

# Emilia-Romagna: Towards a RIS3 strategy



# Expectations from the Peer-Review Workshop



- Benchmark our process of implementation with other regions
- Receive inputs on the activities of involvement of stakeholders
- Share our approach with other regions

# Research and Innovation Strategy in Emilia-Romagna



Emilia-Romagna has got a clear regional strategy on innovation started on 2002 with the [Regional Law no. 7/02](#) :“Promotion of the Industrial Research, Technology Transfer and Innovation in the productive system of Emilia Romagna”

- E-R Strategy can be considered as an example of governance for the implementation of a “knowledge based economy”, focusing not only on actions to promote isolated excellence, but a framework of actions in order to create a “Regional Ecosystem of Innovation“, an environment for a generalised increase of competitiveness of the region.

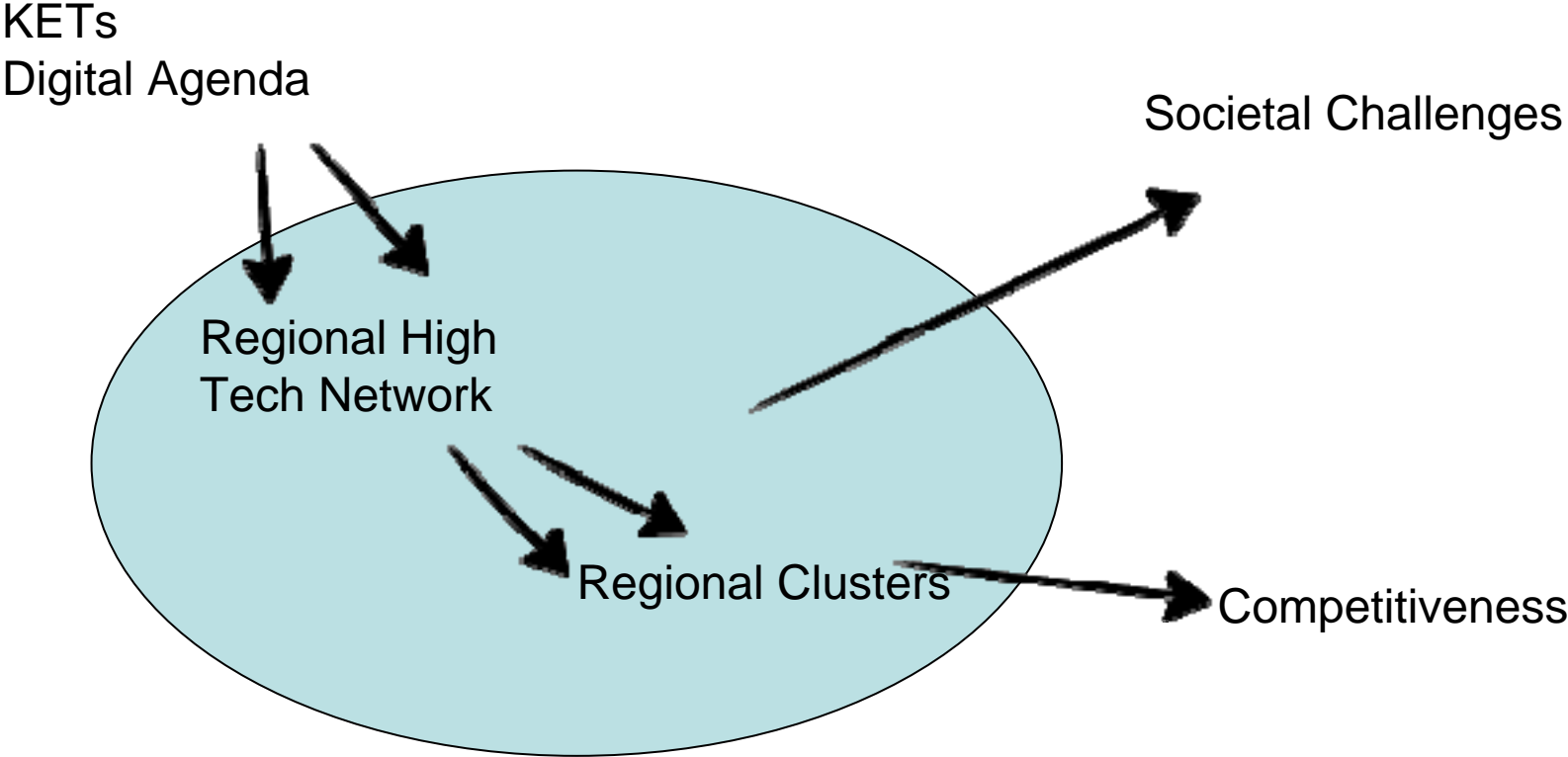
# Research and Innovation Strategy in Emilia-Romagna



The strategy is based on three main pillar:

- stimulating R&D activity in firms and especially in SMEs, supporting projects involving newly graduates and including collaboration with research centres;
- promoting industrial research and technology transfer from Universities and public research organisations to firms through a regional network of industrial research laboratories and innovation centres, organized into regional thematic platforms and located into a regional network of technopoles;
- evolving industrial clusters towards knowledge dimension, through collaborative research and technology transfer, networking firms and promoting start ups.

# Research and Innovation Strategy in Emilia-Romagna



# Place-based dimension of the RIS3



## MAIN STEPS OF THE REGIONAL ANALYSIS:

1. Identification of clusters with the highest employment potential and competitive impact to the regional economy
2. Matching selected clusters with the supply of industrial research platforms included in the Regional Network High Technology
3. Identify mechanisms to steer the system towards innovation pathways aimed at strengthening competition, to product diversification and to tackle major societal challenges and scenarios for medium-long term.
4. Develop specific strategies and the various measures to be implemented.

# Place-based dimension of the RIS3



## Key challenges:

1. Upgrading the technology level and competitiveness of clusters playing a crucial role for the regional specialization model
2. Reinforcing emerging clusters with a high innovative potential and employment for the future

# Place-based dimension of the RIS3



Criteria for the selection of clusters under challenge 1.

1. Indices of regional specialization and competitiveness
2. Strategic role at the national level
3. High level of employment
4. Intersectoral complexity
5. Pervasiveness in the region
6. Relevance of technology challenges



# Place-based dimension of the RIS3



The analysis has started from an overview of the existing clusters in order to find out the pillars on which building the strategy.

Three clusters has been identified as strategic for future competitiveness and development:

- Agrofood
- Construction
- Mechatronics

# Agrofood cluster

Degree of specialization	Very high
Occupation	Primary sectors 205.000 Manufacturing 96.000 Services 83.000 TOTAL 384.000
Sectors of production involved	Agriculture, breeding, fishing, food industry. Organic and Inorganic Chemistry for treatment and packaging, other material for packaging. Agricultural Mechanics, process technology and packaging machinery. Conservation, storage and transport, commercial brokerage. Services of analysis, inspection, certification, research, marketing. Food and farm.
Territorial rooting	Throughout the region, with strategic poles in Parma and Cesena
Possible Technology challenges	Precision Agriculture and Livestock Quality, food safety, traceability Functional food NGM production of high performance
National role	Typical Products, large native enterprises, export leadership Logistics hubs, institutions of national and European level.

# Construction cluster

Degree of specialization	Very High
Occupation	<p>Manufacturing 113.000</p> <p>Building 167.000</p> <p>Services 102.000</p> <p>Total 382.000</p>
Sectors of production involved	<p>Construction sector. Ceramics and bricks, other building materials, included wood products. Construction equipment and materials industries, Earth-moving machinery. Logistics and commercial intermediation. Architecture and professional activities related to construction..</p>
Territorial rooting	<p>Throughout the region, with strategic poles in Modena, Bologna and Faenza.</p>
Possible Technology challenges	<p>Energy efficiency and self-efficiency of buildings</p> <p>Safety and accessibility of the living spaces. Functionality of materials and new materials. Earthquake proof.</p> <p>Innovative technologies for the recovery and restoration</p>
National role	<p>Leadership in specific industrial sectors (tiles, fixtures, mechanical, etc.).</p> <p>Largest construction companies</p>

## MECHANOTIC CLUSTER

Degree of specialization	Very High
Occupation	Manufacturing 266.000 Services 86.000 Total 352.000
Sectors of production involved	Metal Products. Industrial Machinery. Robotics and automation. Electronics. Instruments for measurement and control. Engine. Hydraulics. Power generators. Agricultural mechanics. Cars, motorcycles, trucks, boats, aircraft. Electromedical. Logistics and trading. Software. Engineering.
Territorial rooting	Throughout the region, with strategic poles in Modena, Reggio Emilia and Bologna.
Possible Technology challenges	Efficiency and energy innovation Application of new materials Application of information technology and sensor technology Advanced criteria for design and simulation
National role	Leadership in many sectors

# Place-based dimension of the RIS3



## Criteria for the selection of clusters under challenge 2

1. Substantial employment base in both the manufacturing and service sector
2. Educational profile medium-high, both in technical scientific and socio-humanistic and artistic
3. Strong relationships with the institutions of scientific and technical, cultural, social and educational
4. Opportunity to contribute to the diversification innovative and creative regional economy and upgrading of traditional industries
5. Identification of headroom and structural reinforcement

# Health industries cluster

Occupation	Manufacturing 15.000 Services 112.000 Total 127.000
Training Level	Medium – high, high
Sectors of production involved	Pharmaceutical, cosmeceutical and nutraceutical. Biomedical, medical devices, prosthetics. Wellness. Health informatics. Health and social services. other Services
Territorial rooting	Throughout the region, with strategic poles in Parma, Modena and Bologna
Relations with qualified institutions	Health care facilities. University
Perspective of development and of structural reinforcement	New health and social care needs Developments in medical and biotechnology research Technological influences (nanotechnology, sensors, digital technology) Development of broadband services, cloud, etc.. Export model socio-regional health

# Cultural & Creative Industries cluster

Occupation	Services 79.000 TOTAL 79.000
Training Level	Medium-high
Sectors of production involved	Publishing and multimedia. Software. Telecommunications, broadcasting. Cinema and music. Performing arts, culture and entertainment. Design, graphics, photography, advertising. Architecture.
Territorial rooting	Throughout the region, with strategic poles in Reggio Emilia, Bologna and Rimini
Relations with qualified institutions	University. Theaters. Museums. Cultural institutions. technical Schools
Further area of relapse	Fashion system and made in Italy. Games, toys, educational tools. Tourism and trade. gastronomy Education and social services.
Perspective of development and of structural reinforcement	High interest for young people Large areas of insecurity highly motivated Redevelopment of the city

## Key clusters and regional technology platforms

<b>Clusters</b>	<b>Platforms</b>	<b>Advanced Mechanics and Materials</b>	<b>Agrofood</b>	<b>Building &amp; construction</b>	<b>Life Sciences</b>	<b>Energy &amp; Environment</b>	<b>ICT &amp; design</b>
Agrofood		X	XXX		X	X	X
Costruction		X		XXX		XX	X
Mechatronics		XXX	X	X	X	XX	X
Health Industry		X	X		XXX		X
Creativity & Culture			X	X			XXX



# Links with Structural Funds Objectives

<b>Structural Funds Objectives</b>	<b>Environmental Sustainability</b>	<b>Social inclusion</b>	<b>Employment</b>	<b>Education and culture</b>	<b>Public administration efficiency</b>
<b>Clusters</b>					
Agrofood	XXX	X	X	X	X
Costruction	XXX	X		X	X
Mechatronics	XXX		X	XX	
Health Industry	X	X	XX	XX	XXX
Creativity & Culture		XX	XXX	XXX	XXX

# Links with Societal Challenges (Horizon)

<b>Societal Changes Clusters</b>	<b>Health, welfare, demographic evolution</b>	<b>Food safety, sustainable agriculture</b>	<b>Clean, safe and efficient energy</b>	<b>Sustainable mobility</b>	<b>Climate changes</b>	<b>Inclusive, innovative, secure society</b>
Agrofood	XXX	XXX	X		XX	X
Costruction	XXX		XXX		XX	X
Mechatronics	XX	XX	XX	XXX	XX	X
Health Industry	XXX	X			X	XXX
Creativity & Culture	X			X		XXX

# Looking beyond Region's boundaries



The ROP-ERDF 2007-2013 has financed a technology assessment based on:

- technology evaluation of the Regional High Technology Network platforms;
- evaluation of research demand by the industrial sectors;
- European benchmark for every single platform;
- medium-long term technology scenarios

Emilia-Romagna was promoter of the ERIK Network in the framework of which has shared strategies, policies and best practices.

# Entrepreneurial dynamics



- Assessing entrepreneurial dynamics:
  - Studies on entrepreneurial potential have been promoted in the last years
  - Technology evaluation of R&D applications to regional calls;
  - Matching activity of the Regional High Technology Network
  - “Research to Business”
- The involvement of regional stakeholders in the S3 construction is going to be developed, as in the regional tradition. It will be based on thematic workshops with business organisations, laboratories and innovative firms.

# Governance



The coordination of the process is carried out by the Region with the support of ASTER, consortium of the “Triple helix” actors, and ERVET, in house society supporting the Region in the design of policies

RIS3 strategy will be officially approved by the Regional Council

## Implementation and Budget (?)

	<b>European Funds</b>	<b>Other regional policies</b>
Food Industry	ERDF- ESF FEASR- FEAMP	Agriculture, environment Health and social services
Construction	ERDF- ESF	Energy, environment Building and Planning
Mechatronics	ERDF- ESF	
Health Industries	ERDF- ESF	Health and social services
Creative Industries	ERDF- ESF	Culture, youth policy Commerce and Tourism Information society

# Policy instruments



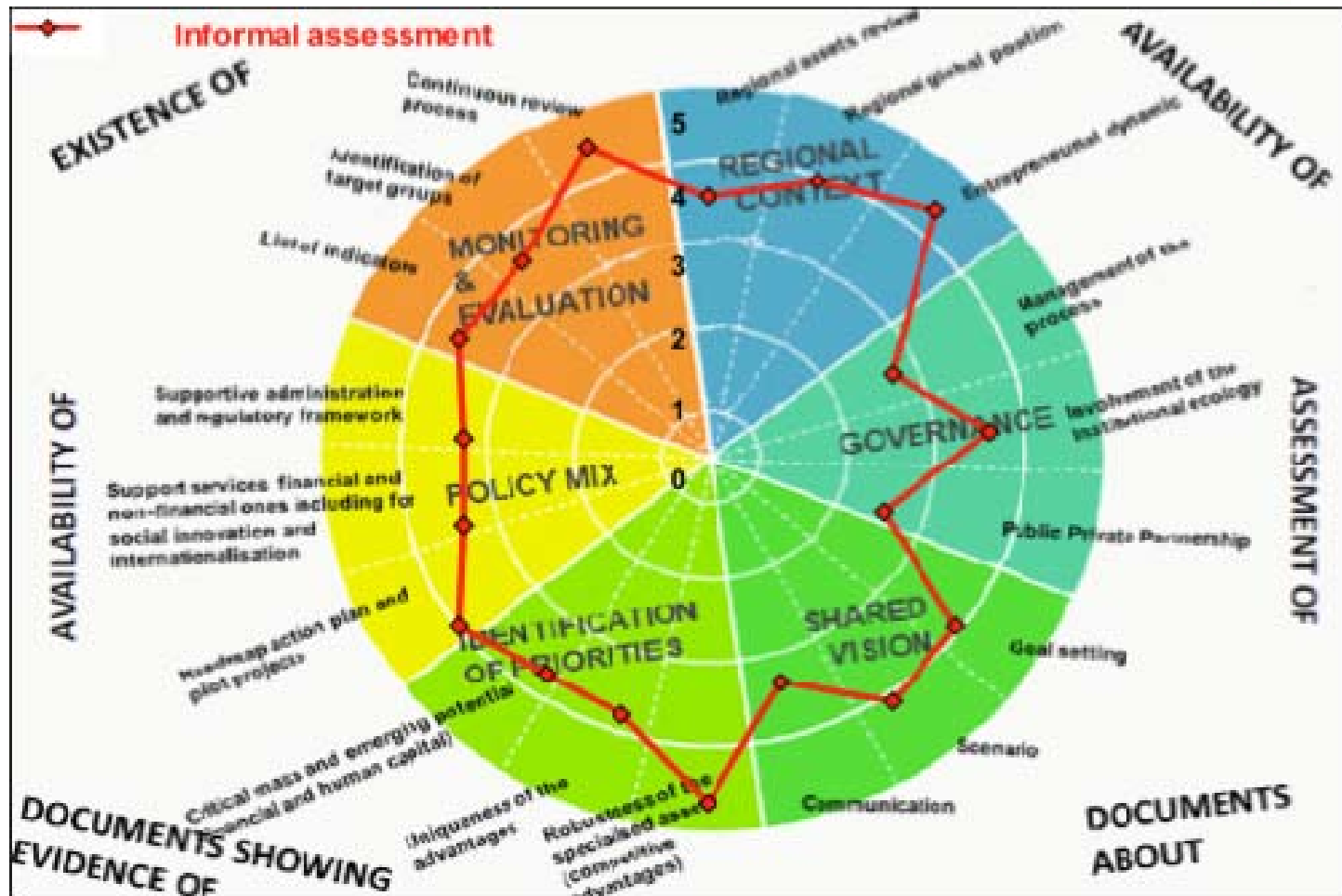
Autonomous R&D projects proposed by SMEs for diversification or relevant improvement

Strategic R&D projects proposed by industrial research laboratories, involving firms, aimed at medium-long term scenarios or societal challenges.

Supporting new start ups bringing KETs or ICT into clusters

Improving management, business services, human capital, attractiveness.

# Self-assessment



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## Friendly questions for discussion:



- The cluster on creativity, represents for us a very new approach and we would like to receive inputs and suggestions from region that are already working on this theme. What are they doing? How they are managing it? Which results ?
- Which are the strategies for technology transfer developed or implemented by other regions ?