

ADVANCED MANUFACTURING IN LOMBARDY

attrACT



INVEST IN
LOMBARDY

POWERED BY



LOMBARDY

Advanced Manufacturing - Methodology and Definition

Advanced manufacturing is characterized by **innovative technological level** and **well-developed research competencies** applied for improving products or processes.

Therefore, with the term "advanced manufacturing", we do not identify a single sector, but rather a **way of doing business**, which can be applied throughout different manufacturing industries, involving the innovative use of **technological processes**.

Regional context gets a high manufacturing value, with strong technological and research competencies in machinery and manufacturing systems development and management.

Lombardy Region is also committed to pushing and developing the industries that drive advanced manufacturing.

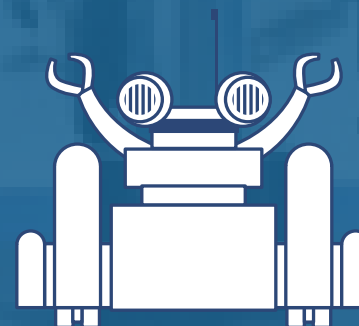
The government program S3 - Smart Specialization Strategy - aims to support and promote innovation and research in order to anticipate and meet successfully the challenges of the future in these fields.



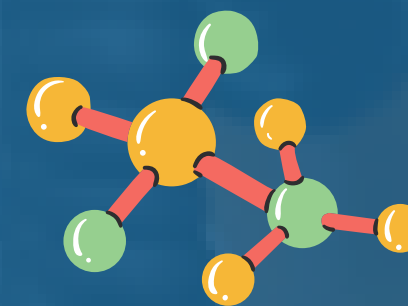
Technology



Innovation



Automation



R&D

Lombardy

MANUFACTURING BUSINESS ENVIRONMENT

- **1st region in Italy** for manufacturing production and **3° in Europe** in terms of employees
- **1st Italian region** by number of **patents** in **manufacturing technologies** registered at the EPO (European Patent Register): 140 patents per million inhabitants
- **1.672 foreign companies** working in the field of manufacturing industry are **located in Lombardy, employing more than 250.000 people**



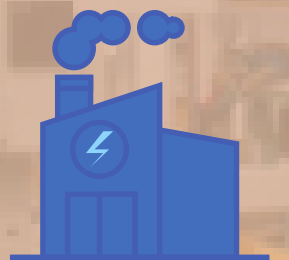
120 bln of export



250 bln revenue



68 bln value added



more than 100.000 enterprises

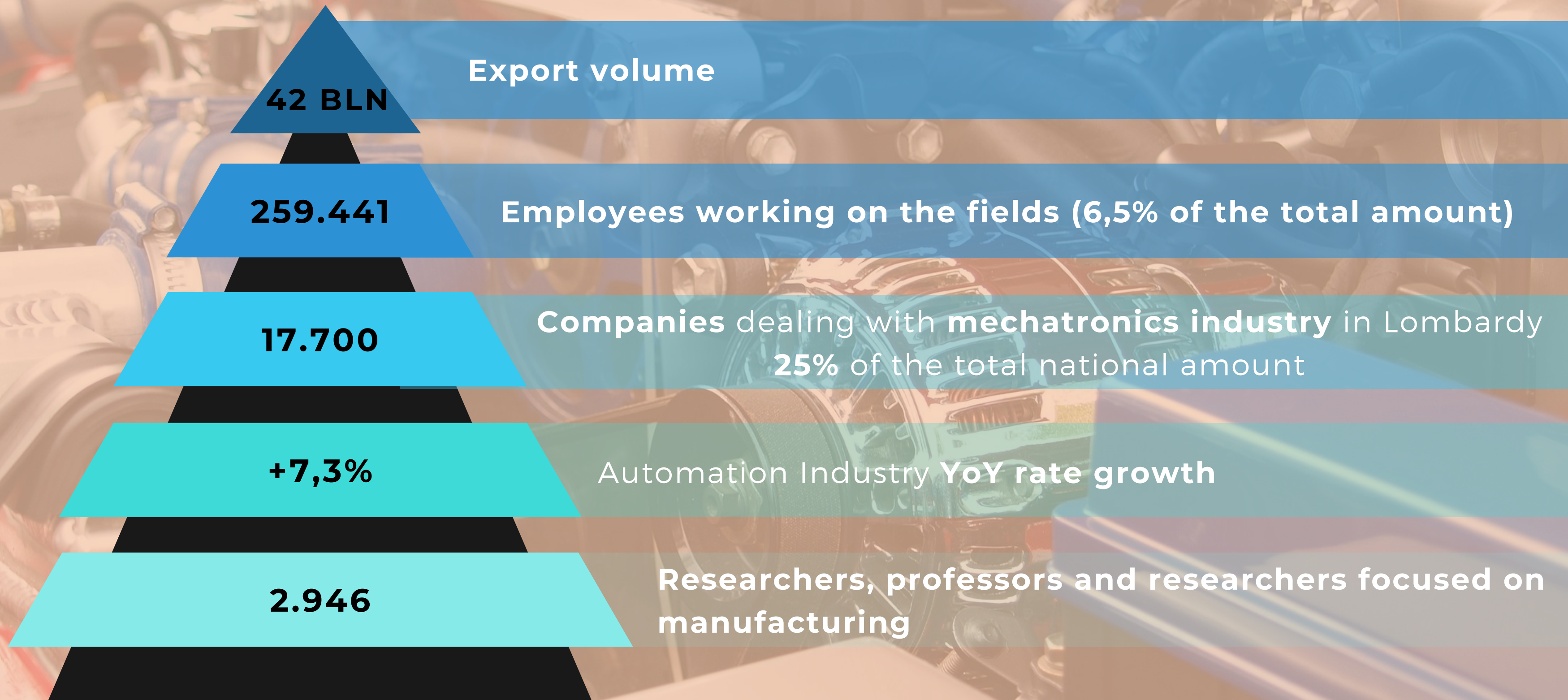


1 mln employees

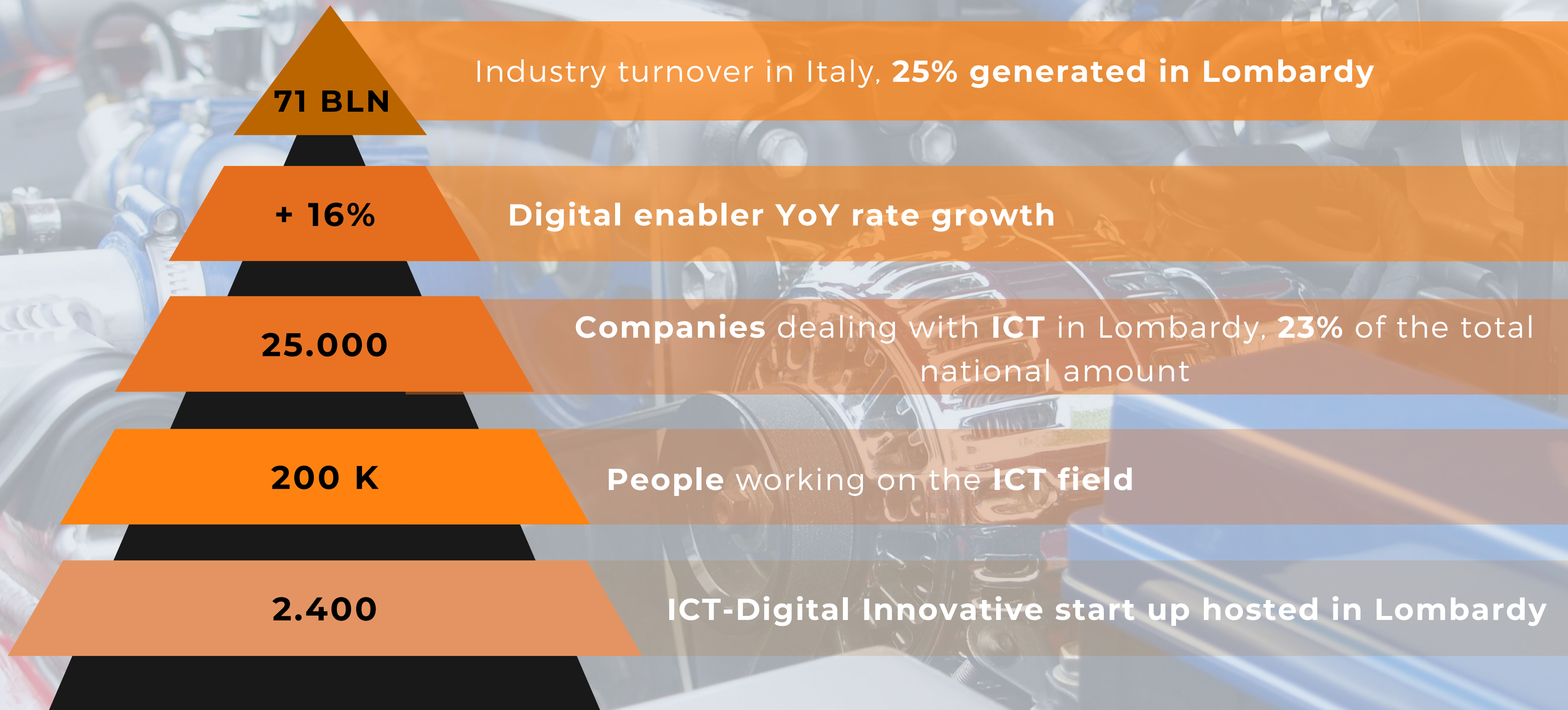


16 manufacturing clusters

ADVANCED MANUFACTURING AT A GLANCE

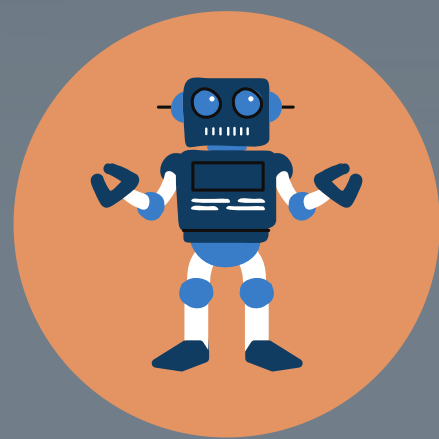


ICT & DIGITAL AT A GLANCE



Advanced manufacturing trends

The recent health crisis has enhanced some already existing trends in advanced manufacturing, and it has created new ones. These innovations find their largest application in **robotics**, a branch of the advanced manufacturing macro-sector. They are going to be especially useful in **planning the result of the economy** and to **manage back-to-normal office life**, but they make **smart working** more efficient and simple as well.



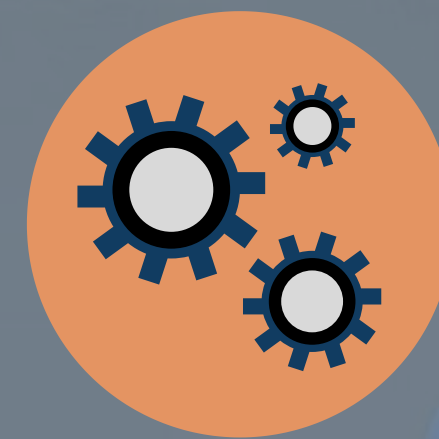
Remote monitor and control of industrial robots, in order to achieve full productivity also during smart working



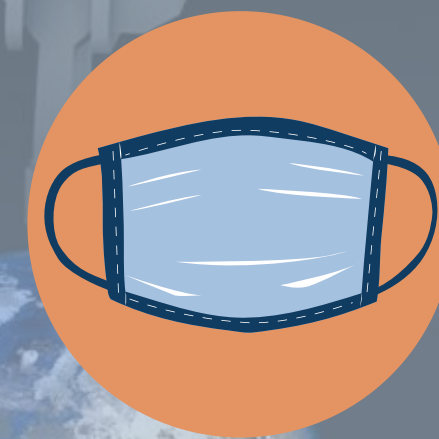
Utilizing robots to achieve **social distancing**, by substituting them to some workers



Creating more **flexible and adaptive robots**, to be able to implement them in very different sectors



Automize production processes, to facilitate reshoring, due to the fragility of supply chains

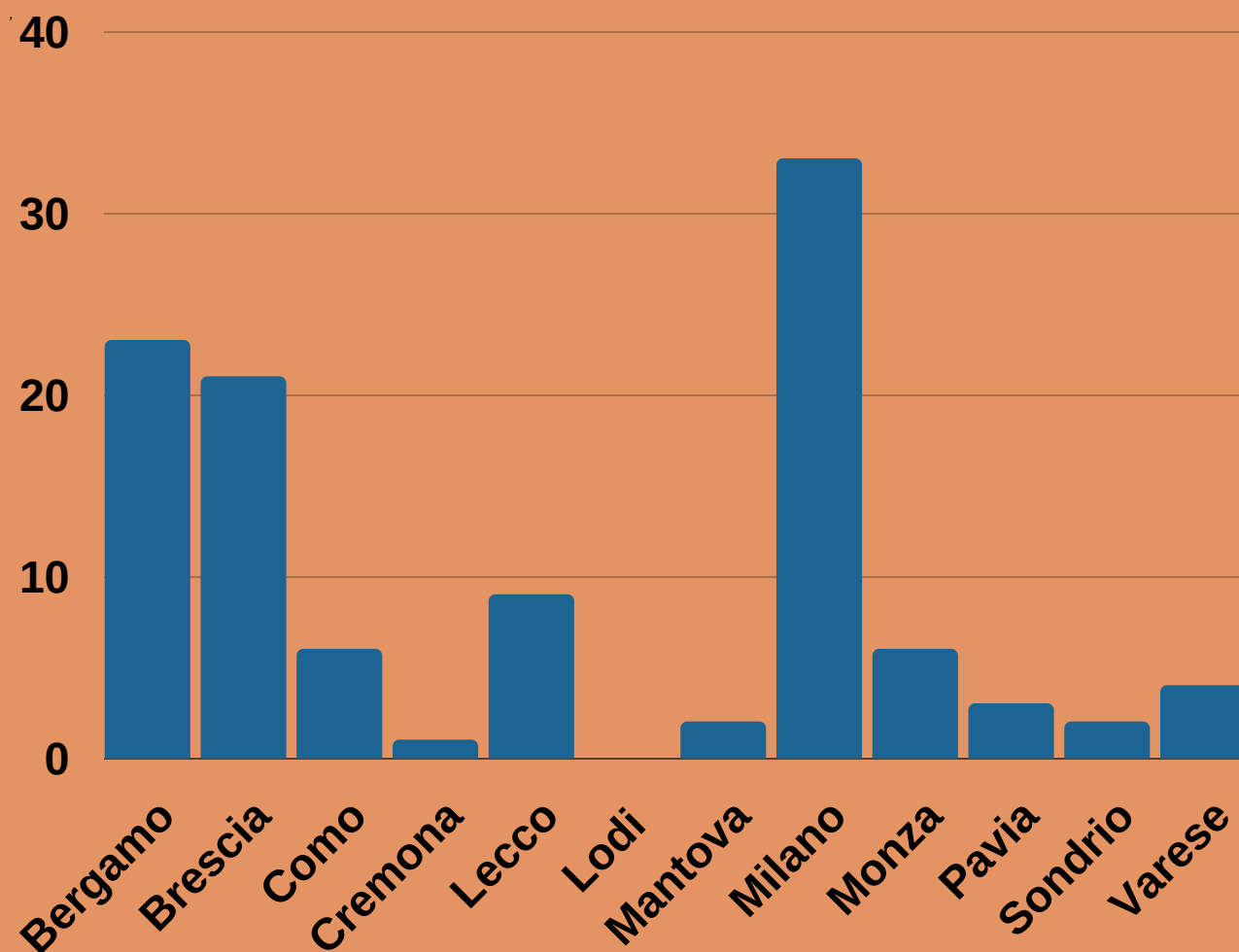


Create **movable robots**, to better organize warehouses and sanitize working spaces

National and International Companies in the cluster

AFIL (Associazione Fabbrica Intelligente Lombardia), the regional cluster for advanced manufacturing, currently includes **110 national and international companies**, of which around 73% are small-medium enterprises.

FIRMS IN THE CLUSTER PER PROVINCE IN LOMBARDY



Some key players



ABB SPA

- **REVENUE:** €1.980.000.000
- **EMPLOYEES:** 6.000
- **LOCATION:** Sesto San Giovanni (MI)
- **MAIN ACTIVITIES:** elettrificazione, robotics, automation



PIRELLI SPA

- **REVENUE:** €5.195.000.000
- **EMPLOYEES:** 31.500
- **LOCATION:** Milano
- **MAIN ACTIVITIES:** car, motorcycles and bicycles tires



DALMINE SPA (TENARIS GROUP)

- **REVENUE:** €974.000.000
- **EMPLOYEES:** 2.100
- **LOCATION:** Dalmine (BG)
- **MAIN ACTIVITIES:** pipes, conduits, hollow profiles and relative steel accessories



ST MICROELECTRONICS SRL

- **REVENUE:** €1.760.000.000
- **EMPLOYEES:** 5.000
- **LOCATION:** Agrate Brianza (MB)
- **MAIN ACTIVITIES:** electronic circuits and chips for smart mobility, energy and internet of things



MARCEGAGLIA CARBON STEEL SPA

- **REVENUE:** €3.140.000.000
- **EMPLOYEES:** 6.600
- **LOCATION:** Corsico (MI)
- **MAIN ACTIVITIES:** welded pipes, conduits and alike



WHIRLPOOL EMEA SPA

- **REVENUE:** €1.050.000.000
- **EMPLOYEES:** 1.700
- **LOCATION:** Pero (MI)
- **MAIN ACTIVITIES:** domestic appliances

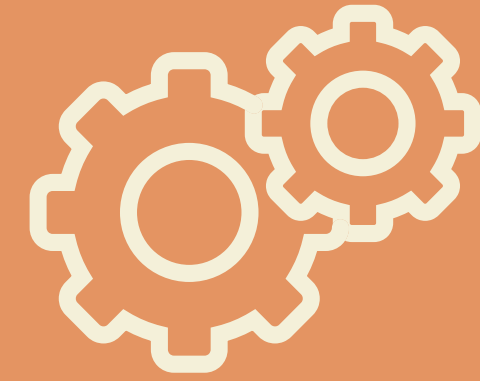
Lombardy Competitive Advantages



**1) CLUSTERS AND
DISTRICTS**



**2) SKILLED
WORKFORCE**



**3) COMPLETE SUB-
INDUSTRIES**



**4) COMPETITIVE
COSTS**



**5) EDUCATION
AND RESEARCH**



**6) DIGITAL
CONNECTIVITY**

Competitive Advantages of the advanced manufacturing environment in Lombardy

1) CLUSTERS AND DISTRICTS

The cluster provides a system with a united, visible, and identifiable collective identity. The peculiar environment:

- **fosters innovation**
- **strengthens companies' position** in the global marketplace
- **guarantees higher competitive advantage** and stimulates the cluster companies' **growth**



2) SKILLED WORKFORCE

The extraordinary geographic concentration of **high-specialized firms** allows the creation of **in-depth know-how**, which guarantees **high specialized employees (who are roughly 259.000)** such as:

- **automation engineers**
- **mechanical engineers**
- **materials engineers**



3) COMPLETE SUB-INDUSTRIES

The main sub-sectors of **Advanced Manufacturing** are those that develop **innovative and cutting-edge technologies**, which increase the competitive advantage of the whole economy.

Inter alia, **Lombardy hosts complete production chains** in:

- **ICT**
- **Industrial automation**
- **Mechatronics**
- **Robotics**



Competitive Advantages of the advanced manufacturing environment in Lombardy

4) COMPETITIVE COSTS

Italy is the third most convenient country in Western Europe for manufacturing **labor costs, with an average of € 28,8 per hour, far below the Euro Area average (€ 30,6)**



5) EDUCATIONAL SYSTEM NETWORK

7 AFIL partner universities and 8 AFIL partner research centers that are specialized in topics related to the aeronautical industry: **roughly 9.000 students graduated in engineering subjects per year in Lombardy**



6) DIGITAL CONNECTIVITY

Lombardy is the best Italian region concerning the Digital Economy and Society Index in 2019 (DESI).

By the end of 2020:
almost **100% of Lombardy** will get ultra-fast broadband service
Great Milan Area, Brescia and 14 clusters will get 5G network



WHAT CAN YOU DO IN LOMBARDY?

Lombardy is among the leading destinations in Europe for investments in the advanced manufacturing industry. It is the first region in Italy in terms of revenues generated (€6 bln out of €16,4 of the total turnover in 2018, equal to 37%).

There are countless benefits that come from investing in the region, as you will be able to:



R&D

Rely on outstanding talents with R&D skills and highly specialized know-how and worldwide renowned designers and creative thinkers



PRODUCTION

Expand your subcontracting chain within an extraordinary business environment of 800.000 companies



MARKET

Have access to more than 800 million european consumers and create a favourable commercial hub to the EMEA market, while consolidating marketing and sales strategies

Recent Success Stories

The Tenova logo, featuring the word "tenova" in a dark blue, lowercase sans-serif font, with a small red and blue circular icon to the right.

MARCH 2019
TENOVA S.P.A.

In March 2019, the company, located in the Varese province, presented its program "**Acciaio_4.0**", whose aim is to create a **Cyber-Physical Factory**, meaning to integrate the enabling technologies of Industry 4.0 with the steelmaking process.



JUNE 2019
ORI MARTIN S.P.A.

The company, located in the Brescia province, is the fourth one identified by the AFIL cluster as **part of the "Lighthouse Power Club"**. The participating firms have been selected on the basis of the **high level of innovation** of the development and digitalization projects.

The ABB logo, featuring the letters "ABB" in a bold, red, sans-serif font.

JANUARY 2020
ABB S.P.A.

During the pandemic, the company was nominated to be a "**Lighthouse Plant**", meaning a production plant that is solely based on **Industry 4.0 technologies**, to favor innovation. In these times, the whole production chain and the partners have been subject to a digital transformation.

sources:

- <https://www.innovationpost.it/2020/06/15/quando-la-resilienza-passa-dallinnovazione-il-caso-di-abb/>
- <https://www.tenova.com/news/press-media/press-releases/detail/tenova-and-ori-martin-launch-their-lighthouse-plant-acciaio-40/>
- <https://www.siderweb.com/articoli/top/702961-ori-martin-entra-nel-lighthouse-club>

SOME RECENT EXAMPLES OF FOREIGN FIRMS INVESTING IN LOMBARDY



ABB

The investment allowed the realization of a new **customers' experiential laboratory** in the R&D center in Bergamo. It will be useful to guide clients through different sustainable energy options and to speed the process of product development.



MS Printing
Solutions

The company, launched a new **excellence center** in Guanzate (CO), a highly specialized area in the textile sector. The center is going to be used as a training facility for digital printing innovations.



Saint
Gobain

The investment consists of the creation of a **new glass fiber production line for insulation purposes**. It represents an expansion of the already existing production facility.



St
Microelectronics

The project consists of the development of a **new production plant, for smart and discrete power** technologies. The outlet for it is going to be the automotive sector.

SOURCES:

- <https://new.abb.com/news/it/detail/18000/il-nuovo-customer-experience-center-conferma-la-leadership-digitale-di-abb>
- <https://www.doverdigitalprinting.com/dover-digital-printing-and-ms-printing-solutions-inaugurate-center-of-excellence/>
- <https://www.impresedilines.it/nuova-linea-produttiva-isover-nello-stabilimento-vidalengo/>
- <https://www.industriaitaliana.it/le-mosse-future-di-stmicroelectronics/>

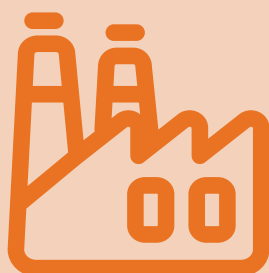
NATIONAL INCENTIVES AND FISCAL BENEFITS



Large Investments and Area of Industrial Crisis

Development Contracts

Incentives for investment projects of at least € 20 mln in Manufacturing, Agriculture, Tourism and Environmental protection sectors (fast lane for foreign companies)



R&D Investments

• Innovation Agreements

Industrial research and development activities with eligible costs between € 5 mln and € 40 mln - 20% granted by National level, 3% granted by Lombardy Region)

• Large Project R&D

Digital agenda Sustainable Industry: industrial research and development activities in the digital fields or innovation, costs between € 5 mln and € 40 mln - subsidized loan up to 70% of the eligible costs



Fiscal Benefits

New investments

- Fiscal Exemption on capital Investments
- Tax Credits Industry 4.0
- Tax Credits Machineries

R&D

- Patent Box
- Tax Credits R&D
- Tax Credits Innovation

Human resource Training

- Industry 4.0 Training
- Employment bonuses



SOURCES

<https://www.fesr.regione.lombardia.it/>

https://ec.europa.eu/regional_policy/

REGIONAL INCENTIVES



«AL VIA» Corporate Investments

Long-term financing from €50.000 to €2,85 mln at favorable rates, with a duration from 3 to 6 years

Free financial guarantee to cover up to 70% of the financing the eligible projects must be related to one of these two categories: Company Development or Relaunch of Productive Areas



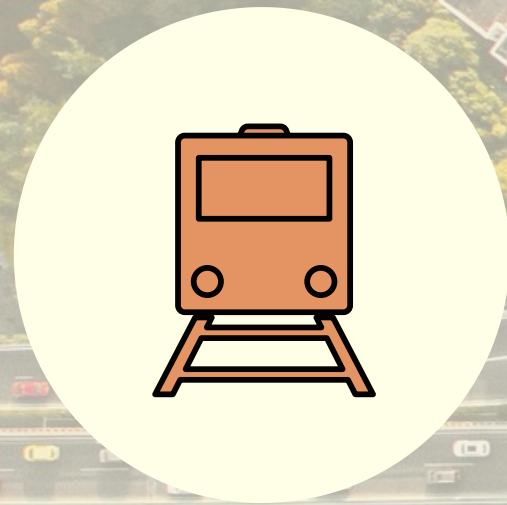
European Regional Development Fund R&D

The incentive consists of a subsidized-interest-rate medium-long term loan (3-7 years long), starting from a minimum of 100.000 up to a maximum of €1.000.000

The combination of the incentives can cover 100% of the total eligible cost of the project



INFRASTRUCTURES & CONNECTIONS



1.869 km
Railway
Network



1.460 km
Highways



11.000 km
Provincial
roads



4
International
Airports



4 INTERNATIONAL AIRPORTS



Lombardy offers a great availability of direct flights, directed to the main European and global destinations, such as:

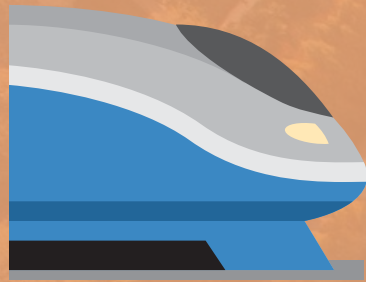
Bergamo - Orio al Serio

Brescia - Montichiari

Milano - Linate

Milano - Malpensa

- 1h to **Zurich**
- 1.30 h to **Paris**
- 1.40 h to **Berlin**
- 1.50 h to **London**
- 2h to **Madrid**
- 3.20 h to **Moscow**
- 5.45 h to **Doha**
- 6h to **Dubai**
- 8h to **New York**
- 10h to **Beijing**
- 11h to **Delhi**
- 12h to **Tokyo**
- 12h to **Taipei**
- 14h to **Hong Kong**



OTHER MEANS OF TRANSPORT

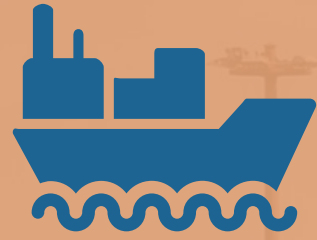


- 400 **railway stations** in Lombardy, including the 23 located in Milan, that connect the city with the other major Italian and European destinations;
- 32 train rides to **Rome** daily;
- It is possible to get to Rome in 2h 45min with the **high speed train**;
- You can easily reach any area of the Italian peninsula through a well-maintained, privately managed **highway network**

Railways: 1.869 km
Highways: 1.460 km
Provincial roads: 11.000 km

TRAIN TRAVEL TIMES

- 3h 45 min to **Zurich**
- 7h 15 min to **Paris**
- 10h to **Wien**
- 12h to **London**
- 12h to **Berlin**
- 24h to **Madrid**



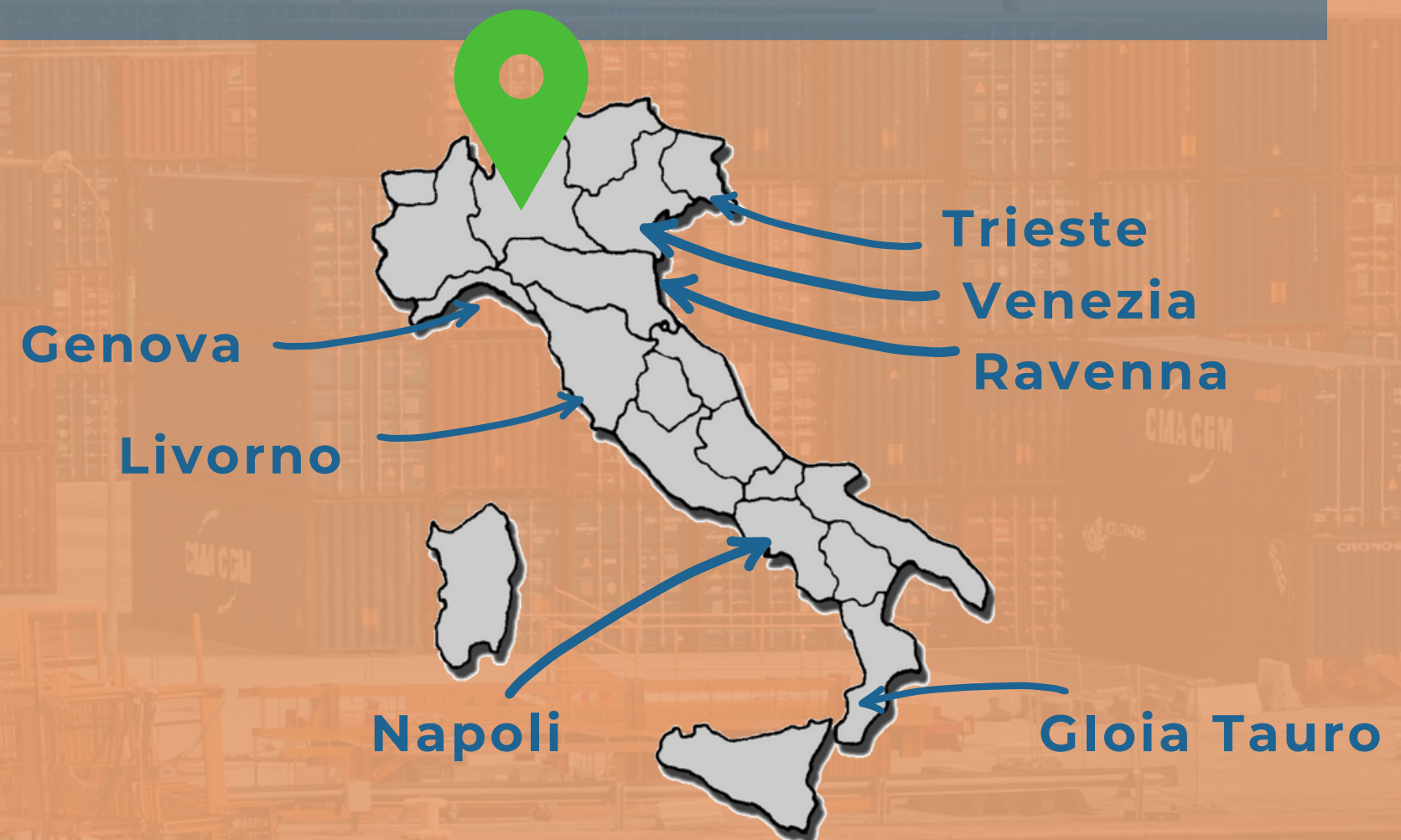
PORTS AND NAVAL CONNECTIONS



Italy, being a peninsula, is surrounded by the sea. Consequently, many cities have a **port of strategic importance**, both from a **commercial** and a **touristic** points of view. They include:

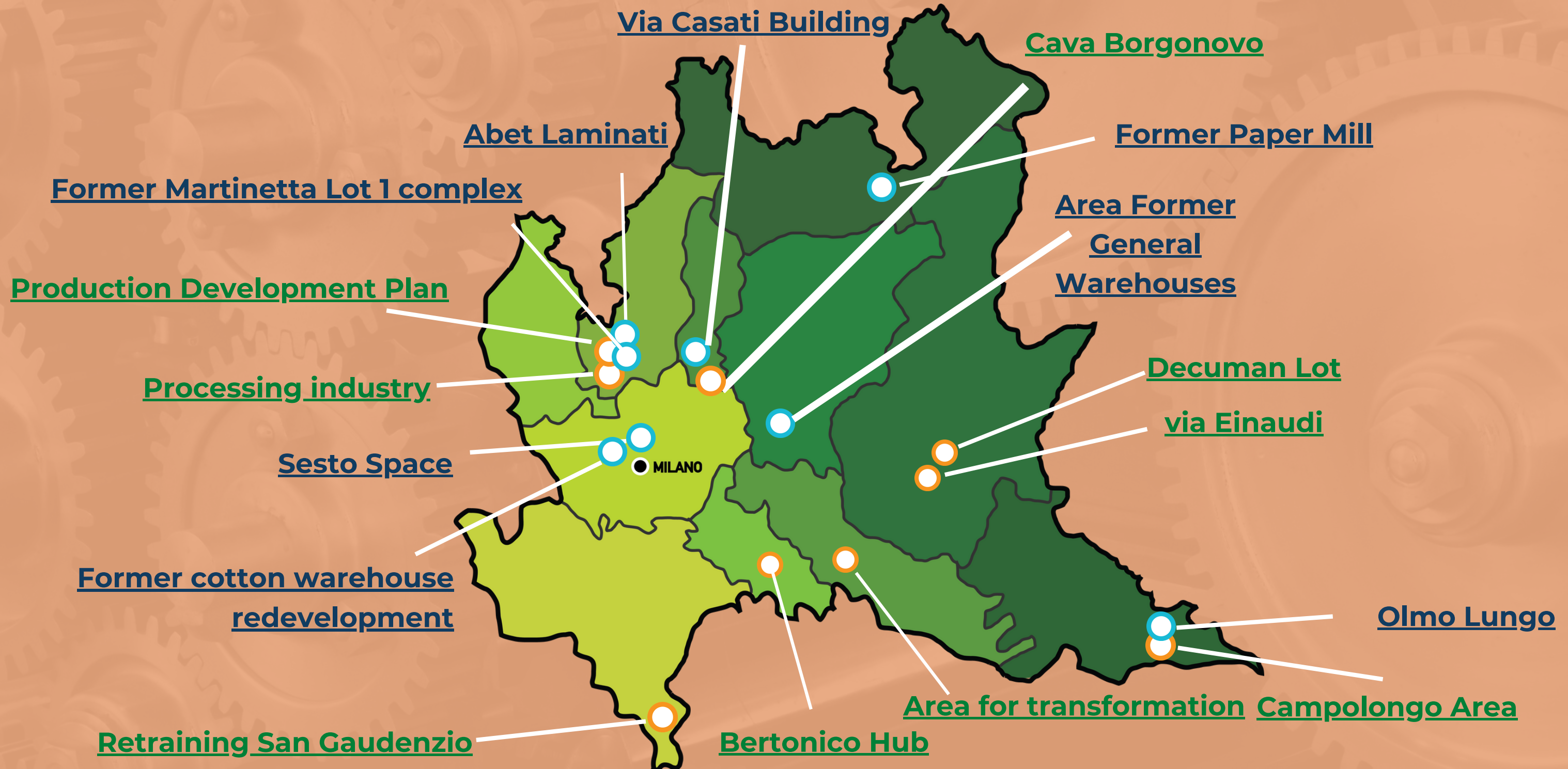
DISTANCES FROM MILAN:

- 2h to **Genoa**
- 3h to **Venice**
- 3.30 h to **Livorno**
- 4.30 h to **Trieste**
- 8 h to **Naples**
- 12h to **Gioia Tauro (RC)**



SETTLEMENT OPPORTUNITIES

The Region offers a variety of locational opportunities (**greenfield** and **brownfield**) mapped out also through the AttrACT programme. Besides the relevant examples highlighted on the map, the dedicated team provided by Lombardy Region can seek for further available areas matching investors' demand



for further locations visit the website: www.attractlombardy.it/eng

Educational and Research System

Lombardy's educational system guarantees **excellent specialization and extraordinary expertise** in several advanced manufacturing fields.

Specialized Laboratories of the Milan Politecnico:

- Additive Manufacturing
- Cable Dynamics
- Electric Drives
- Material Testing
- Mechatronics and Smart Structures
- Non-destructive tests
- Process metallurgies and material analysis
- Test of mechanical components

Sources:
<https://www.afil.it/associati/elenco-soci/>
<https://www.mecc.polimi.it/us/research/departmental-laboratories/>



Partner Research Centers of the AFIL Cluster

- Consiglio Nazionale delle Ricerche (STIIMA)
- Consiglio interuniversitario nazionale per la scienza e la tecnologia dei materiali
- Bergamo Sviluppo
- CSMT - Centro Servizi Multisetoriale e Tecnologico



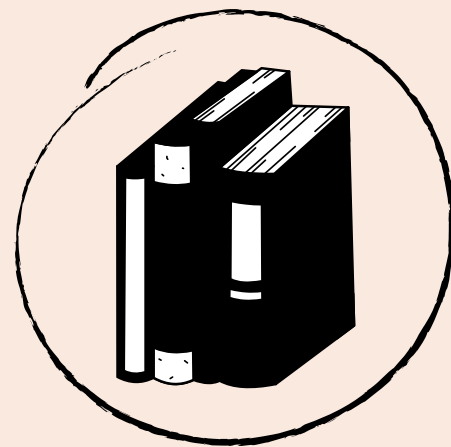
Partner Universities of the AFIL Cluster

• Milano Politecnico

16th Engineering University in the world

- *Aeronautical Engineering* → around 200 students p/y*
- *Automation and Control Engineering* → around 220 students p/y
- *Mechanical Engineering* → around 560 students per year p/y
- *Civil Engineering* → around 500 students per year p/y
- *ICT Engineering* → around 1600 students per year p/y
- *Electronic Engineering* → around 270 students per year p/y
- *Energy Engineering* → around 300 students per year p/y
- *Industrial Engineering* → around 560 students per year p/y
- *Physics + Mathematics* → around 300 students per year p/y

- Università Cattolica del Sacro Cuore
- Università Carlo Cattaneo - Liuc
- Università degli Studi di Bergamo
- Università degli Studi di Brescia
- Università degli Studi Milano Bicocca
- Università degli Studi Pavia



Technical High School Education:

- ITS (Istituti Tecnici Superiori)
- IFTS (Istituti di Formazione Tecnica Superiore)

*p/y = per year

A strong institutional network:



AFIL - Associazione Fabbrica Intelligente Lombardia

The regional cluster for **advanced manufacturing and industry 4.0**



AEIT

Italian Association of **Electrical, Electronics, Automation, Information and Communication Technology**



ANIE (Associazione Nazionale Imprese Elettrotecniche)

Federation to which adhere around **1400 companies** in the electrotechnical and electrical sectors



ANIE Automazione

100 firms, it represents in Italy the reference for companies **supplying technologies for factory, process and network automation**



Fab Lab Milano

A fully equipped **digital manufacturing laboratory**, created in order to connect students and artisans with companies.



Gruppo Meccatronici Assolombarda

Trade association representing **manufacturing companies dealing with the industry**



MADE - Politecnico di Milano

The competence center for supports enterprises in the **digital transformation** towards Industry 4.0



SIRI (Associazione Italiana di Robotica e Innovazione)

Members of SIRI include research bodies, universities, manufacturers, integrators and importers operating in the robotics area.

...AND MANY MORE!

Innovation System



Como Next

It is a Digital Innovation Hub and a startup innovator. It houses 125 businesses, (of which 1/3 is a startup), more than 650 workers on a space of over 21.000 sqm



Parco Scientifico e Tecnologico Kilometro Rosso

It is a scientific park, that brings together companies, universities and research centers, in order to foster innovation in the manufacturing industry. In detail, it houses: 60 companies, 28 laboratories, 23 R&D already financed projects, and 1.700 employees. In June 2020, within the park, a new research and robotics laboratory, the **JOiINT LAB** was established as the result of the partnership between the Italian Technological Institute, the Intellimech Consortium, Confindustria Bergamo and the Bergamo Università degli Studi.



POINT Polo Innovazione Tecnologica Provincia di Bergamo

It is a technological park, where are located companies and research projects. Particularly, it includes 26 companies and with around 300 employees on a space of over 40.000 sqm

Lombardy's territory is full of **innovation centers** which guarantee the **coordination of the manufacturing networks** and carry out relevant **researches and development projects**



Limited Liability Company

Società a Responsabilità Limitata - SRL

Only 5 steps-**2/3 days:**

1. Registration of directors and shareholders with Italian Tax Authorities
2. Execution of the articles of association with a public notary
3. Issuance of the company VAT number
4. Issuance of the certificate of incorporation
5. Open a bank account for the company

Branch*

The establishment of a branch enables the company to operate in Italy with a more cost-effective structure

The establishment of a branch in Italy requires - **2/3 days:**

- Registration of the branch with the Italian Registrar of Companies
- To appoint a representative of the branch whose name will be shown in the Italian Registrar of Companies
- To have an address in Italy
- To obtain an Italian VAT number

Representative Office*

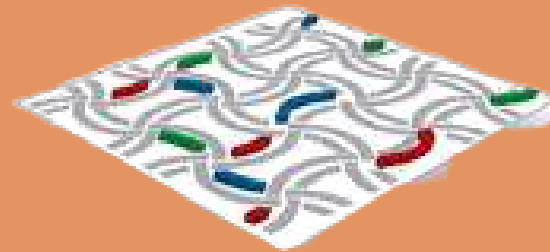
A representative office is a fixed place of business of a foreign company in Italy engaged only in marketing and promotional activities, or scientific (not commercial activities).

The establishment of a RO in Italy requires - **2 days:**

- Registration of the RO with the Italian Registrar of Companies
- To appoint a representative of the RO
- To have an address in Italy
- The company and the representative of the RO shall obtain a tax identification number

*The establishment of a branch or a representative office shall be authorized by a special resolution of the company's corporate body that is competent pursuant to the law of the place of incorporation.

Services offered by Lombardy's Assistance team



**INVEST IN
LOMBARDY**

attrACT

01

Investment evaluation

- Business Plan
- Market Analysis

02

Starting the business

- Advice on the most suitable corporate form
- Support with bureaucratic procedures

03

Sites selection

- Search for suitable work spaces for the business
- Assistance in the evaluation phase

04

Personnel recruitment

Assistance in choosing the best channels for staff selection

05

Access to funding resources

- Search for the best incentives for the business
- Connection with the main credit institutions and other financial subjects

06

Access & Research

- Support to market researches
- Facilitation in dealing with local partners

07

Managerial Training

Customized courses for companies and managers

THE INSTITUTIONS INVOLVED



The Lombardy Region Economic Development Department promotes the attraction of investments in Lombardy



Unioncamere Lombardia is identified within the Agreement for the economic development and competitiveness of the Lombardy's system as the implementing entity of AttrACT initiative



OTHER INSTITUTIONS

Various institutional collaborations exist with regional and local administrations involved in the settlement processes (ARPA (the Regional Environmental Protection Agency), Lombardy's prefects, ATS (Health Protection Agency), other authorities)



Promos Italia - the Agency for International activities of the Italian Chambers of Commerce - is the acting technical partner in FDI attraction through the "Invest in Lombardy" project. The AttrACT program has consolidated this collaboration

CONTACT US

FOR QUESTIONS, COMMENTS
AND SUPPORT

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