

# The Development Policy of Emilia - Romagna : the crossroads of European knowledge

What we can learn from the Emilia-Romagna experience  
that could be useful for other experiences

*Patrizio Bianchi*

*Ancona 2 luglio 2019*

# Main regional figures

**4.5 million inhabitants**

**GDP per capita = 32.0 thou. €**

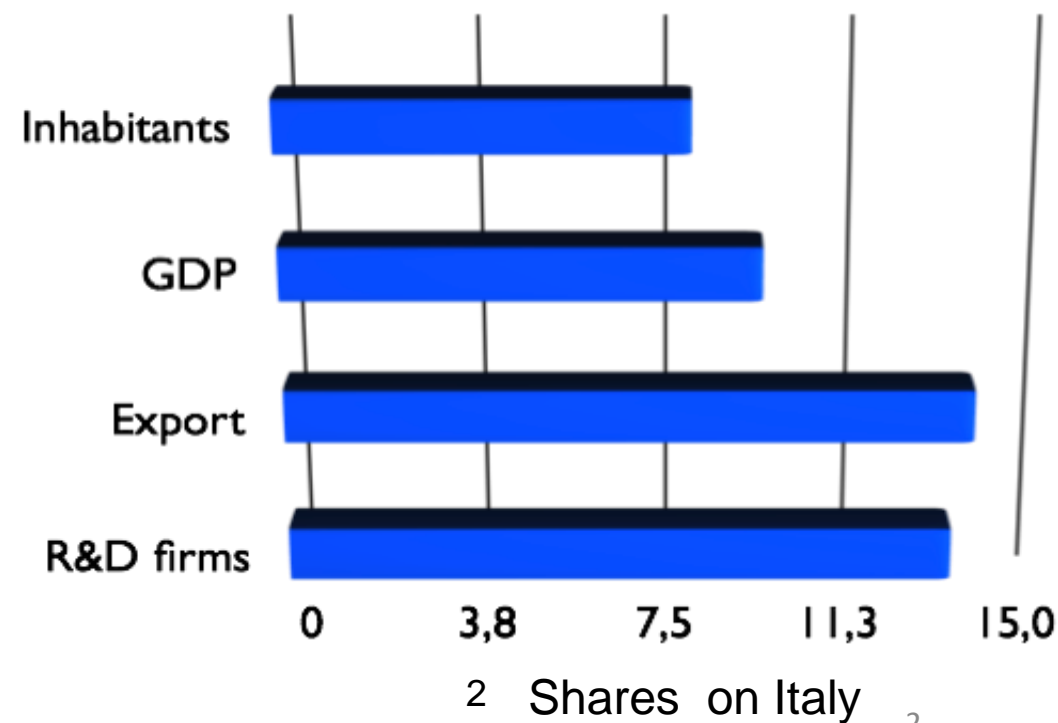
**Unemployment = 5.9%**

**Activity rate = 72.3% of working age population**

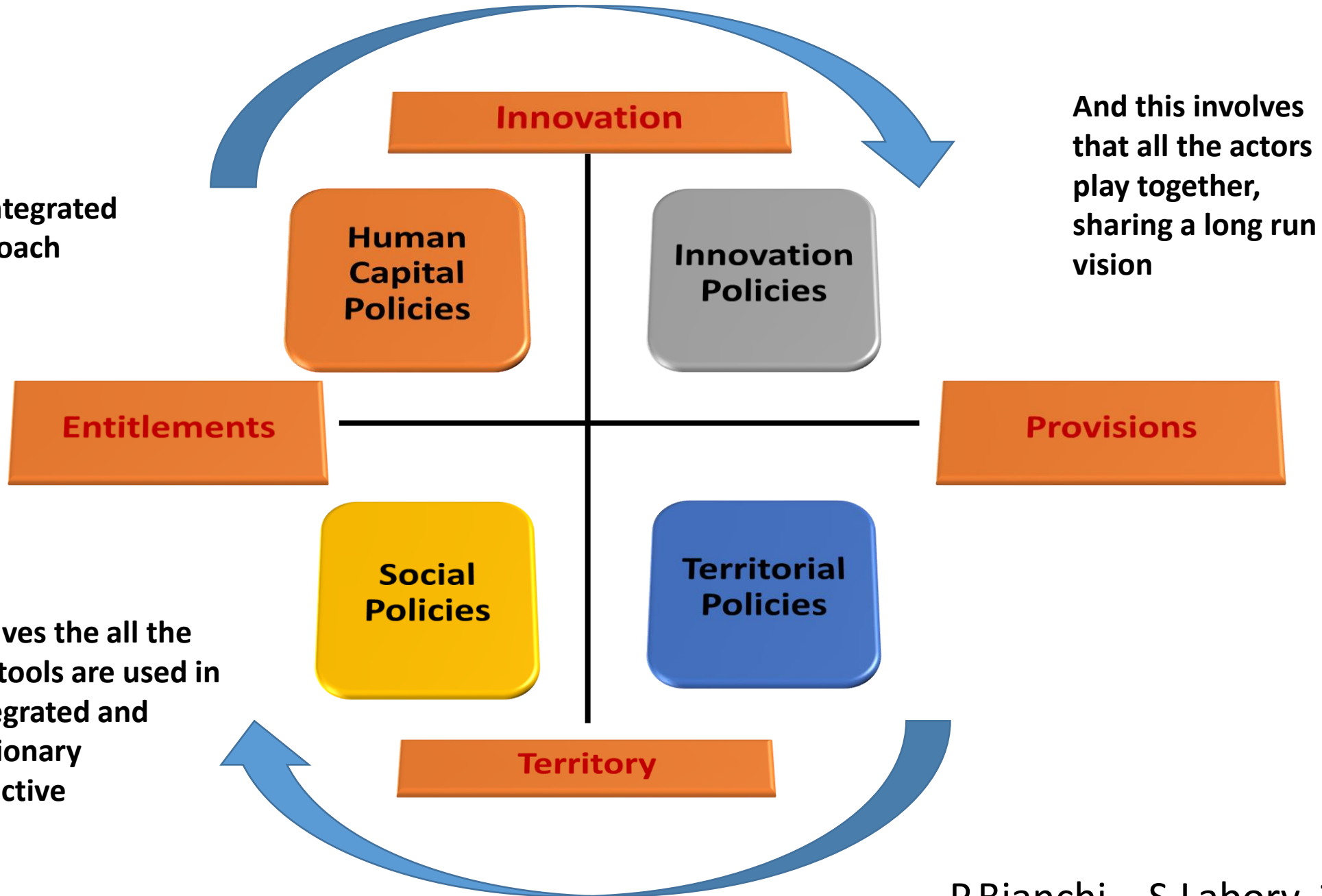
**Export = 56 billions €**

**R&D/GDP = 1.75% (2014), of which,  
1.25 by firms**

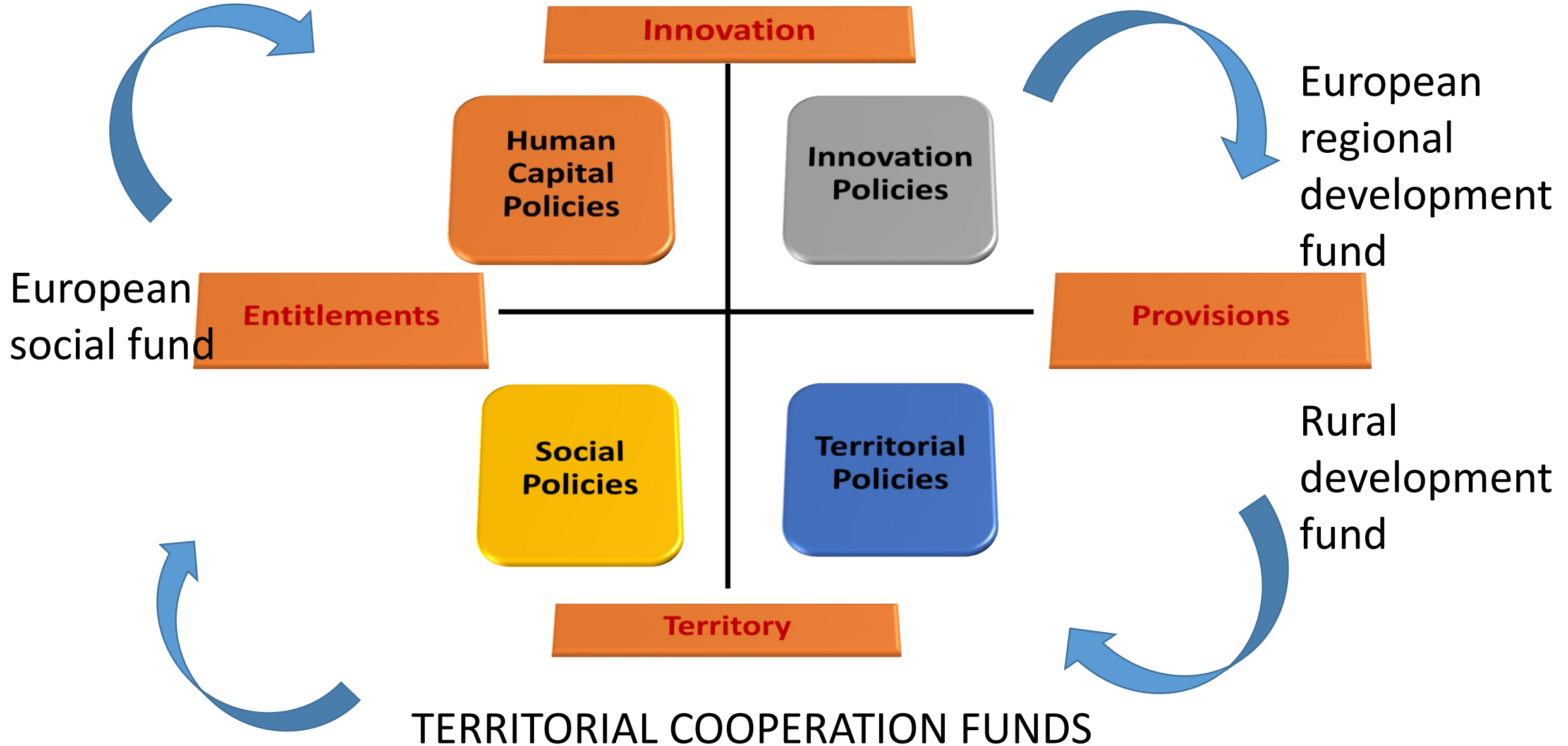
**Manufacturing GDP = 27%**



This is an integrated  
policy approach



# HORIZON 2020 / EUROPE



The starting  
point:



The first action was the reform and reorgaziation of the entire education and vocational training structure

to stress the strategic role of an integrated educational system

The first structural reform must regard human resources education

Polytechnic Network

Higher education,  
research and  
Universities

Technical Education  
and Vocational Training

Policies for  
school/labour  
transition



**ER**

**Education Research Emilia-Romagna**

patrizio bianchi

# Education and professional training

The reform of vocational training and technical schools was aimed at raising the level of skills of the entire regional economy and orienting it towards Industry 4.0 technologies.

The reform has encouraged social inclusion and reduced school drop-out



# Polytechnic network

We have promoted a network of new advanced technical schools (Istituti tecnici superiori) as independent foundations among companies, state schools, universities and local institutions.

The purpose of this network of new educational institutions is to raise the technical quality of the middle managers responsible for production.



# Higher education, research and universities

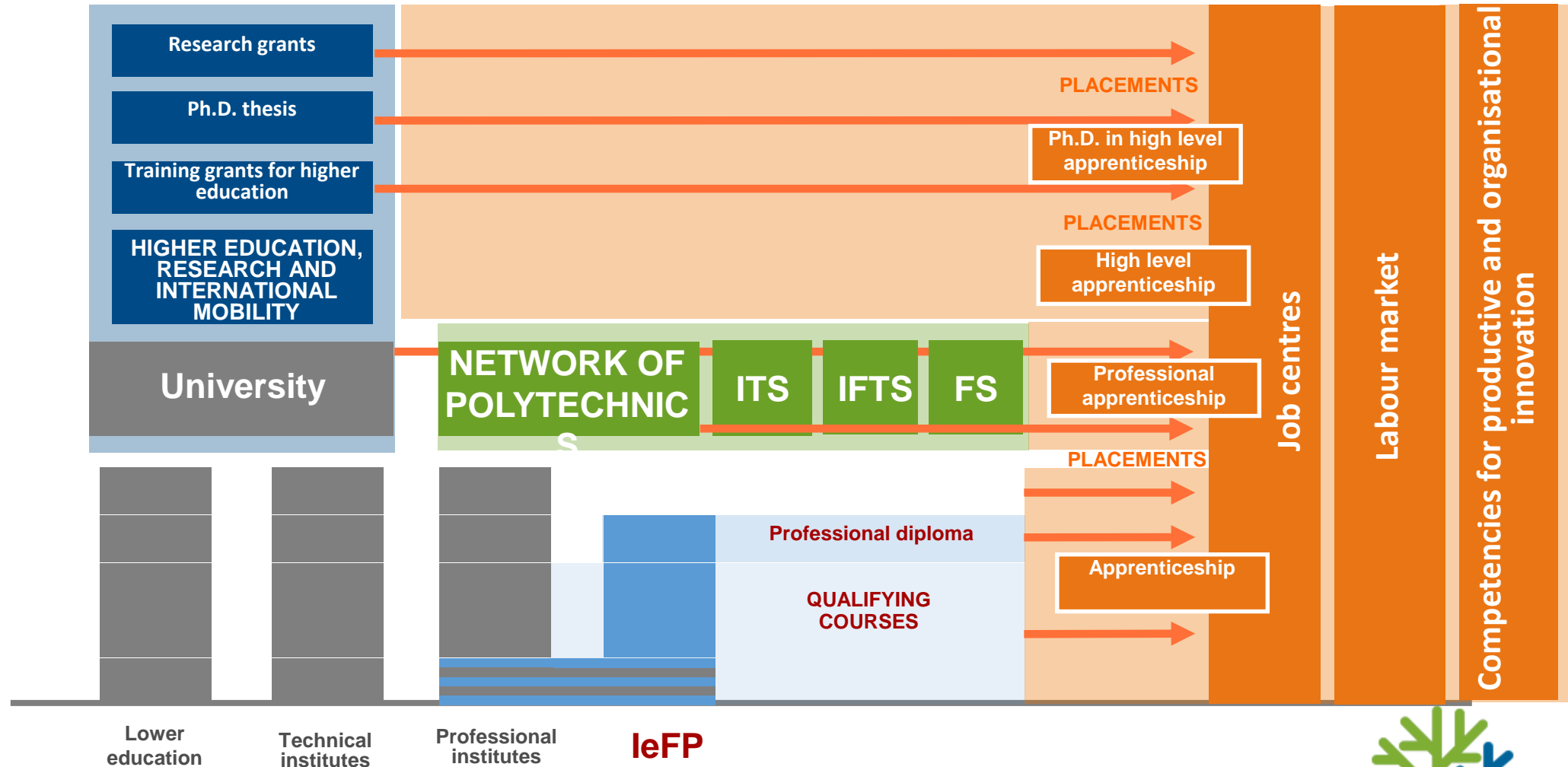
Emilia Romagna has developed a broad research and innovation strategy based on the universities and the national research institutes operating in the territory

## Competencies and labour



Policies to bring people from school to work

# From school to work





# EARTHQUAKE 2012

THE RECONSTRUCTION OF  
THE EDUCATION SYSTEM

THE ROLE OF LOCAL  
COMMUNITIES

# PATTO PER IL LAVORO

Un nuovo sviluppo  
per una nuova coesione sociale

Bologna, 20 luglio 2015

 Regione Emilia-Romagna

**This approach has been adopted by the Region Emilia Romagna and developed in the Labour Pact, that is the long-run planning of the Region (2015-2020).**

**This text was discussed, shared and signed by all business associations, trade unions, universities and city mayors.**

# PATTO PER IL LAVORO

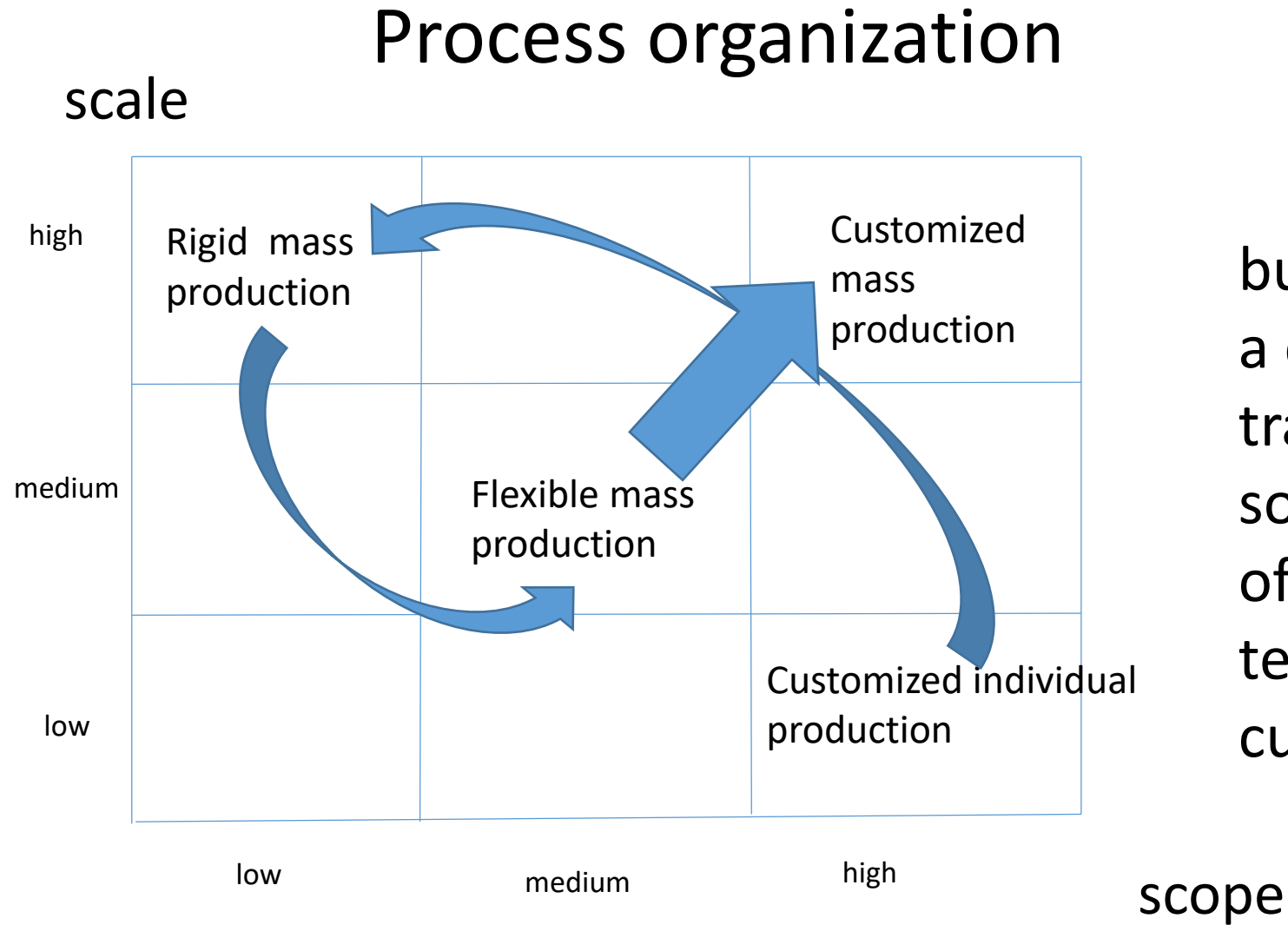
Un nuovo sviluppo  
per una nuova coesione sociale

Bologna, 20 luglio 2015

 Regione Emilia-Romagna

**The core of this approach is to increase the global added value produced in the regional economy, investing in human resources, innovation and internationalization of the entire regional society**

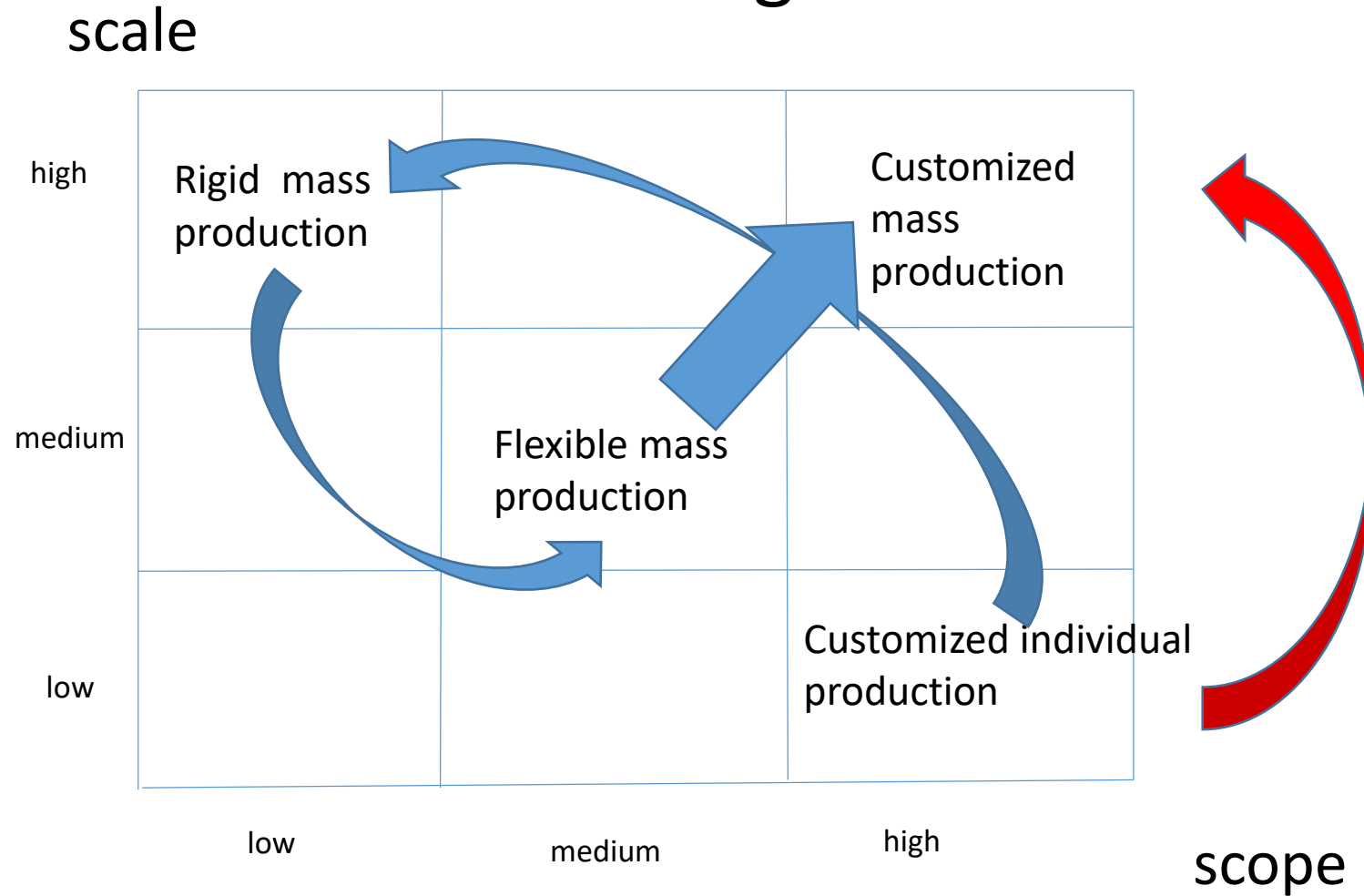
The 4° Industrial revolution is not only robotization ,



but it is a complete transformation of social relations, of scientific , technological, cultural basis

# Process organization

Today,  
developing  
countries  
can jump  
directly to  
the IV  
industrial  
revolution



Source: P.Bianchi, S.Labory, Industrial Policy for Manufacturing Revolution, E. Elgar Pu. 2018

The Patto per il lavoro assembly  
decided to promote an important  
**structural reform**

**The creation of the Regional  
Employment Agency that unites the  
public services and the private agencies  
in an integrated network that involves  
the whole society to create new  
employment**



The new system is based on the interaction of the 3 levels of employment promotion



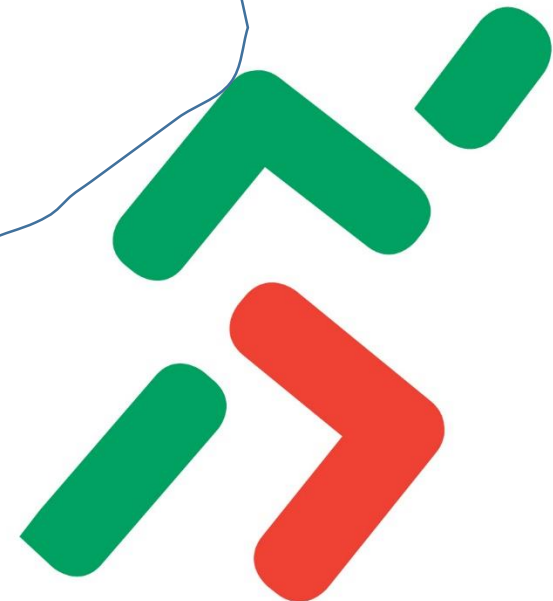
AGENZIA  
REGIONALE  
PER IL LAVORO  
EMILIA-ROMAGNA

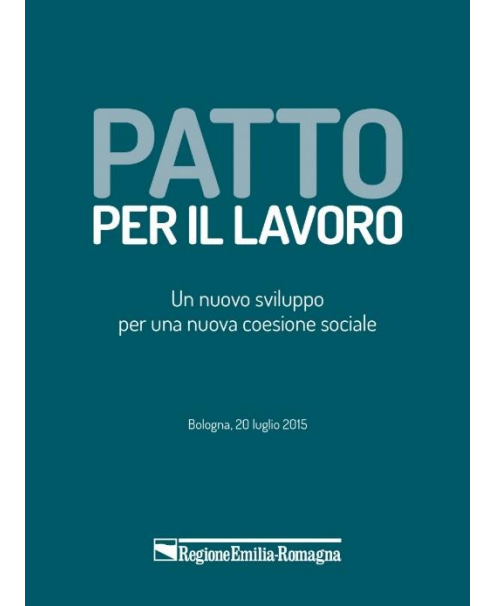
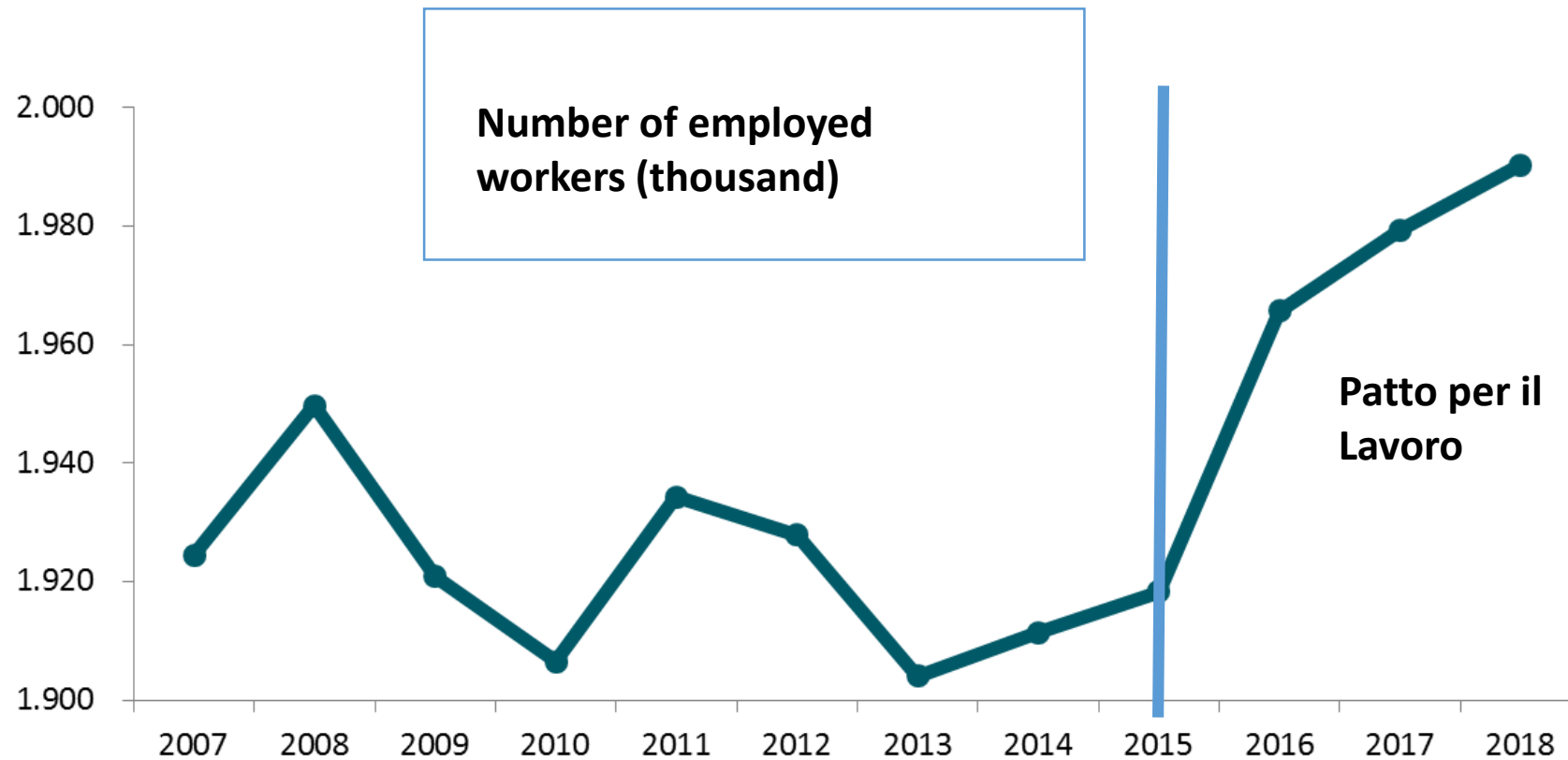
**Public employment  
centres**

**Private employment agencies**

**RETE ATTIVA DEL LAVORO**

**Employment active alliance (training centres, entrepreneurial  
associations, unions organizations)**

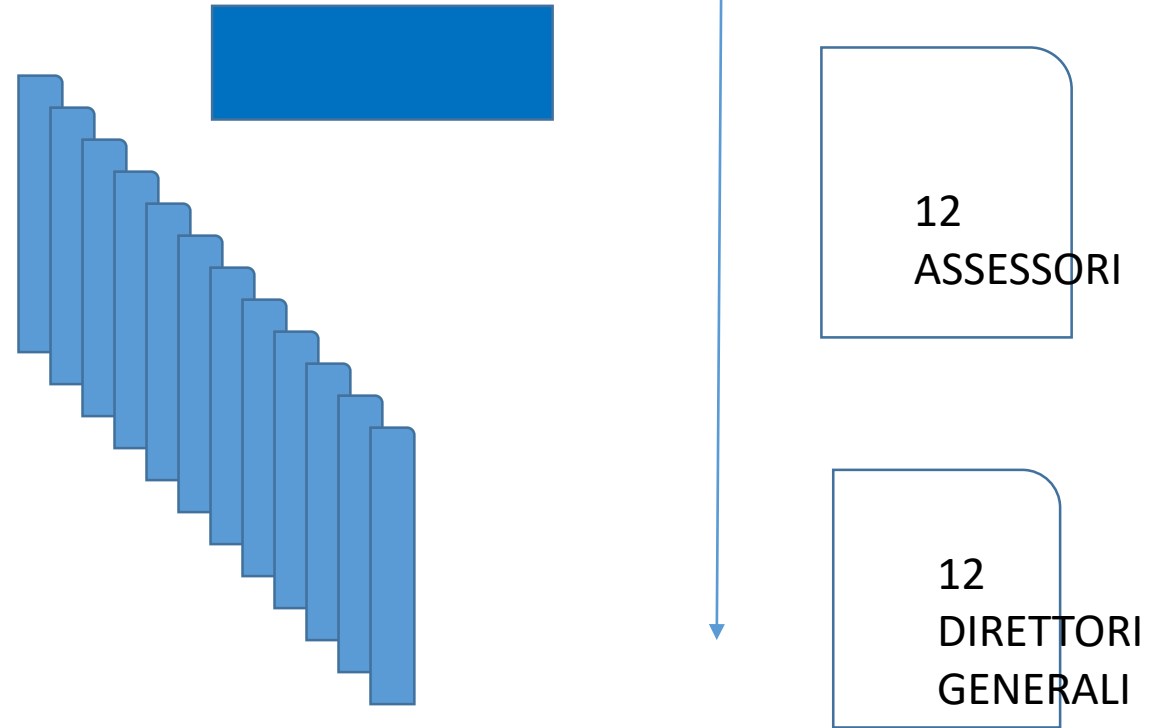




These policies have led not only to a strong recovery in employment and in the reduction of the school drop out index

But they gave a strong reorientation to the entire policy orientation of

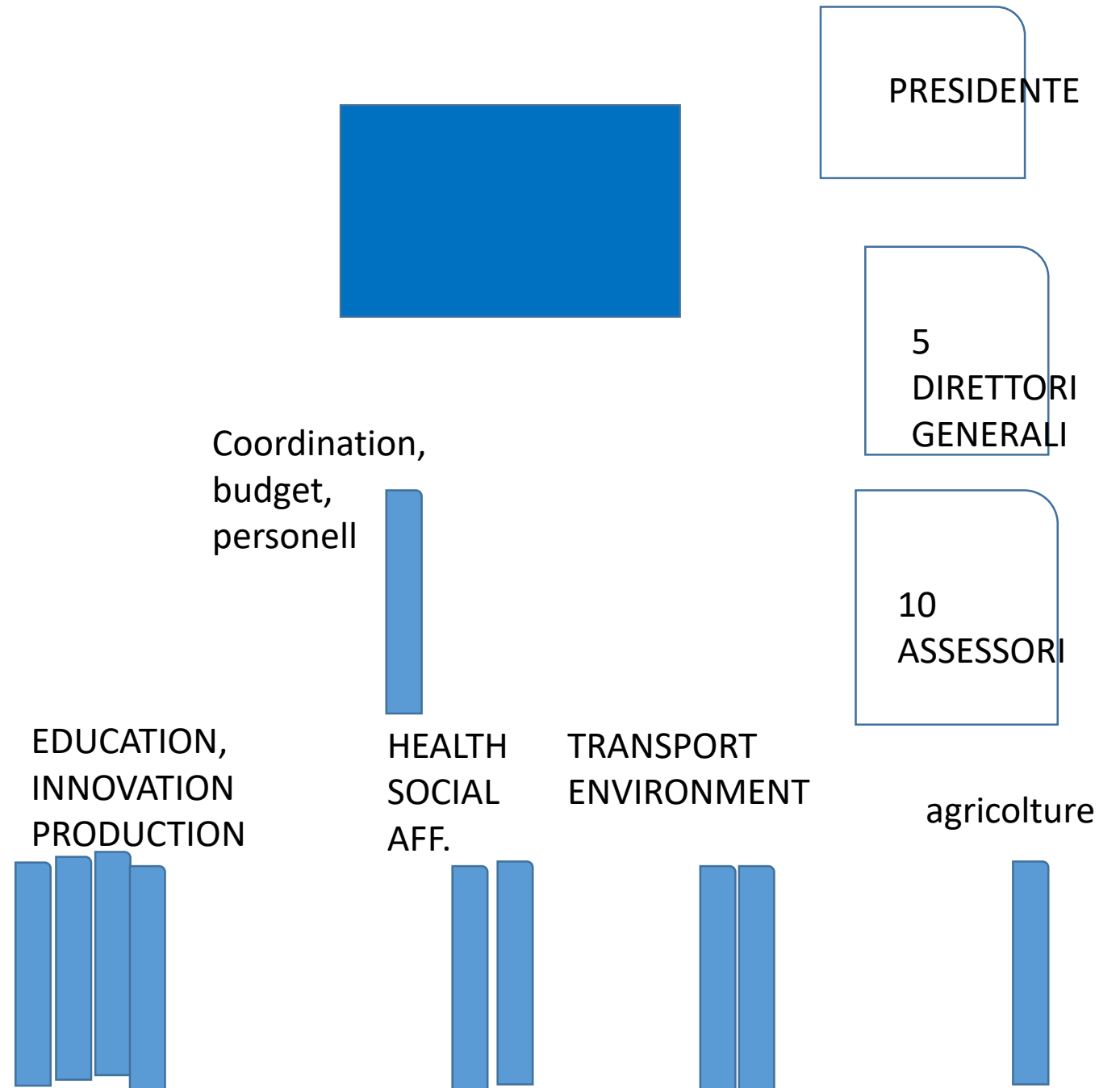
**A crucial reform**  
was the  
reorganization of  
the entire  
Regional  
Administrative  
Organization with  
respect to the  
Patto per il Lavoro  
/Sundial  
approach




The original model

A counselor in  
charge for  
coordination of  
European Funds  
for development


The reformed  
model




PATTO PER IL LAVORO: the President  
level of the different organizations, they  
meet every 6 months



CRT  
CONFERENZA TRIPARTITA REGIONALE  
They are technicians and local authorities,  
They have a meeting every 10 days



CONFERENZA  
REGIONALE DELLA  
SCUOLA E DELLA  
FORMAZIONE



CONFERENZA  
REGIONALE SERVIZI  
SOCIALI



CONFERENZA  
REGIONALE  
VOLONTARIATO



A **RELEVANT REFORM**  
WAS ON INTEGRATING

SERVICES FOR EMPLOYMENT

SOCIAL SERVICES

HEALTH SERVICES

PROVIDED BY

AGENZIA PER IL LAVORO


MUNICIPAL SERVICES FOR SOCIAL  
ASSISTANCE

TERRITORIAL AGENCIES FOR HEALTH  
AND HOSPITAL SERVICES

# INTERNATIONAL REPOSITIONING OF THE ENTIRE REGIONAL COMMUNITY

ATTRACTION POLICY  
PROMOTION OF OUR EXPORT  
INTERNATIONAL COOPERATION

REGIONAL RELATIONS  
AT INTERNATIONAL  
LEVEL  
REGIONAL DIPLOMACY



LAND HESSEN WIESBADEN  
REGION NOUVELLE ACQUITAINE BORDEAUX  
PROVINCE OF GUANGDONG CANTON  
PROVINCE OF GUATENG JOHANNESBURG  
STATE OF CALIFORNIA SACRAMENTO  
STATE OF PENNSYLVANIA HARRISBURG  
PROVINCE OF VIELKOPOLSKA POZNAN



CPMR INTERMEDITERRANEAN  
COMMISSION



**CPMR  
CRPM**

# ALLIANCE DE LA COOPERATION MEDITERRANEENNE

RELEVER ENSEMBLE  
DES DÉFIS COMMUN ET INTÉGRER  
DES STRATÉGIES POUR UN AVENIR  
MEILLEUR ET DURABLE POUR  
TOUTES LES REGIONS DU BASIN  
MEDITERRANEE



Climate change and  
weather forecasting

Blue economy  
Agricultural activity  
Transportation,  
Tourism  
City management



This framework gave a strong orientation to the Regional policy on Innovation and research and in particular to the relations with the Universities and the National Research Centres



The coordination core is

**REGION -  
UNIVERSITY  
EMILIA  
ROMAGNA  
CONFERENCE**



4 Universities, 11 campus

5 National Research organizations

Inter-university Computing Center (CINECA)

## The Regional High Tech Network

10 Technopoles

88 laboratories/centres of industrial research

600 full time young researchers

1200 part-time researchers

800 High Tech Start ups



# UNIVERSITY SYSTEM, RESEARCH CENTRES AND INTERNATIONAL AGENCIES



## 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 - Centro Euro-Mediterraneo sui Cambiamenti Climatici, INGV - Istituto Nazionale di Geofisica e Vulcanologia)

## International Authorities/Agencies:

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

**ART-ER** (Attractivity, research, territory/technology)

## Regional University System (7 Universities)

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

## 4 Large Research Infrastructure:

**Big Data Technopole**

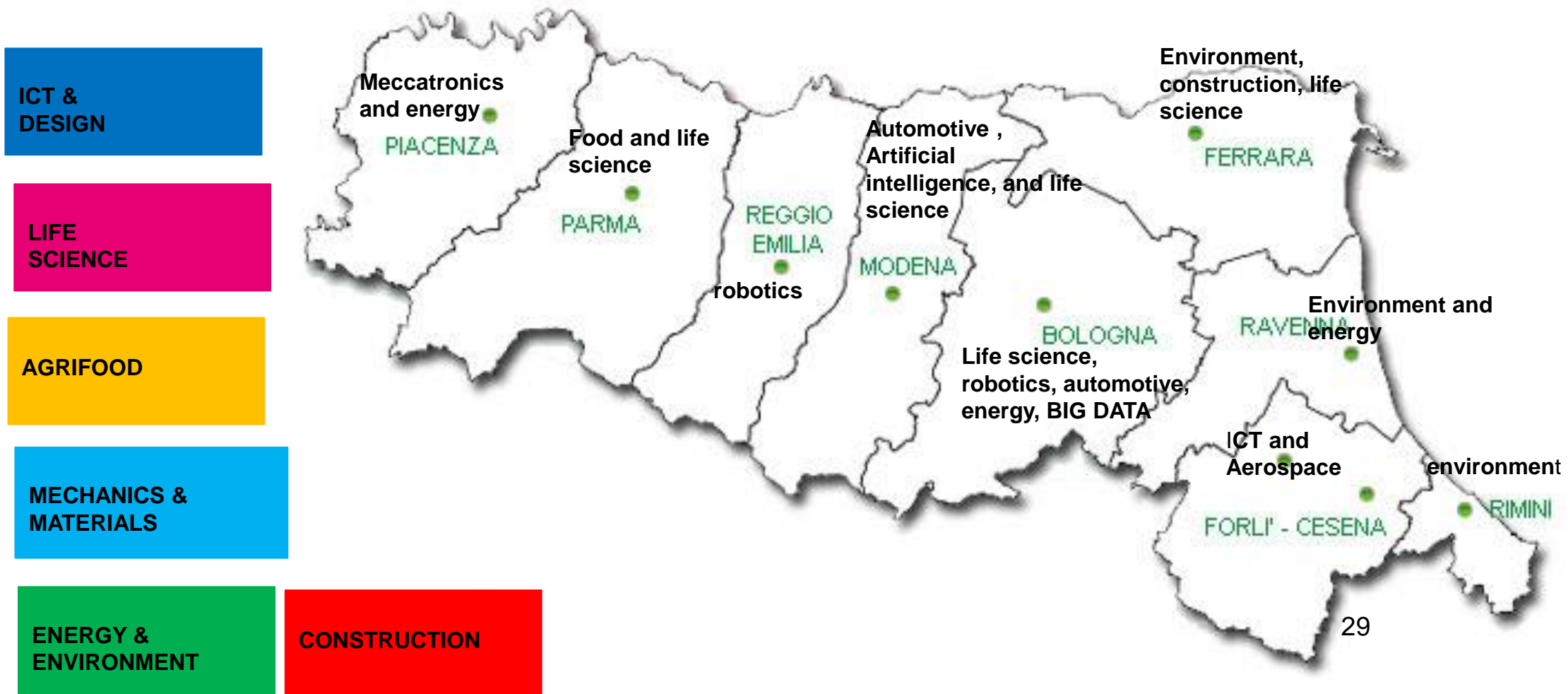
**INAF Radio Telescopes**

**ENEA Brasimone**

**CICLOPE**

# The ER Technopole Network

According to the relative advantages, each technopole is the hub of the regional network in the specific research cluster, where all the universities and the national research institutes participate



WE HAVE ORGANIZED A NETWORK  
INVOLVING ALL THE INSTITUTIONS  
PRODUCING KNOWLEDGE E  
DIFFUSING TECHNOLOGIES



NOT ONLY SMART  
SPECIALIZATION BUT ALSO  
SMART COMPLEMENTARITY  
STRATEGY TO INTEGRATE THE  
ENTIRE PRODUCTION AND  
INSTITUTIONAL SYSTEM

# THE INTERDEPENDENCE SYSTEM

**CLUST-ER**  
**AGRIFOOD**  
AGROALIMENTARE

**CLUST-ER**  
**BUILD**  
EDILIZIA E COSTRUZIONI

**CLUST-ER**  
**GREENTECH**  
ENERGIA E SOSTENIBILITÀ

**CLUST-ER**  
**CREATE**  
CULTURA E CREATIVITÀ

**CLUST-ER**  
**HEALTH**  
SALUTE E BENESSERE

**CLUST-ER**  
**INNOVATE**  
INNOVAZIONE NEI SERVIZI

**CLUST-ER**  
**MECH**  
MECCATRONICA E MOTORISTICA

associazione  
**BigData**  
from volume to value

**MUNER**  
Motorvehicle University  
of Emilia-Romagna

**463 members**

Total memberships	463
Research Labs & Innovation Centres (High Technology Network)	201
Companies	204
Education & Training	32
Others	26

To share ideas, skills, tools, resources supporting the competitiveness of Emilia-Romagna's production systems.



# Muner

## Motorvehicle University of Emilia Romagna

- The Regional Government promoted an association among the 4 universities and the motorvehicle companies working in ER
- University of Bologna, University of Ferrara, University of Modena and Reggio Emilia, University of Parma
- Ferrari, Alfa Romeo, Maserati, Lamborghini, Ducati, Dallara, Toro Rosso, Pagani, Marelli, Coxa
- For a joint Msc degree in Automotive engineering and Compumotive





1. IMPROVE THE QUALITY AND THE ADDED VALUE OF THE PRODUCTION

2. INTEGRATING THE UNIVERSITY RESEARCH AND THE DIFFUSION OF RESULTS TO ALL COMPANIES

3. CERTIFICATION AND GUARANTEED QUALITY ASSURANCE FOR ALL THE PHASES AND THE COMPANIES IN THE PRODUCTION CHAIN

4. A STRONG PROCESS OF INTERNATIONALIZATION;  
PROMOTION OF OUR PRODUCTION  
INTERNATIONAL COOPERATION  
ATTRACTION OF INVESTMENT



## Production system leading companies

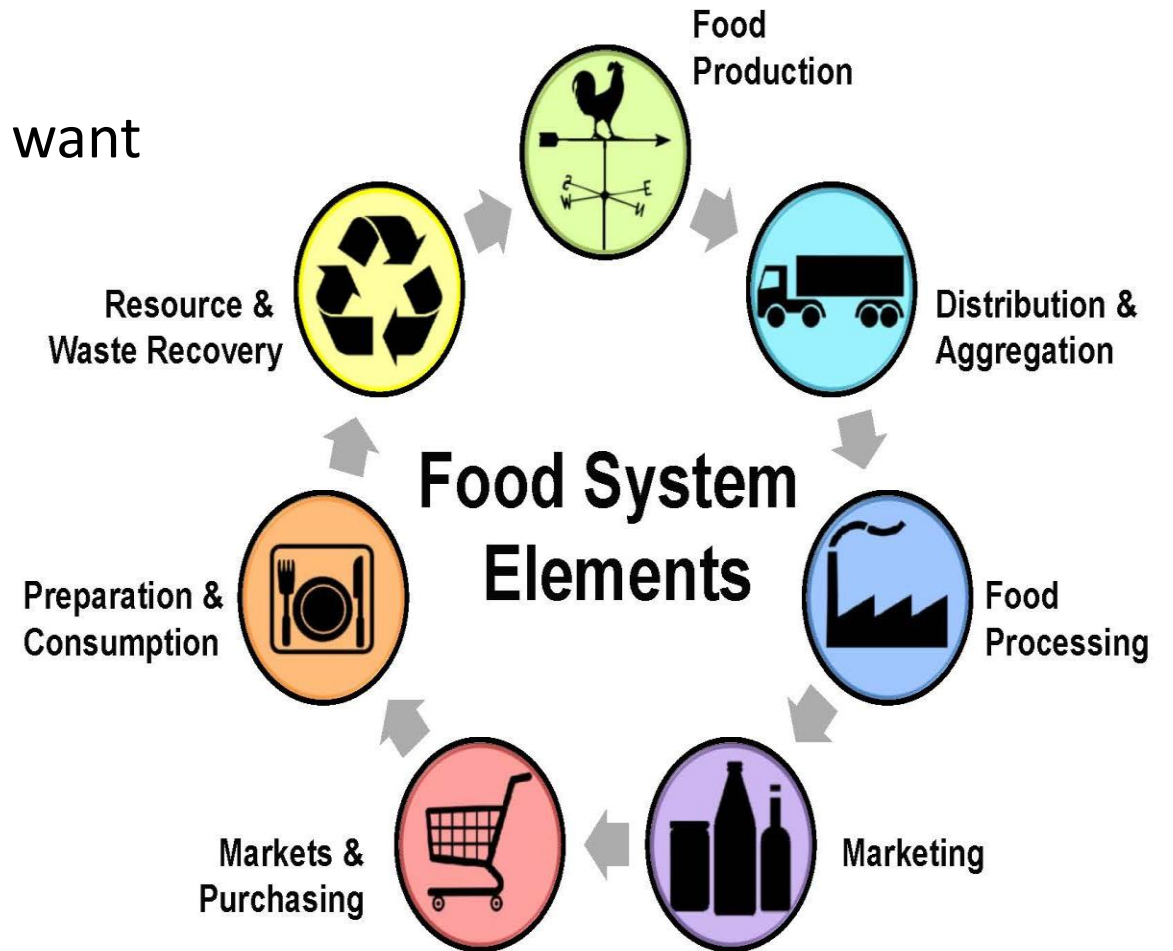
Safety and security  
In the entire food  
value chain as the  
basis of a policy of  
high quality food  
specialization

International  
school of  
nutrition and  
safety food



## A strategy for an agrofood based economy

1. In which part of the global value chain we want to position ourselves
2. In which part of the gvc we are at present and how can we move from the present situation to the expected area
3. Which is the effective condition of the companies and the status of the institutions
4. Which policy structure we can activate to design and implement this policy



*Adapted by Christy Shi, Center for Environmental Farming Systems.*

*From: Wilkins, J. and Eames-Sheavly, M. Discovering the Food System; An experiential learning program for young and inquiring minds. Cornell University, Departments of Nutritional Science and Horticulture. <http://www.discoverfoodsys.cornell.edu/>*

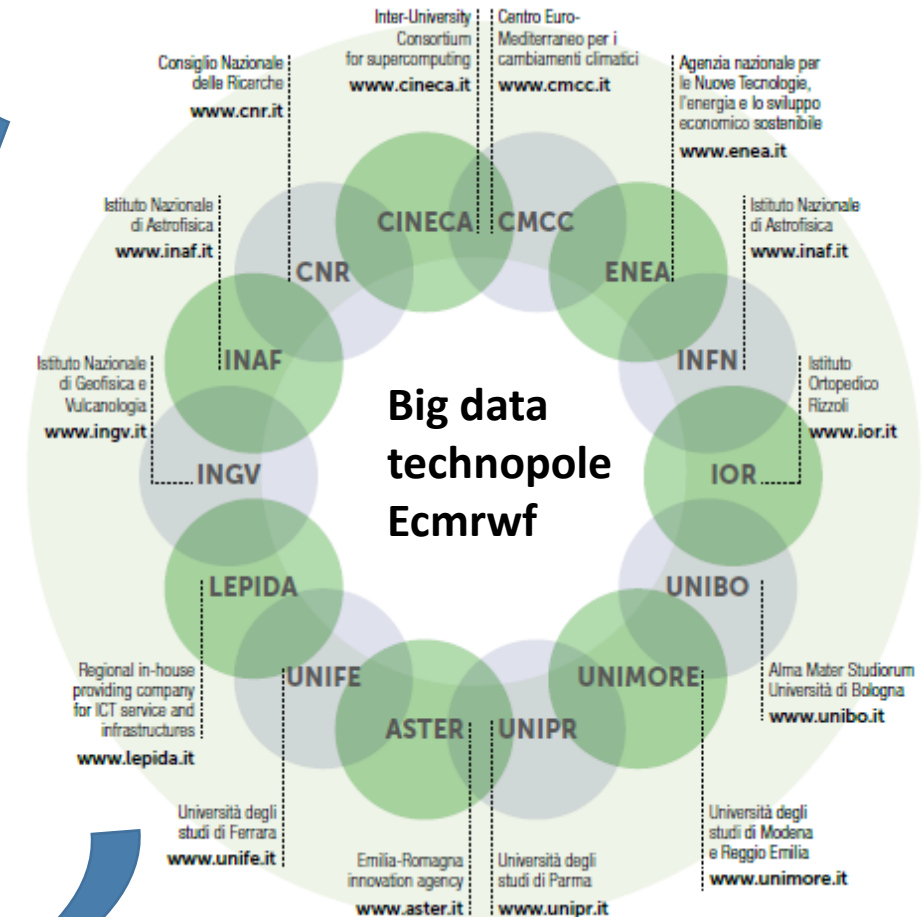
A **NECESSARY REFORM** WAS THE INTEGRATION OF THE COMPETENCES OF OUR AGENCIES, THAT ARE PARTECIPATED BY THE UNIVERSITIES AND THE REGIONAL INNOVATION SYSTEM PLAYERS





- Climate change
- Health and aging
- Production and innovation
- Humanities and society
- Sustainable cities
- Security and Cybersecurity
- education

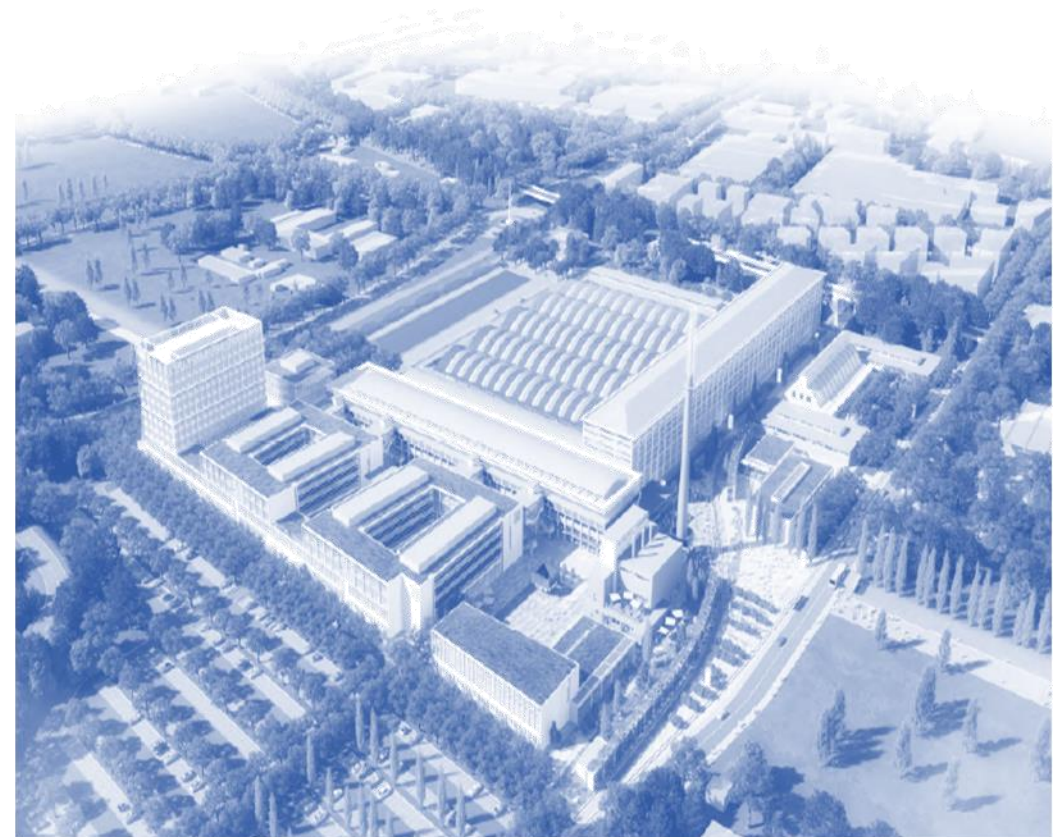
**Fundamental analytics and applications**  
**Science, Industrial and society challenges**



# THE BIG DATA TECHNOPOLE: BOLOGNA HUB

The Technopole will host:

- **The ECMWF data centre and supercomputing facility**
- The CINECA data centre towards exascale computing
- The INFN data centre towards extreme HPTC
- **The European High Performing Computing Centre HPC**
- The National Agency Italia Meteo
- National Competence centre «Big Data for Industry 4.0»
- National Agency for Energy and Environment-ENEA research centre
- IOR (Istituto Ortopedico Rizzoli) biobank centre
- «Ballette» industrial research incubator for companies and start-ups
- Regional Agency for Development and Innovation
- University research and education centres
- IBM CENTRE BIG DATA AND AI FOR AGING





# FOUNDATION BIG DATA AND ARTIFICIAL INTELLIGENCE FOR HUMAN DEVELOPMENT

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**EuroHPC**  
Joint Undertaking

## **What we can learn from the Emilia-Romagna experience that could be useful for Croatia and in particular for the less-favoured areas of the country**

1. A long term vision of structural changes of the entire economy and society. This vision required an Integrated approach to policy making
2. It is necessary to propose instrument of participation of the representative bodies of societies, but at different levels of social responsibility, avoiding assemblarism
3. A Project approach to development requires adequate scale of design and implementation of the policy-making

## **What we can learn from the Emilia-Romagna experience that could be useful for Croatia and in particular for the less-favoured areas of the country**

4. Human resources are the starting point of any development policy and this requires an adequate organization
5. Structural reforms are necessary to guarantee consistency and coherence of policy making both at horizontal and vertical streams of decisions
6. We are operating in an open, competitive and global context. Than, we can generate infrastructure that serving an economic and social environment larger than our extent of jurisdiction, acquiring a central position in the global network of relations

# **What we can learn from the Emilia-Romagna experience that could be useful for Croatia and in particular for the less-favoured areas of the country**

7. The perspective of development of an agrofood -based economy is the rooted on the construction of an ecosystem capable to guarantee and control quality and to guarantee an efficient and specific logistic system

8. Investment on public administration quality strengthen is necessary for guarantee the implementation of the policy making

9. The «Patto per il lavoro Approach» has stabilized the economic expectations of the local and international players, reduced the investment risks, and in particular in research and education

10. Any development process is largely defined by the historic conditions, therefore we cannot transfer policy experiences from a country to another, but we can learn from the mistakes of the others. Thanks