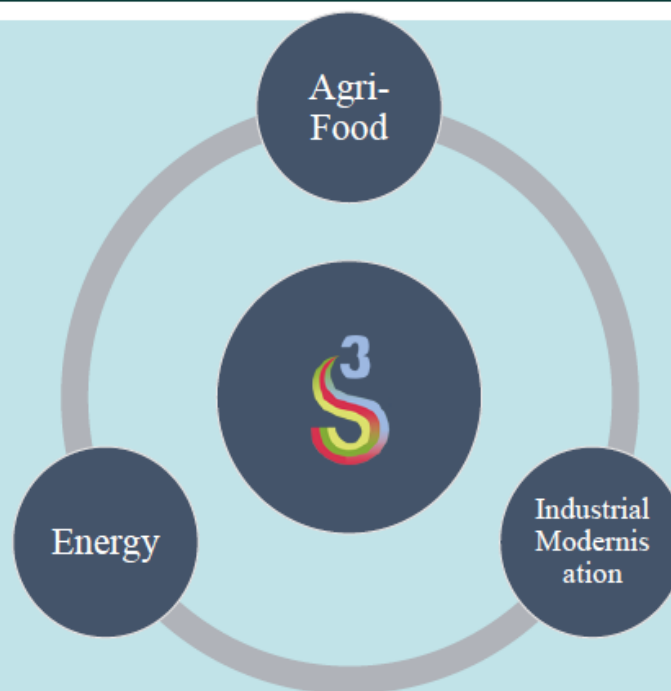
Thematic S3 Platforms 3 platforms, 1 goal

- **Joint EC-initiative** (DG REGIO, GROW, AGRI, ENER, JRC, ...)
- **Bottom-up approach**
 - > 100 regions involved
 - > 25 partnerships under the 3 platforms
- Using S3 as a coordination principle in strategic EU priority domains
- Alignment of regional S3
- **Creation of interregional value chains → investment projects**
- Alignment of strategic investments (public/ private)

Opportunities provided by S3 Thematic Platforms

S3 Thematic Platforms: Agri-Food, Energy and Industrial Modernisation

- To support interregional cooperation in new growth areas, aiming to build an investment pipeline of bankable projects
- To provide tailored advice and help regions establish links with the business and research communities
- To help regions develop shared infrastructure such as testing facilities, pilot plants, etc.



ART-ER and the European S3 Thematic Platforms

- Support in the participation to the **S3 Thematic Platforms Partnerships**:
 - Link with Regional Authority
 - Identification of opportunities
 - Mobilisation of stakeholders
 - Support to and coordination of stakeholders



Traceability and Big Data Partnership – Agrifood Platform



Lead Region: Regional Ministry of Agriculture, Fisheries and Rural Development of Andalusia
Co-lead Region: Emilia Romagna Region

- 22 Regions
- 12 Associate Partners
- 14 Countries
- +1600 stakeholder



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Key points

Started in 2016

Actors involved

Topics of common interest

- **TOPIC 1.** Traceability and Big Data in the “**Lifecycles of the value chain**”
- **TOPIC 2.** Traceability and big Data in the “**Smart monitoring of the value chain** (production, agri-food industry, logistics, distribution and consumers) aiming at improving the competitiveness in the agri-food sector”
- **TOPIC 3.** Traceability and Big Data in order to “incorporate the experiences of the **consumers** and of the different operators of the value chain **in decision-making processes**”
- **Cross-cutting Topic 1.** Open data, **interoperativity**, data **governance** and information **security**.

Spill over effect

Current T&BD projects



SMART AGRI HUBS

REGIONS 4FOOD Interreg Europe

DIVA Boosting innovative Digital Value chains for Agri-food, forestry and environment

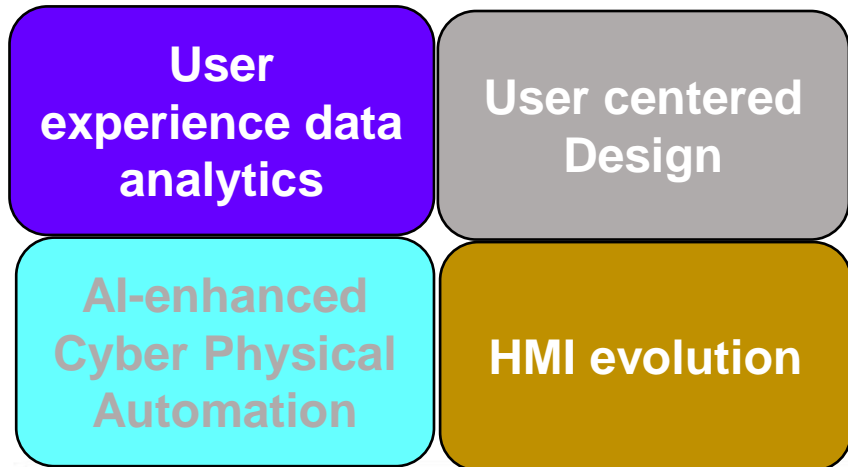
TRACK

Artificial Intelligence & Human-Machine Interface Partnership – Industrial Modernisation Platform

Started in
2018



Focus areas



PARTNER REGIONS

- Lead Region: **Emilia-Romagna** (IT)
 Autonomous Province of Trento (IT)
 Navarra (ES)
 Nord Brabant (NL)
 Baden Wurttemberg (DE)
 Orebro (SE)
 Slovenia
 Salzburg (AT)

INTERESTED REGIONS

- Western Transdanubia (HU)
- Provence-Alpes-Côte d'Azur (FR)
- Grand Est (FR)



BENEFITS FROM ENGAGING IN INTERREGIONAL PARTNERSHIPS



- open up of innovation ecosystems to new opportunities:
 - visibility, networking, knowledge circulation, projects development
- regional (ecosystem) stakeholders promotion
- territorial attractiveness

Reasons for opening up Smart Specialisation Strategies (Internationalisation of S3)

Outward-looking Smart Specialisation Strategies enhance opportunities to take advantage of the best available knowledge, examples:

- get access to wider business and knowledge networks
- get necessary research capacity
- reaching out to other markets
- expanding business opportunities
- combining complementary strengths
- joining GVCs



Medical technology



Photonics



Sport



Digitalisation and Safety for Tourism



Social Economy



Artificial Intelligence



Advanced materials for batteries



Personalised medicine

ENABLING CONDITIONS

- POLITICAL **COMMITMENT** AND LONG TERM VISION
- STRONG AND CONNECTED **ECOSYSTEM**
- **PUBLIC-PRIVATE COLLABORATION**
- **INDUSTRY-SCIENCE PARTNERSHIPS** WORKING (WELL) AT THE REGIONAL LEVEL
- EFFECTIVE **GOVERNANCE**
- ROLE OF 'KNOWLEDGE **INTERMEDIARIES**'



CRITICAL ISSUES

GENERAL

Lack of a clear framework and perspectives → what are the rule of the game? what's next?

Lack of a clear regulatory framework → uncertainty, risk and fear to make mistakes

Diversity of projects types, of development stage → need to be flexible and ready to pilot

Difficulties in engaging companies → what will I get?

FINANCIAL RESOURCES

for the participation to the S3 partnerships

for projects implementation

FROM SPECIALISATION TO COMPLEMENTARITY

Need to adopt an interregional innovation collaboration perspective and to have a specific programme with dedicated funding

THANK YOU

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