



# Reggio Emilia Innovazione

Eliana Porreca

Ricerca, Innovazione e Trasferimento Tecnologico

EMPLOYouth- 16th October 2013



# Agenda

10.00 – 10.20

Welcome intro

*E. Porreca, Rei*

10.20 – 11.00

DQUID case

*S. Marzani, CEO*

11.00 – 11.10

Transfer to

Fab Lab

Reggio Emilia

11.20 – 12.00

first group  
visiting Fab Lab

12.00 – 12.30

second group  
visiting Fab Lab

# REI – Who we are



Reggio Emilia Innovazione (REI) was founded in 2003 by public authorities, business associations of Reggio Emilia and University.

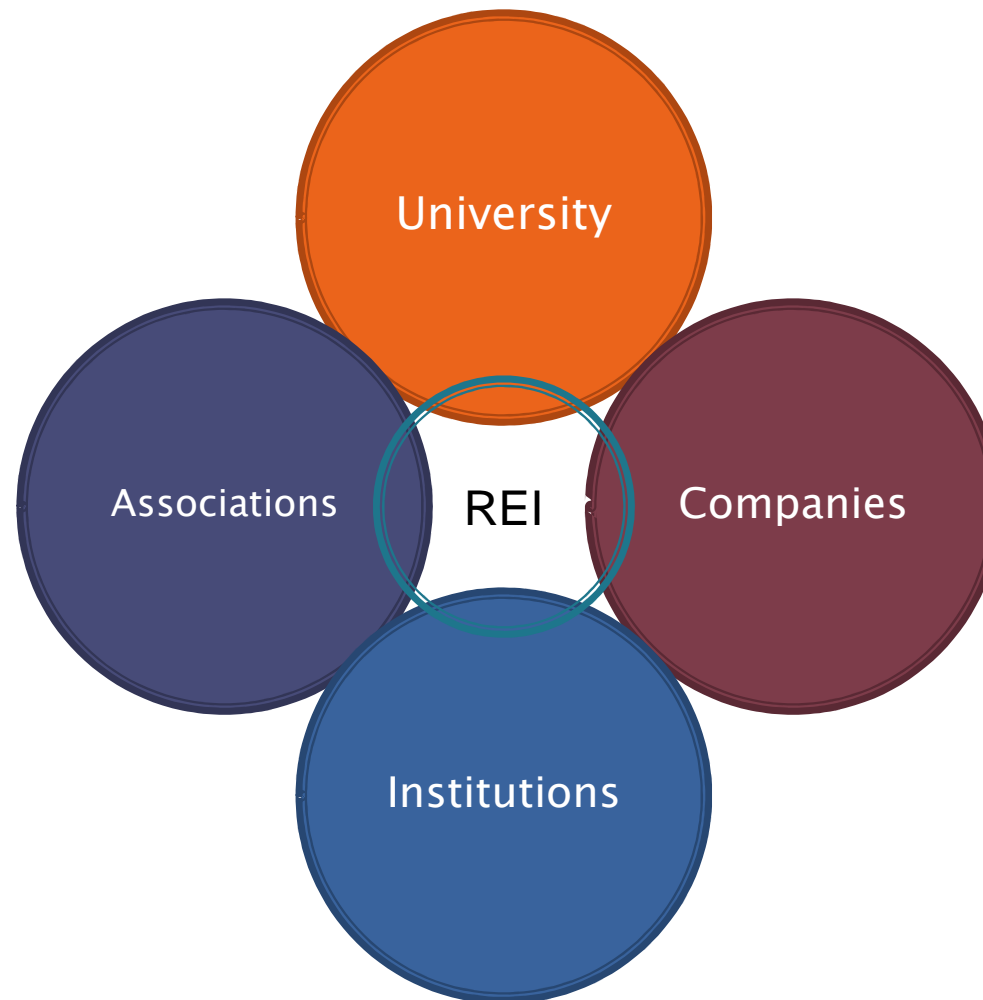
It is a public consortium composed by:

- Chamber of commerce
- University of Modena and Reggio Emilia
- Municipality and Province of Reggio Emilia
- Unindustria, CNA and other local business associations

REI is a Center for innovation and accredited Lab for industrial research and technology transfer of High Technology Network of Emilia–Romagna Region. Since last year, REI is the hosting organization for the *Technopole* of Reggio Emilia.



# Architecture of REI



# REI – the mission

- ▶ Supporting the innovation processes of the companies in the Province of Reggio Emilia, by promoting the communication and the collaboration between University/Research, Province board and the Industry
- ▶ Promoting and valorising the competences of the research carrying out activities aimed at science and technology transfer of innovative technologies.
- ▶ Participating and contributing to national and international projects aimed at improving the science and technology transfer networks.



# REI – in few words ...what we do

- **Industrial Research:** REI hosts laboratories and performs directly research in electromagnetic compatibility, power and battery managements systems for automotive and mechatronics.
- **Technological Services** operating as consultant and verification tester of innovative products at its own laboratories.
- **Spin-off Incubator:** REI hosts, promotes e supports the growth of the local start-up and spin-off.
- **Technology Transfer and Research Marketing** as support to company innovation processes and to the valorisation of research laboratories' competences.



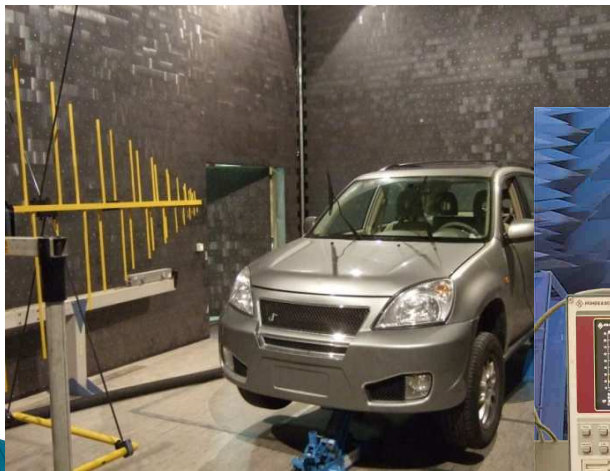
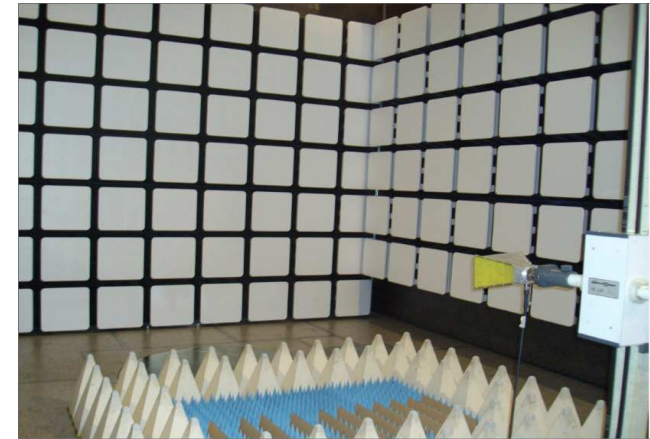


# Industrial Research

Nine are the laboratories devoted to industrial research in order to develop specific competences for innovative technologies.

Sectors most important are:

- mechatronics
- energy and environment
- transport and sustainable mobility



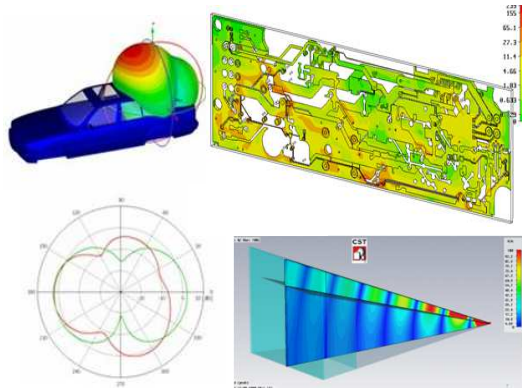
# Nine LABs

- ▶ EMC & RF – electromagnet compatibility & radiofrequency
- ▶ Energy Power
- ▶ Energy Control
- ▶ FPM – Fluid Power for Mechatronics
- ▶ HMI –Human Machine Interface
- ▶ ATEn – Aeronautics Termofluidodinamics Energy
- ▶ ECO-BUILDING – construction sector
- ▶ LAC – Logistic & Automation
- ▶ FABLab – fabrication laboratory





# EMC & RF



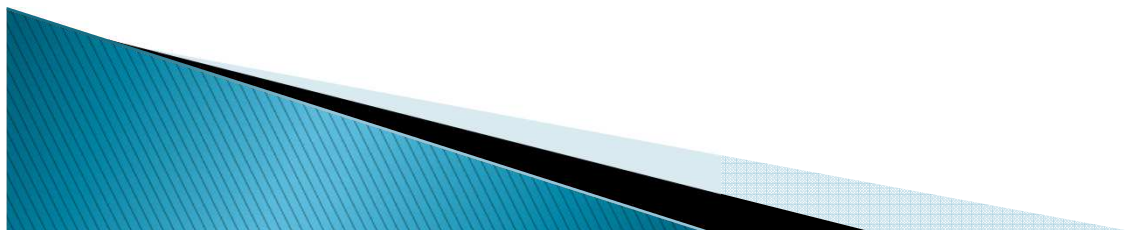
It's about problem solving activities and product solutions by an experienced team, providing innovative methodologies and evolving instruments.



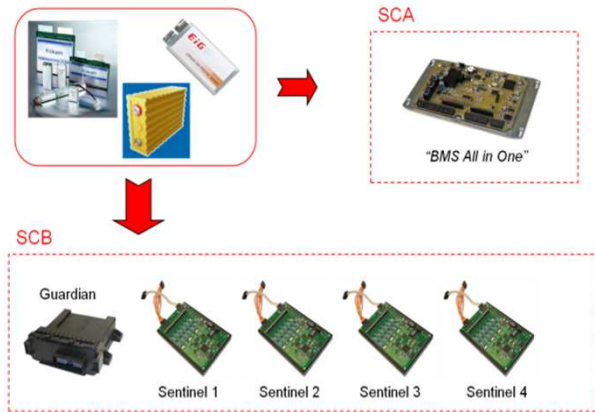
## Energy Power

It concerns power electronic project, for all aspects. Main characteristic: experience in static conversion of energy:

- By renewable source (photovoltaic inverter and microwind)
- For electric devices on mechatronics applications.



# Energy Control



It deploys custom electronic systems with microcontrol device.

Very important the study of software, definition of master and direct production. The whole system is provided.



# Fluid Power for Mechatronics

It regards simulation and characterization on electro-hydro circuit for application fixed, movable in oleodynamics, as hydro motor and supports the interface software for data elaboration.



# ATEn Lab



ATEn-Lab promotes the radical innovation in several research fields of application, especially related to thermofluiddynamic exchange as application in energy, aeronautics. It is also participating in some 7FP projects at European level.



## ECO-Building

There will be executed tests on materials and manufacturing tools for construction sector (steel, ceramic) notwithstanding It will be



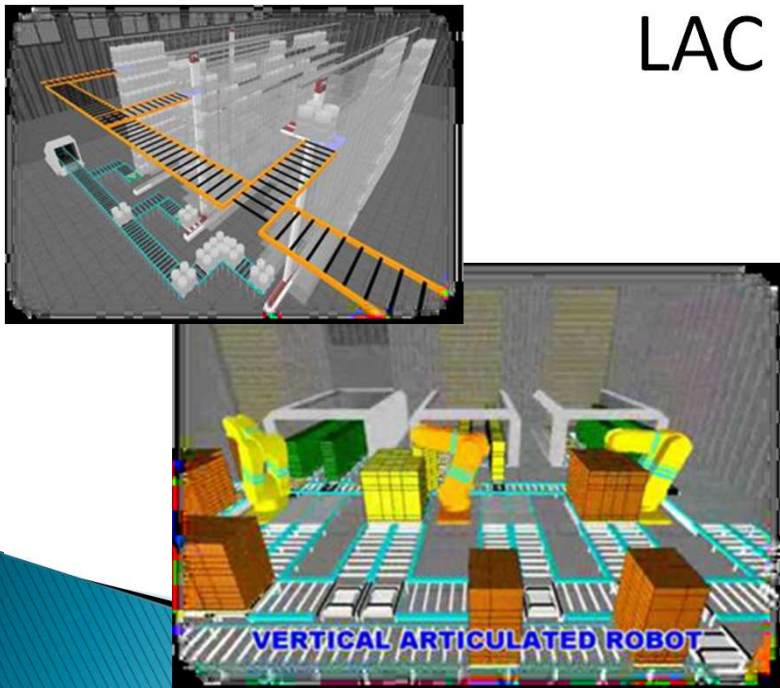


# HMI– Human machine Interface



It designs, develops and studies the interaction between user and vehicle through a driving simulator Oktal, which is a platform for carrying out tests in different road contexts and according to the equipment on board.

# LAC – Logistic & Automation



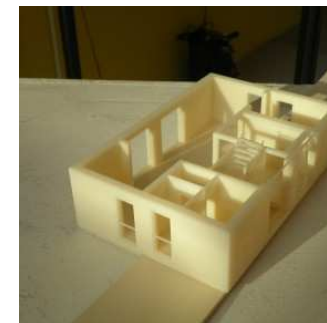
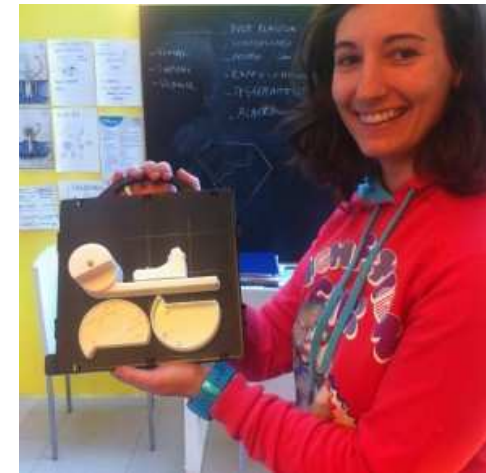
Focus area includes design and management of production system, production planning, optimisation and supply chain management, the internal logistics and distribution network, up to the developing and implementation of automation solutions for production and logistic.

# FABLab



It is a small-sized lab for «design and digital fabrication» that uses the latest generation machines for digital manufacturing, as 3D printer, laser cutter managed by software and processes easily accessible. A meeting place where individuals, companies, professionals can find synergies and economies to develop new forms of production.

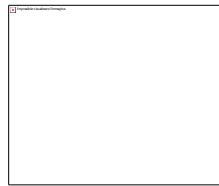
This new approach is called  
Third industrial revolution!!



# Partnership



PRESIDENZA DEL CONSIGLIO DEI MINISTRI  
AGENZIA PER LA DIFFUSIONE  
DELLE TECNOLOGIE PER L'INNOVAZIONE



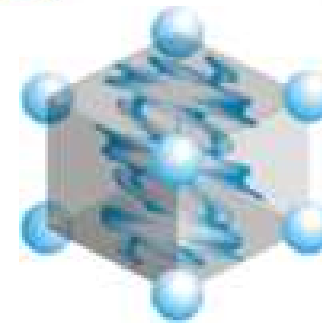
Consiglio  
Nazionale  
delle  
Ricerche



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA



Business Support on Your Doorstep



RETE  
Ventures



UNIVERSITÀ DEGLI STUDI  
DI MODENA E REGGIO EMILIA





# Universities network



- ▶ Università di Mo.Re. – Reggio Emilia
  - DISMI – Engineering Science and Methods



- ▶ Università di Mo.Re.– Modena
  - Engineering dept. «Enzo Ferrari»



- ▶ Università di Bologna
  - DIE, Electric engineering



- ▶ Università di Parma
  - DII, Information engineering



## Technological services: Certification LABs

- ▶ Electromagnet compatibility
- ▶ Radio frequency
- ▶ Electric safety
- ▶ Vibration and noise
- ▶ Endurance
- ▶ ISOBUS



# Electromagnet compatibility

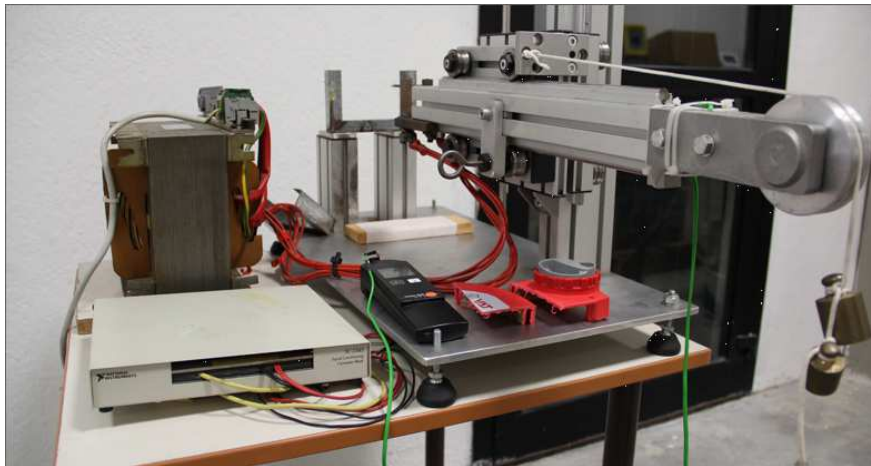
Direttiva 2004/108/CE (Automotive)



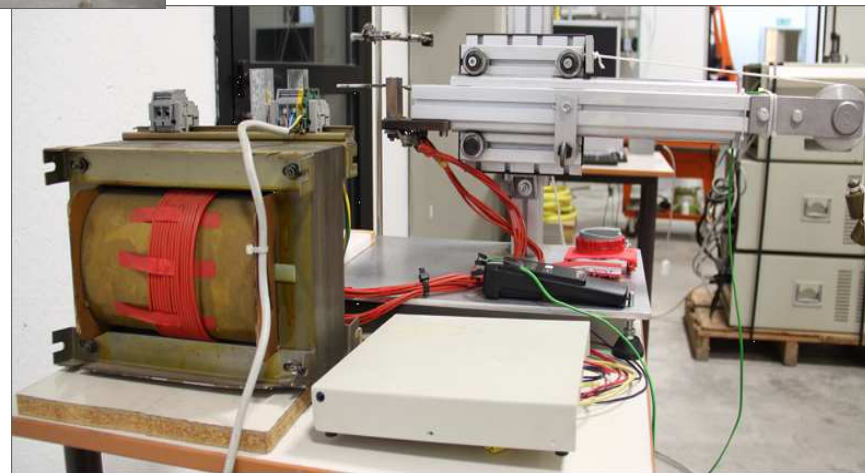




# Electric safety



Direttiva 2006/95/CE



# Vibration and noise

Direttiva 2000/14/CE

Direttiva 2006/42/CE





# Endurance

Thermic stress, environmental and mechanic fatigue, especially for automotive sector in extreme conditions.



# Spin-off incubator

## Energy Power Lab

In collaboration with



- ❑ Inverter e electric motor
- ❑ Control system and electronic device
- ❑ Batterycharge

## Energy Control Lab

In collaboration with



- ❑ Battery lithium pack
- ❑ Battery Management System

## HMI Lab

In collaboration with



- ❑ Interface Human Machine
- ❑ Wireless sensors network



**XBW**  
mechatronic solutions

- BM -  
Battery  
management

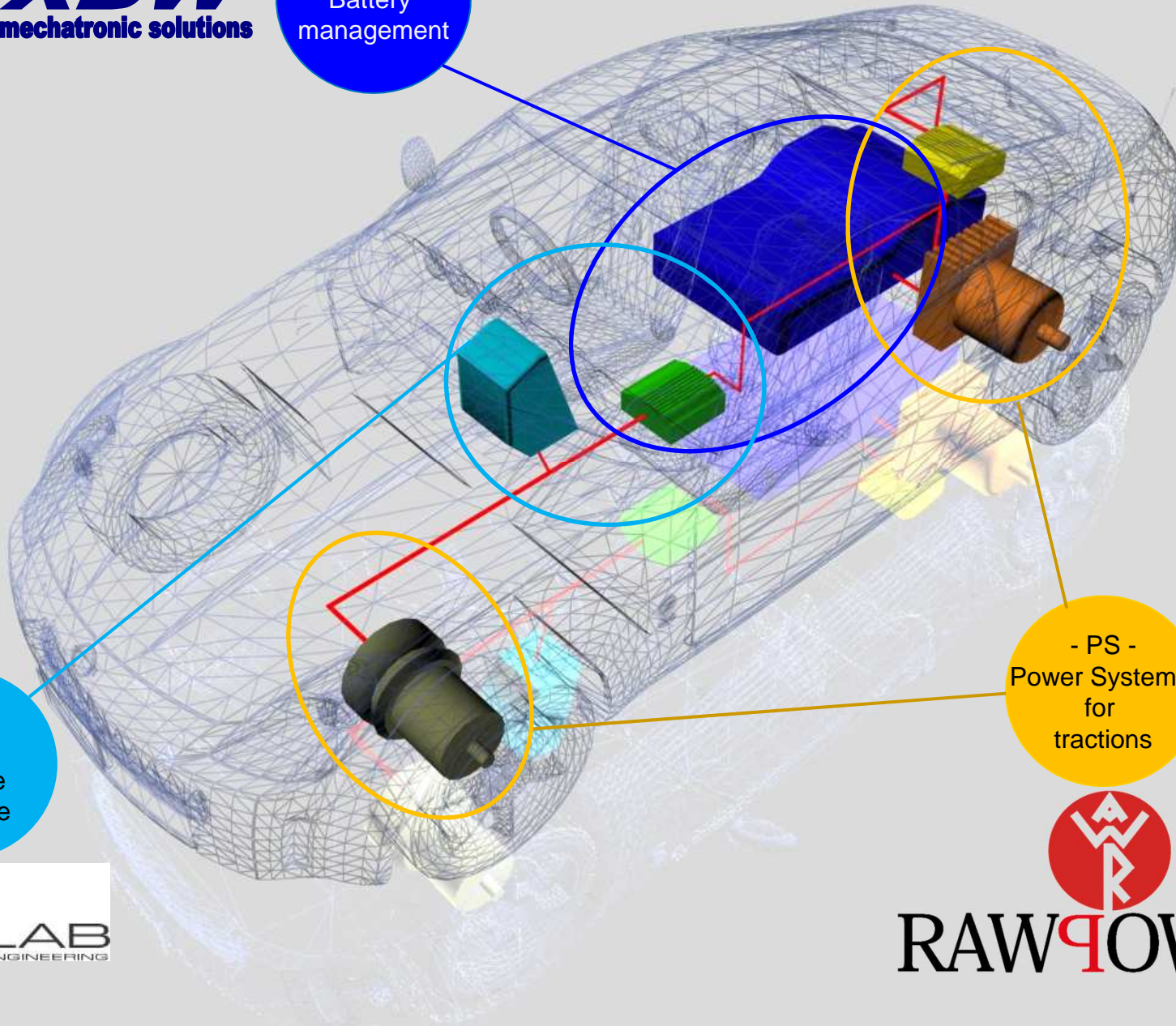
- HMI -  
Human  
Machine  
Interface

- PS -  
Power Systems  
for  
tractions



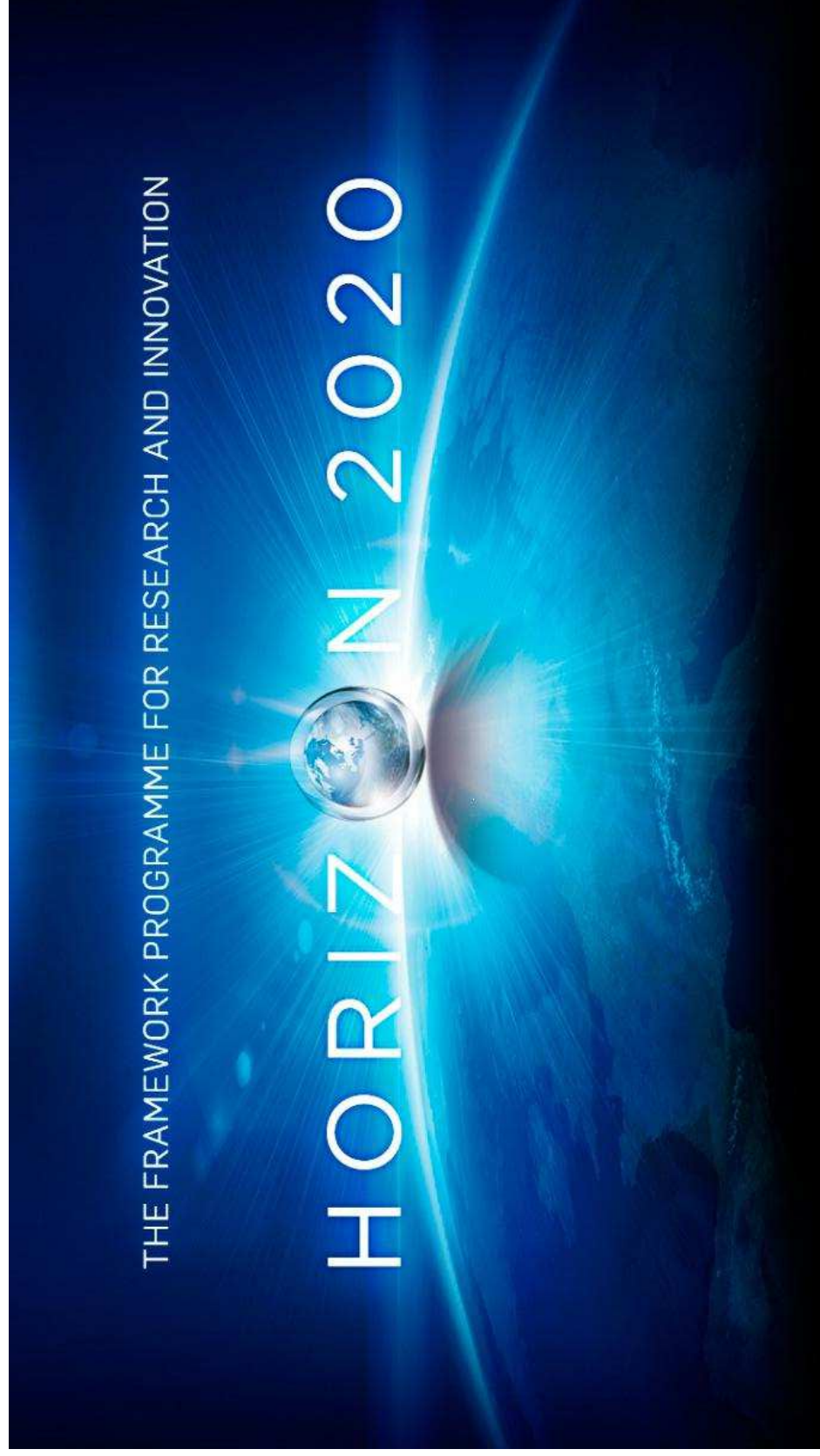
**RAW POWER**

**re:LAB**  
INTERACTION ENGINEERING

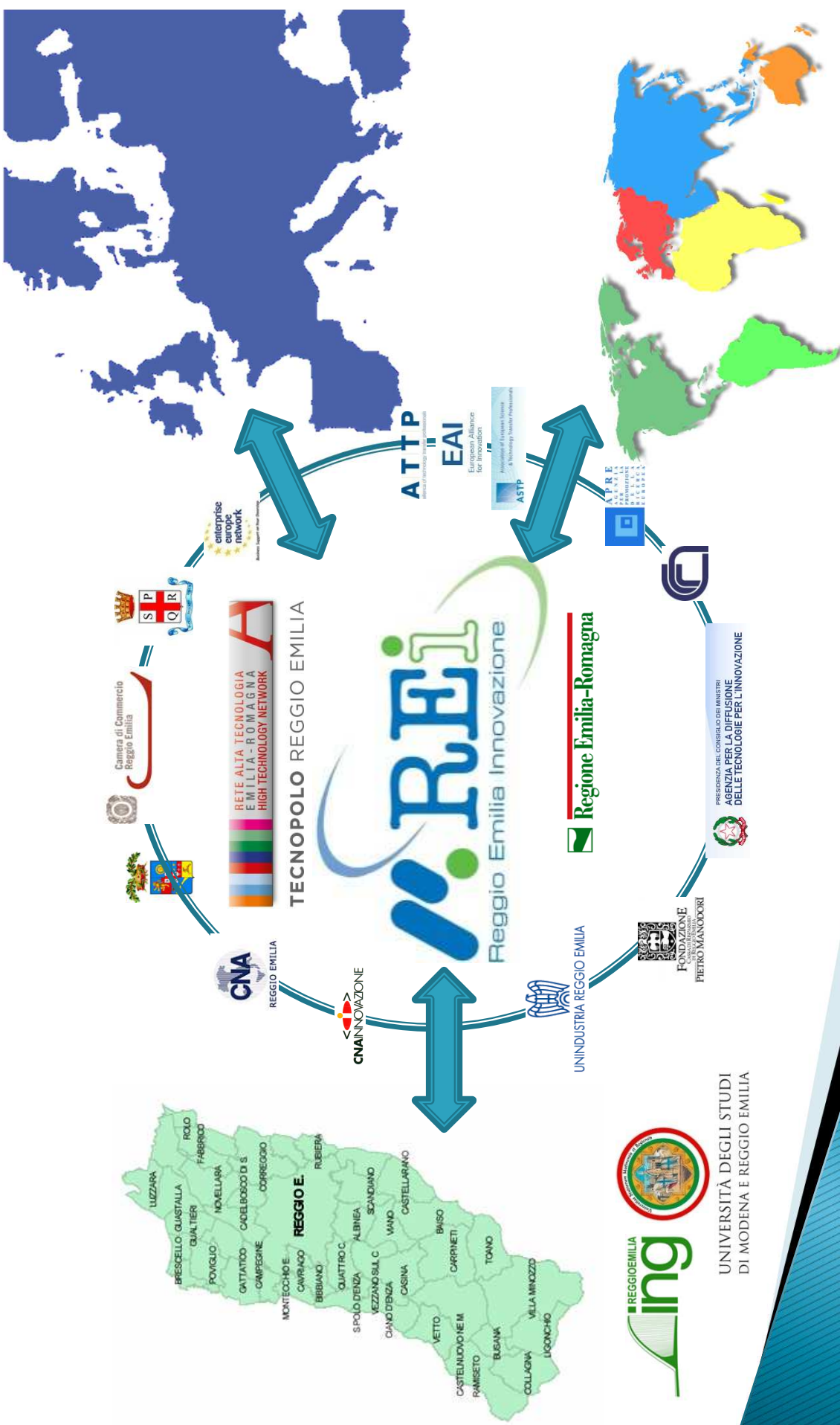




In our next future.....



# Technology transfer means networking ...





UNIVERSITÀ DEGLI STUDI  
DI MODENA E REGGIO EMILIA



COMUNE DI  
REGGIO EMILIA



# TECHNOPOLE of Reggio Emilia



TECNOPOLO REGGIO EMILIA



# Emilia Romagna Regions Technopoles

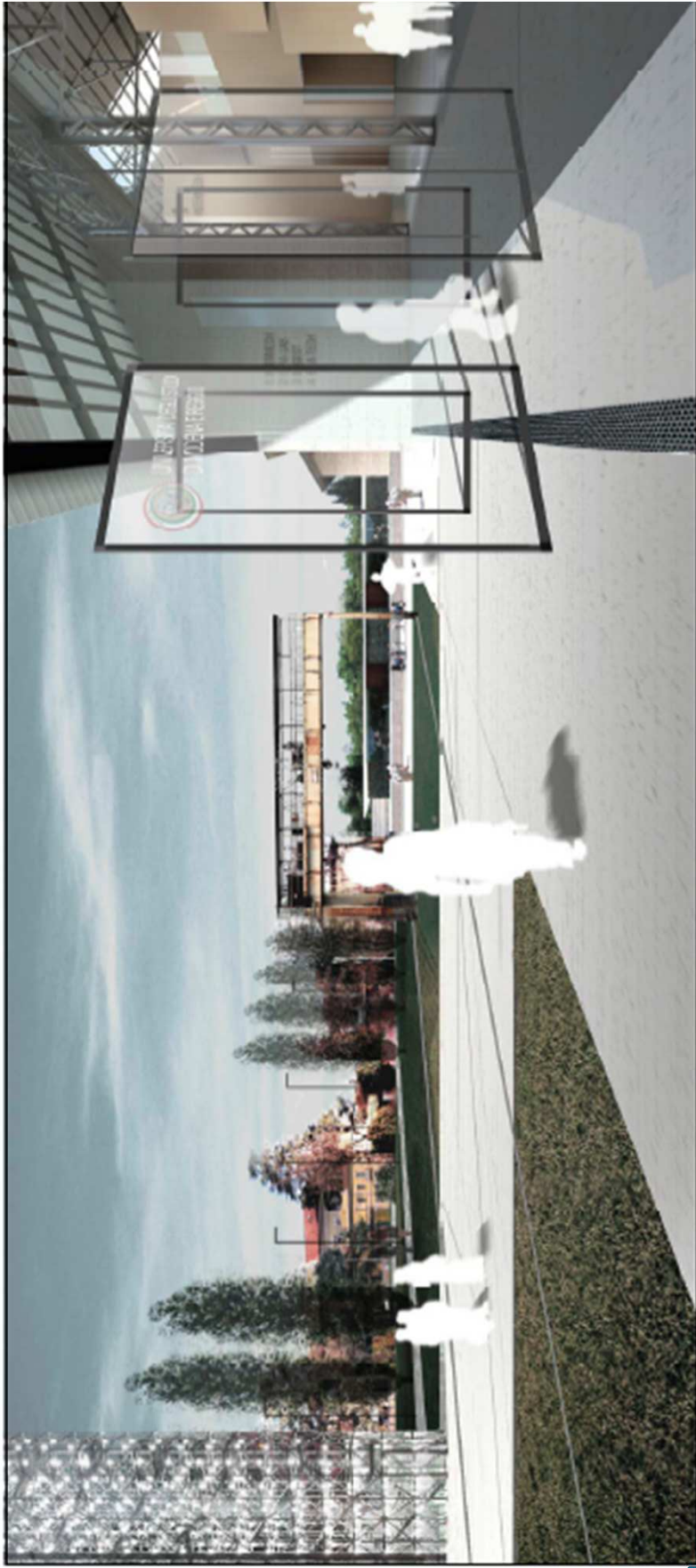


- 10 technopoles in 9 provinces
- 6 thematic platforms
- 246 Mln € investments
  - 142 Mln € from Region ER
  - 90 Mln € from Research centers and Universities
  - 14 Mln € from local Authorities

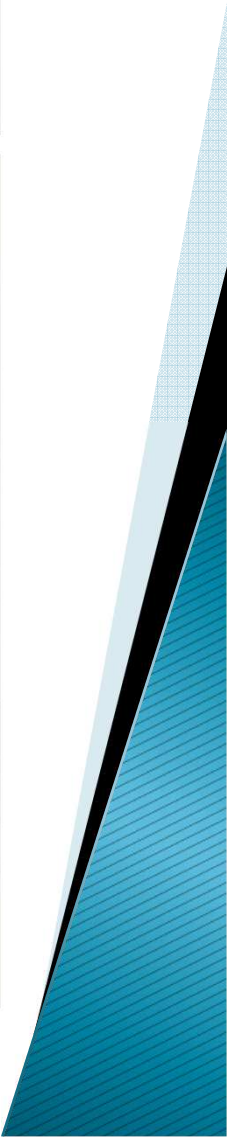
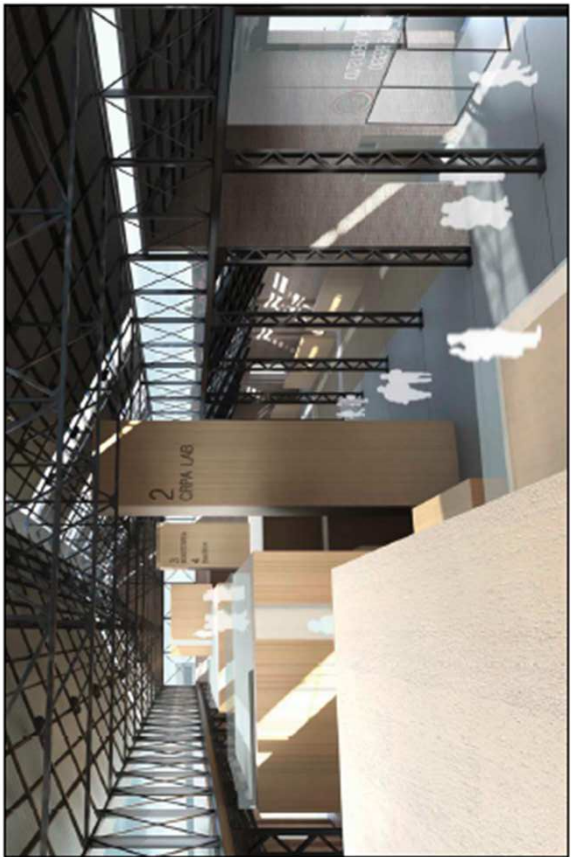
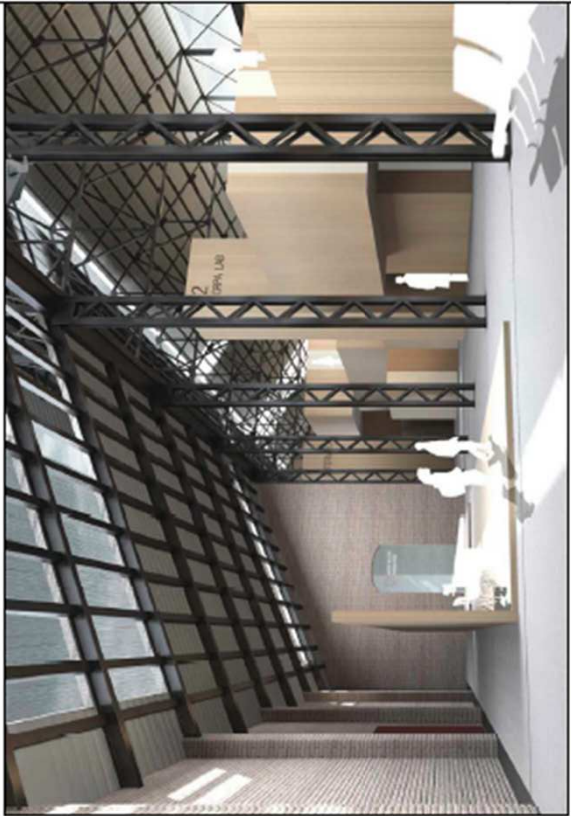
# Thematic platforms in Technopole

PIATTAFORMA AGROALIMENTARE	
PIATTAFORMA COSTRUZIONI	
PIATTAFORMA ENERGIA AMBIENTE	
PIATTAFORMA ICT E DESIGN	
PIATTAFORMA MECCANICA MATERIALI	
PIATTAFORMA SCIENZE DELLA VITA	















OPENING on 26th OCTOBER !!!!



# REI – contacts

Via Sicilia, 31

42122 Reggio Emilia (ITALY)

Tel. +39 0522-922238

Fax +39 0522-513772

Web site: [www.reinnova.it](http://www.reinnova.it)

Web site: [www.tecnopolo-re.it](http://www.tecnopolo-re.it)



**RICERCA, INNOVAZIONE E TRASFERIMENTO TECNOLOGICO**

Eliana Porreca

email: [tt-office@reinnova.it](mailto:tt-office@reinnova.it)



**TECNOPOLO REGGIO EMILIA**