

"ECOSYSTEM FOR SUSTAINABLE TRANSITION IN EMILIA-ROMAGNA"

CLIMATE, ENERGY AND SUSTAINABLE
MOBILITY



TARGET:

Emilia-Romagna counts on a diversified and flexible production specialization model that fits in a territory rich of knowledge, skills, services, infrastructures, collaborative networks on research and development, with a strong and competitive manufacturing vocation, one of the most relevant at European level: with 453,000 employees, manufacturing is worth 30% of total employment, a value significantly higher than the national average, which amounts to 22%.

The industrial system absorbs about one third (33%) of final energy consumption in the region, with 4.2 Mtoe of final consumption of which over 70% consists of natural gas and the remaining of electricity. For this reason, it appears necessary that companies convert their production cycles into a new dimension of circularity, reducing energy consumption, gradually increasing the use of renewable resources and allowing, at the end of their life, the recycling and reuse of materials and components. In Emilia-Romagna the role of renewable energy sources (RES) has been growing rapidly; in the region, the use of RES covered more than 10% of total energy consumption already in 2014 (thus exceeding the forecasts: 8.9% in 2020).

To support this strong and highly competitive production system, the Emilia-Romagna Region decided to build an integrated innovative ecosystem, in association with Universities, Research Centers and other territorial players. This ecosystem is coordinated by ART-ER - 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. Regional policies have supported investments in R&D creation of new entrepreneurship with high technological content, the development of networks for research and the growth of human capital. In this integrated and innovation-oriented system, the 4 regional Universities (Bologna, Modena and Reggio Emilia, Ferrara and Parma), together with the Piacenza hubs (of the Politecnico and Cattolica University of Milan) and the research system (which can count on important national public research bodies of excellence based in the area, such as CNR, ENEA, INFN, CINECA and CMCC) play a crucial role in the area and they are among the most active on the national and European scene as regards the development of research and innovation projects (more than 600 participations - total contribution received greater than 230 million € in Horizon 2020).

One of the pivotal networks of the regional ecosystem is the High Technology Network: with its 79 Industrial Research Laboratories and 14 Centers for Innovation, it provides skills, tools and resources for business development. Most of them are hosted in Technopoles, the territorial access point to the overall ecosystem offer, targeted to facilitate the meeting between companies and researchers. In the Technopoles are hosted the Areas S3 which have the task of generating new opportunities for highly skilled young people to access professional paths related to innovation. Clust-ERs are associations of laboratories and firms aimed at developing joint strategic projects with a high regional impact in accordance with the regional specialization. As for the regional initiatives supporting knowledge-based startup growth, it is worth mentioning EmiliaRomagnaStartup, a one-stop-shop offering information and support to +1000 regional startups, and the in-ER network, the community composed of 28 regional incubators and accelerators providing facilities, services, tools and financing opportunities. There are also initiatives devoted to technology transfer and to the exploitation of the research results, such as the Start Cup Emilia-Romagna, the business idea competition organized in partnership with the regional Universities and research centers and EROI - Emilia-Romagna Open Innovation, a digital community open to people who want to innovate by collaborating in line with the Open innovation principles.

SECTION PARTNERS

TOTAL NO. OF PARTNERS: 23

Proposer: Alma Mater Studiorum Università di Bologna

Participants

PUBLIC SUBJECTS

Universities

- Università di Ferrara
- Università di Modena e Reggio Emilia
- Università di Parma
- Politecnico di Milano

Research Institutes

- Consiglio Nazionale delle Ricerche
- Istituto Nazionale di Fisica Nucleare
- Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile

PRIVATE ACTORS:

Research Organisations

- Università Cattolica del Sacro Cuore
- CINECA Consorzio Interuniversitario
- CertiMaC S.cons. a r.l.
- CRPA Spa
- MISTER Smart Innovation
- Consorzio PROAMBIENTE
- Fondazione REI
- Romagna Tech
- Fondazione Democenter-Sipe
- Centro Ceramico Consorzio Universitario

Companies

- BI-REX
 - LEAP S. Cons. a r.l.
 - Consorzio MUSP
 - Consorzio T3LAB
 - ALMACUBE S.r.l
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SPOKE

Spoke n. 1 - Materials for sustainability and ecological transition

Leader spoke: Consiglio Nazionale delle Ricerche

Spoke members:

- Università degli Studi di Modena e Reggio Emilia
- Alma Mater Studiorum Università di Bologna
- Università di Parma
- Università di Ferrara
- Università Cattolica del Sacro Cuore
- Politecnico di Milano
- Centro Ceramico Consorzio Universitario
- CertiMaC S.cons. a r.l.
- Fondazione Democenter-Sipe
- MISTER Smart Innovation
- Consorzio MUSP
- Romagna Tech
- ALMACUBE S.r.l

Spoke n. 2 - Clean energy production, storage and saving

Leader spoke: Università di Modena e Reggio Emilia

Spoke members:

- Consiglio Nazionale delle Ricerche
- Alma Mater Studiorum Università di Bologna
- Università di Parma
- Università di Ferrara
- Politecnico di Milano
- Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile
- CRPA Spa
- Fondazione Democenter-Sipe
- Fondazione REI
- LEAP S. Cons. a r.l.

Spoke n. 3 - Green manufacturing for a sustainable economy

Leader spoke: Alma Mater Studiorum Università di Bologna

Spoke members:

- Consiglio Nazionale delle Ricerche
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- Università di Modena e Reggio Emilia
- Università di Parma
- Università di Ferrara
- Politecnico di Milano
- Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile
- BI-REX
- Centro Ceramico Consorzio Universitario
- Fondazione REI
- MISTER Smart Innovation
- Consorzio MUSP
- Romagna Tech
- Consorzio T3LAB
- ALMACUBE S.r.l

Spoke n. 4 - Smart mobility, housing and energy solutions for a carbon-neutral society

Leader spoke: Università di Parma

Spoke members:

- Consiglio Nazionale delle Ricerche
- Alma Mater Studiorum Università di Bologna
- Università di Modena e Reggio Emilia
- Università di Ferrara
- Politecnico di Milano
- Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile
- CertiMaC S.cons. a r.l.
- Consorzio PROAMBIENTE
- Consorzio T3LAB
- ALMACUBE S.r.l

Spoke n. 5 Circular economy and blue economy

Leader spoke: Università di Ferrara

Spoke members:

- Consiglio Nazionale delle Ricerche
 - Alma Mater Studiorum Università di Bologna
 - Università di Modena e Reggio Emilia
 - Università di Parma
 - Politecnico di Milano
 - Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile
 - CRPA Spa
 - LEAP S. Cons. a r.l.
 - Consorzio PROAMBIENTE
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Spoke n. 6 - Ecological transition based on HPC and Data Technology

Leader spoke: Università degli Studi di Parma

Spoke members:

- Università di Modena e Reggio Emilia
- Alma Mater Studiorum Università di Bologna
- Istituto Nazionale di Fisica Nucleare
- CINECA Consorzio Interuniversitario

FINANCIAL DATA (by concession decree)

Total amount: € 112.003.380,86

MUR grant: € 110.000.000,00

Project calls: 28% of project amount