

# INDUSTRIAL CLUSTER FOR POWER GENERATION, TRANSMISSION AND DISTRIBUTION



**“I’m very much interested in the future,  
because it’s where I’ll spend the rest of my life”**

*(Groucho Marx)*



# **Industrial plant engineering in Italy and in Lombardy region**



The Italian industrial, civil and infrastructural plant engineering supply chain 2010 turnover: **140 billion €** (source *Federprogetti* )

**50% of plant engineering supply is in Lombardy**

**POWER GENERATION** sector (production and distribution plants and components): equal to **16% - 18,6 billion €** (source *Federprogetti* )

**and power generation stands for:**

**Turnover: more than 9 billion € (2010)**

**About 28.700 employees**

**700 companies** (source: *Energy Cluster estimate*)



# The map of knowledge and know-how in energy field

## 15 Institutions

*10 Universities  
5 Research Centres*

*94 Departments, research centers,  
institutions*

## About 3.000 academics

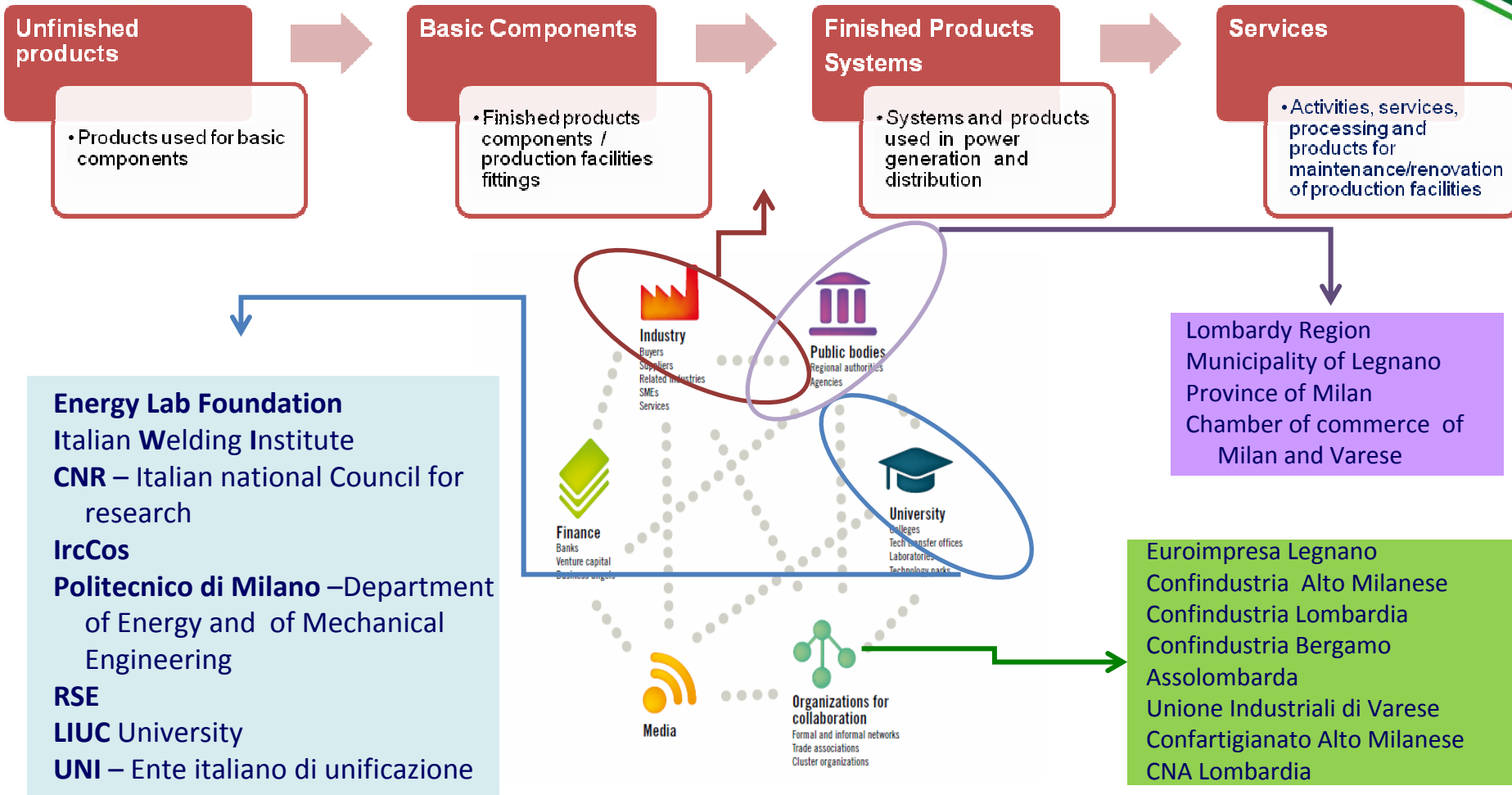
*Professors, lectures, doctoral/post-doc.  
researchers*

## 482 lines of research

*In every energy field*

*440 joint projects with other Italian (260)  
and foreign universities (180)*

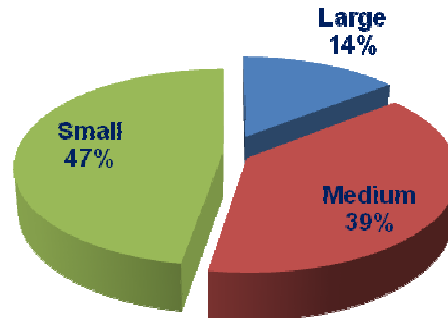
## A Triple Helix model cluster





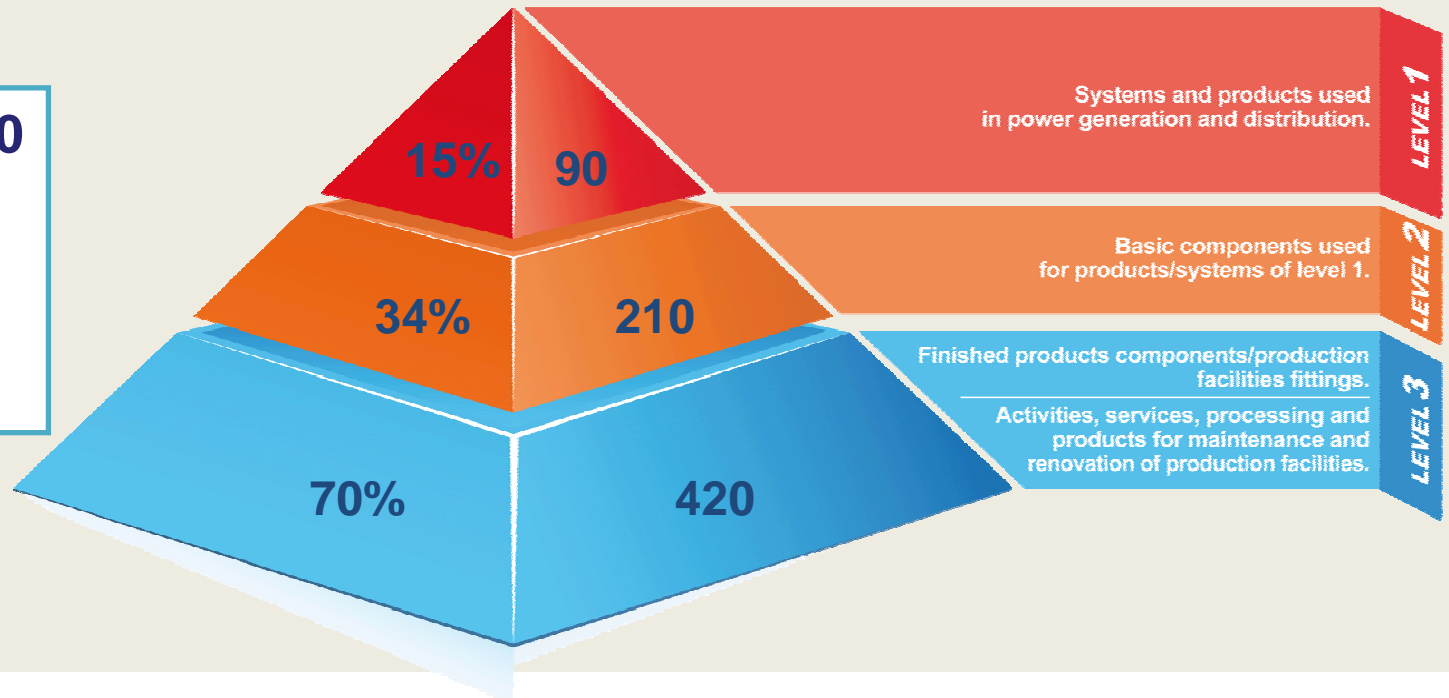
## LEC today: 98 companies associated

Cluster by  
enterprise  
size



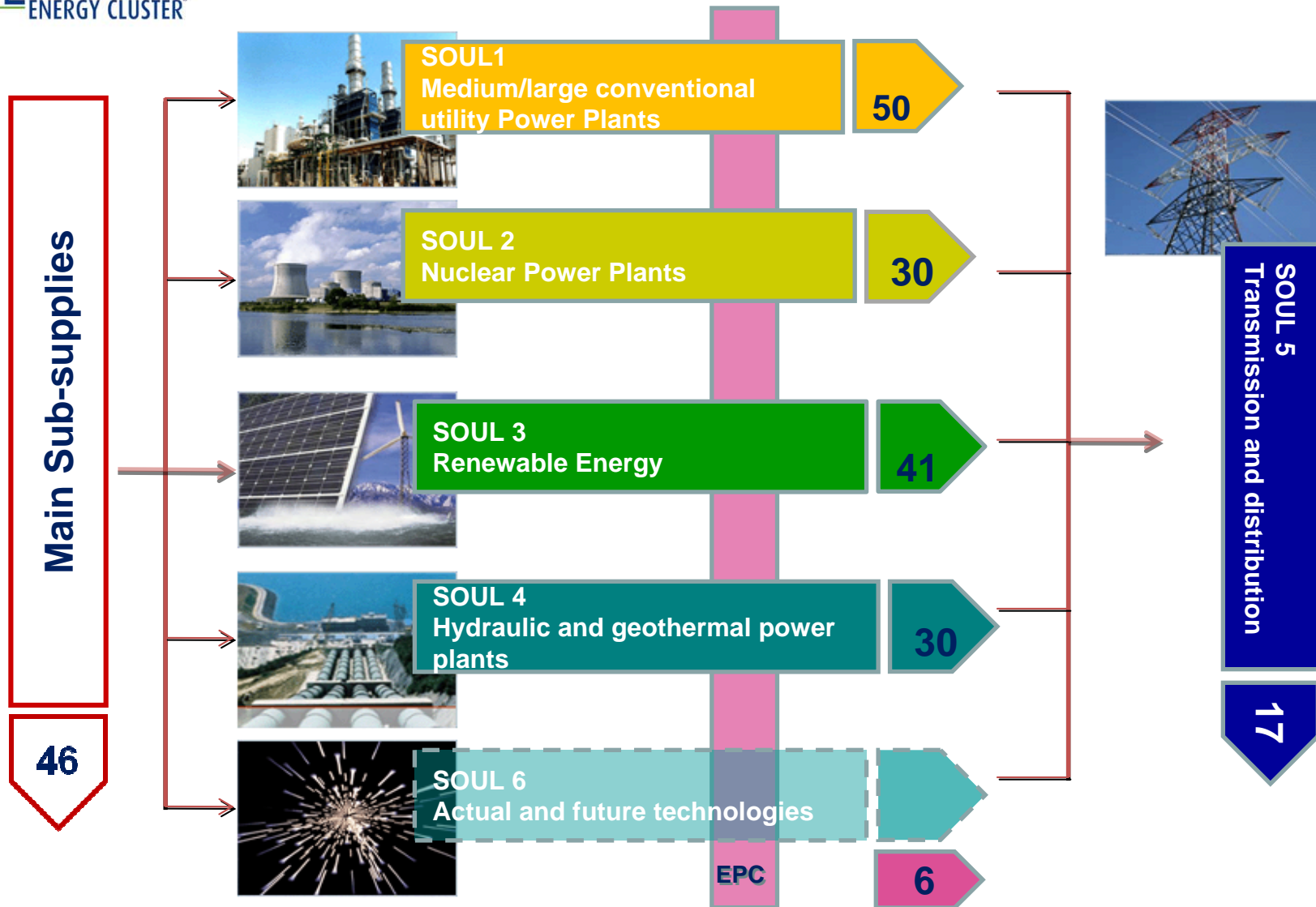
Employees: **21.704**  
Turnover : **8.936**  
million €

More than 700  
companies  
ranked into  
the industrial  
cluster basin



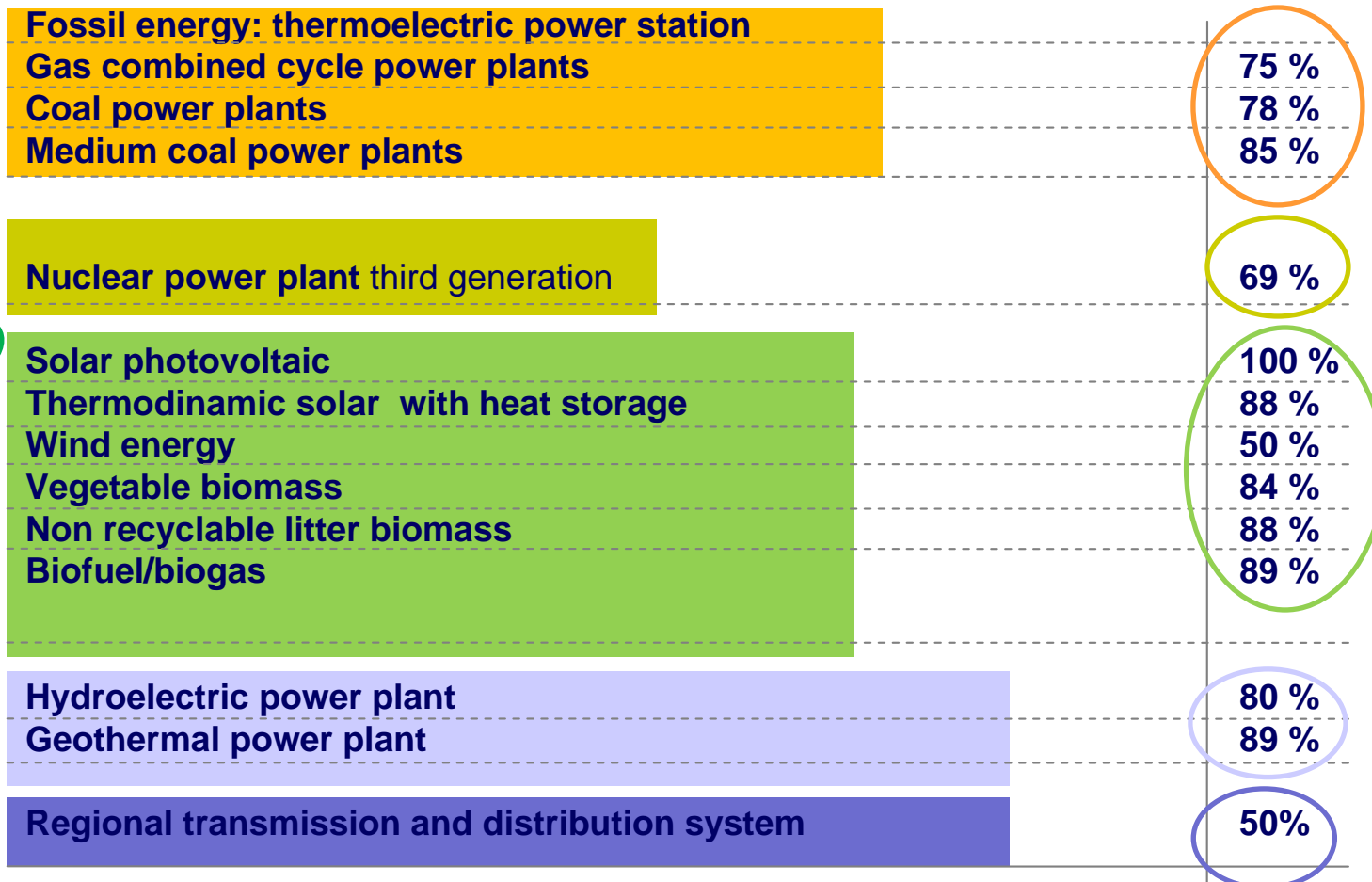


## LEC enterprises involved in each “soul”



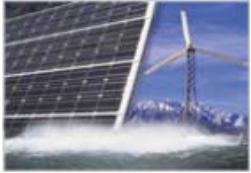


## Lombardy power production supply chain compared to the total technological needs





## Renewable energy: 82 enterprises



### Sun and wind

- Solar photovoltaic
- Thermodynamic solar with heat storage
- Wind energy

28

### Biomass

- Vegetable biomass
- Non recyclable litter biomass
- Biofuel/biogas

40

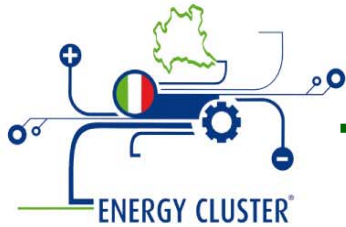
Hydroelectric power plant  
Geothermal power plant

14

Employees:  
**13.000**  
Turnover :  
**4.500 million €**

**Top stronghold: Biomass and Waste to energy**





## **The cluster organization**

President

Board of directors

Cluster manager

2 human resource senior

1 human resource junior

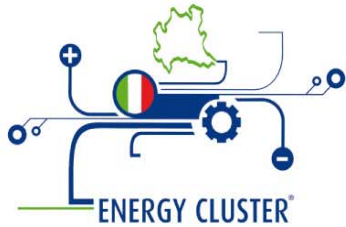
3 engineers



## **Financing**

LEC is financed by:

- Members' fees (from 20% to 30%)
- Fundings from the Lombardy Region and other local institutions - the Chamber of Commerce of Varese - (65%-75%)
- National funding – Ministry of the Economic Development (5%)



## Mission

*LEC was born in 2009 and recognized by Lombardy Region*



### Support member companies to become more competitive:

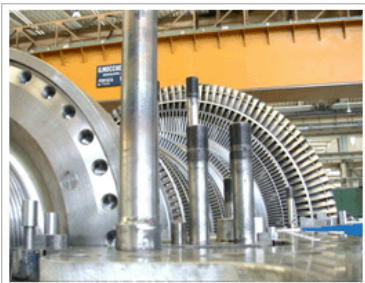
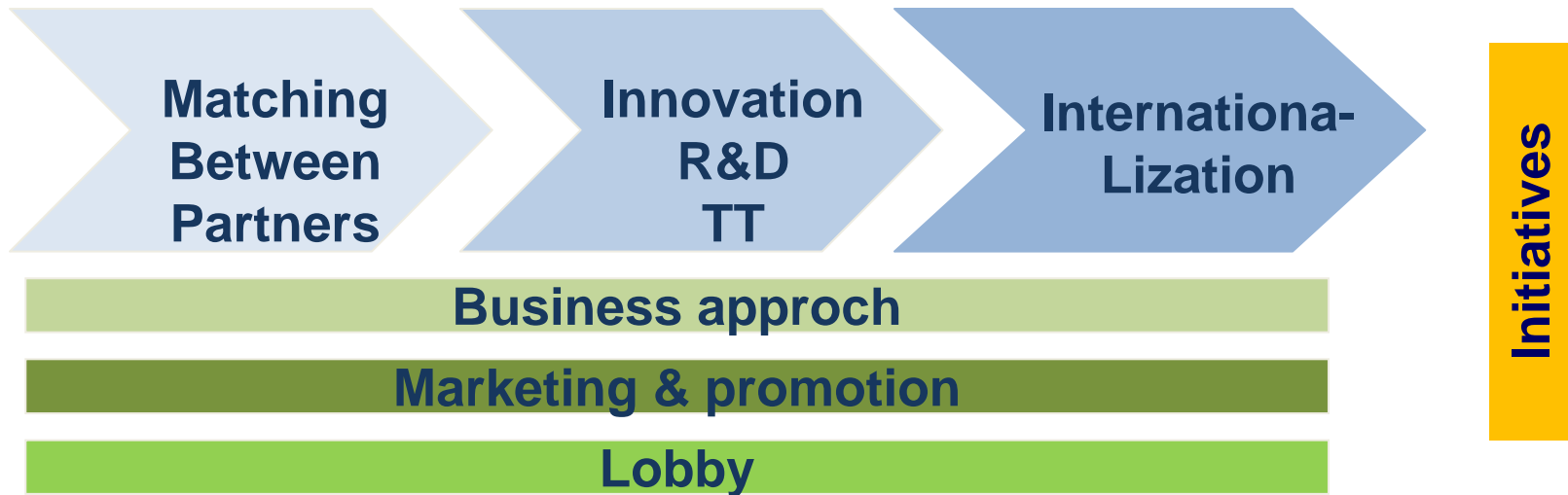
- operating on the market with the widest portfolio
- with the support of academic and R&D institutions
- integrating the supply chain and increasing the added value
- satisfying needs becoming more and more complex and demanding

- **Operating as a network** to reinforce and to develop the member companies to an everlasting competitiveness based on knowledge and quality
- **Improving our human capital**
- **Increase international visibility**, markets knowledge, competence and ability to operate on international markets;
- Consolidate the **excellence** in power generation, transmission and distribution business by increasing synergies among all institutions and companies in the region





## Strategy: Growth



We are made in Italy **as well...**





## Several cluster initiatives undergoing

- Matching between partners: supply and added value chain
- R & D and Innovation projects (founded by Lombardy Region)
- Transfer technology projects (funded by the Ministry of Economic development)
- Internationalization projects





## Technology Integration



Needs, opportunities and targets are spotted in each sector and matched with enterprises' potential.

Each working group singles out specific **operative objectives**

**Research Centers and Universities are involved**

Subgroups are created coinciding with the **integrated "areas" in the supply chain**

- The client refers to a sole supplier

- The enterprises act as a group offering the client a "complete package"**

**Innovative projects** are under development in cooperation with the research system

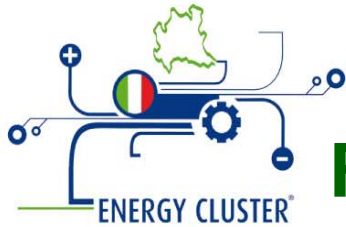
*Supply chain group 1: medium/large conventional utility power plants*

*Supply chain group 2: nuclear power plant*

*Supply chain group 3: renewable energy (biomass, solar, wind..)*

*Supply chain group 4: Hydraulic and geothermal power plants*

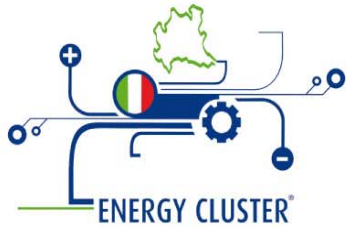
*Supply chain group 5: transmission and distribution*



## From supply chain to Value Chain

LEC companies become stronger and more competitive because:

- they operate in an **organized network** which facilitates communication throughout the entire chain in order to optimize the services and final costs;
- they **increment their skills thanks to the sharing of knowledge** over the entire production process and by uniting competitiveness and cooperation (co-opetition);
- they can exploit the advantages deriving from relations with **institutions, the world of research, centers of excellence** (some are institutional partners of Cluster) and big clients.



## A business oriented innovative offer

LEC is a **horizontal chain** which has the possibility to form a **vertical cooperation chain**, an interlacing which offers high potential to forms of cooperation for new clients and the market in general.

**Together LEC companies can supply a finished product and even an entire “island” of any type of electrical energy power plant** regardless of the raw material source: fossil, nuclear, solar, wind, water, geothermal, biomass, etc..

Energy Cluster is facing different foreign markets where promoting turnkey **waste to energy and biomass power plant:**

*Russia*  
*Ukraine*  
*Serbia*  
*Slovenia*





## LEC and the EU

LEC is registered at the European online Platforms:

- **European Cluster Observatory**
- **European Cluster Collaboration Platform**
  
- It is involved in European Projects aimed at optimizing cluster management and cluster internationalization: **CNCB** and **Cluster Cord (Interreg Programme)**.
  
- Energy Cluster is cited by the **Electra Report “The Smart World ”** as a **best practice under Smart Industry chapter**.
  
- It participates at **European Cluster Conferences** held each year.





## Certificate of Excellence

Energy Cluster is applying at the **benchmarking** exercise developed by **ESCA** (European Secretariat for Cluster Analysis ) to prove its excellence and receive the **Bronze label** as an Outstanding Cluster Management Organization



### **BENEFITS:**

- geographical comparison of the cluster with peer cluster
- Feedback on cluster status
- Report on how to optimize its performance
- More visibility to policy makers
- Obtaining of the Bronze label towards Gold label



## Our International approach

### ***Energy trend***

- More energy needed
- More renewable energy needed
- More energy from challenging locations
- More responsible energy: pollution

### ***New energy scenarios: what about the supply chain?***

- New technologies necessary
- Large investments needed
- Integration of the supply chain demanded

***Technological challenge***



***Collaboration among suppliers***



## **The web based Platform for internationalization**

An innovative tool to facilitate internationalization activities of our members.

A platform where EC companies can share knowledge, information, advices and chat about foreign markets' peculiarities (administrative aspects, market strategy and legal difficulties etc..) in order to improve their capacity to face new markets.

**A new way to know each other**

**A new way to capitalize the supply chain integration**

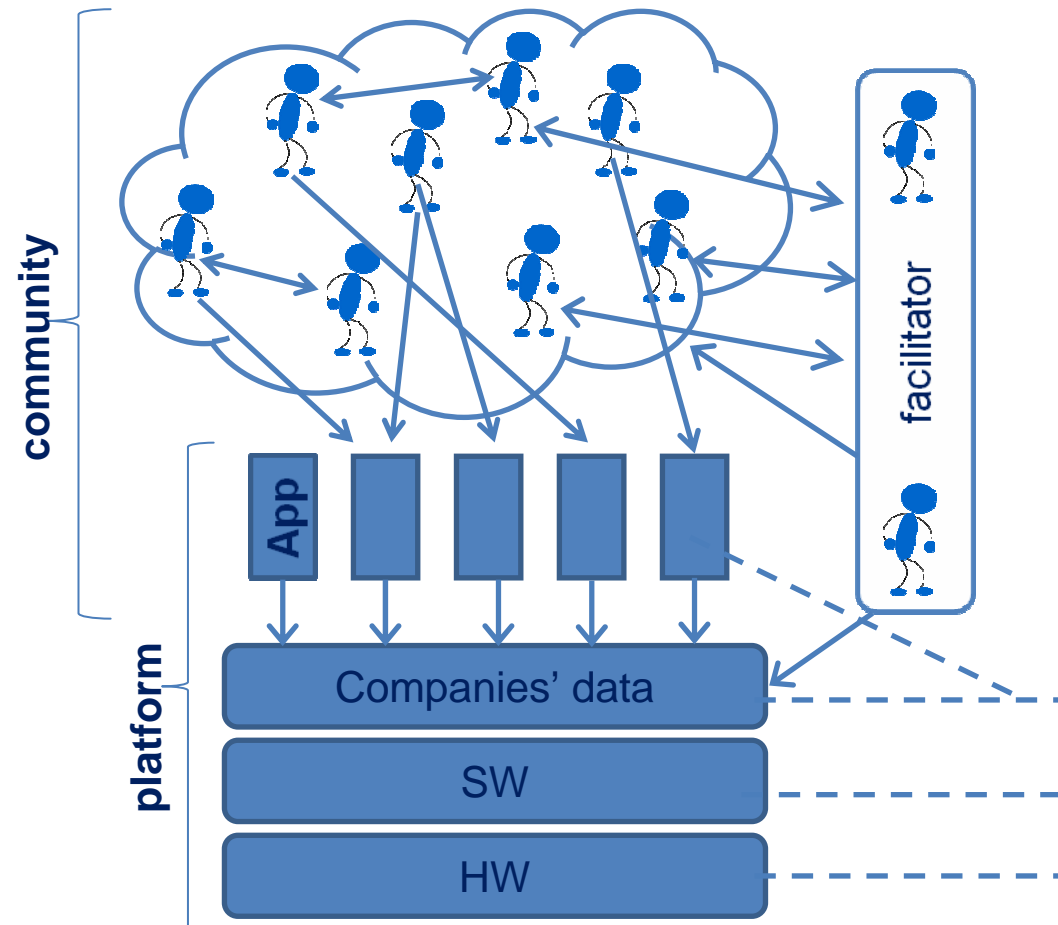
**A new way to promote company's products and services**

**GOAL:  
The CREATION of  
a BUSINESS  
COMMUNITY**



# The web based Platform for internationalization

## Service structure



Be aware about **needs and difficulties** of internationalization activities

**Collecting data** of LEC companies

Developing the Platform taking into account **LEC members requests**

Training LEC members to use it an **motivate them to share useful information**



# Energy Cluster joined the International Cleantech Network

A network between the world's leading cleantech cluster organisations

- **Copenhagen** Cleantech Cluster
  - **Colorado** Clean Energy Cluster in the US
  - **Oslo** Renewable Energy and Environment Cluster in Norway
  - Ecoworld Styria in **Austria**
  - **North Carolina** in the US
  - Aclima in **Spain**
  - **Lombardy** Energy Cluster
  - **Singapore** Sustainability Alliance
  - Renewable Energy **Hamburg**
  - Tenerrdis **Rhone Alpes** Region





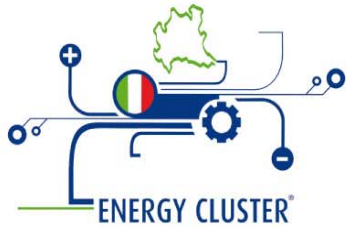
## Benefit from being ICN members

### For Companies :

- Finding partners for R&D projects or commercialization
- Gaining market insights and get regional cleantech sector overviews
- Assistance for internationalization
- Getting an overview of funding sources in each region
- Opening doors to potential partners through relations in other ICN clusters

### For Universities and research institutions :

- Promoting of test- and demonstration facilities
- Development of cross-regional study programs for e.g. Masters
- Enhancing of existing or creation of new relations to partners in ICN regions e.g. by creating cleantech focused exchange agreements
- Facilitation of Ph.D exchanges
- Knowledge-sharing of researchers within specific cleantech sector



## Benefit from being ICN members

### For Public authorities and municipalities :

- Sharing of best practices / policies,  
i.e. how to use clusters as a driver for  
green growth
- Study tours

### ICN VIDEOS

<http://www.youtube.com/watch?v=gsXO13-Pa00&feature=youtu.be>

<http://www.cphcleantech.com/home/news--events/cluster-news/2012/4/utilize-ccc%E2%80%99s-international-cleantech-network>



## Contact us

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