

LIFE SCIENCES IN LOMBARDY



POWERED BY



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WHY LOMBARDY

LIFE SCIENCES

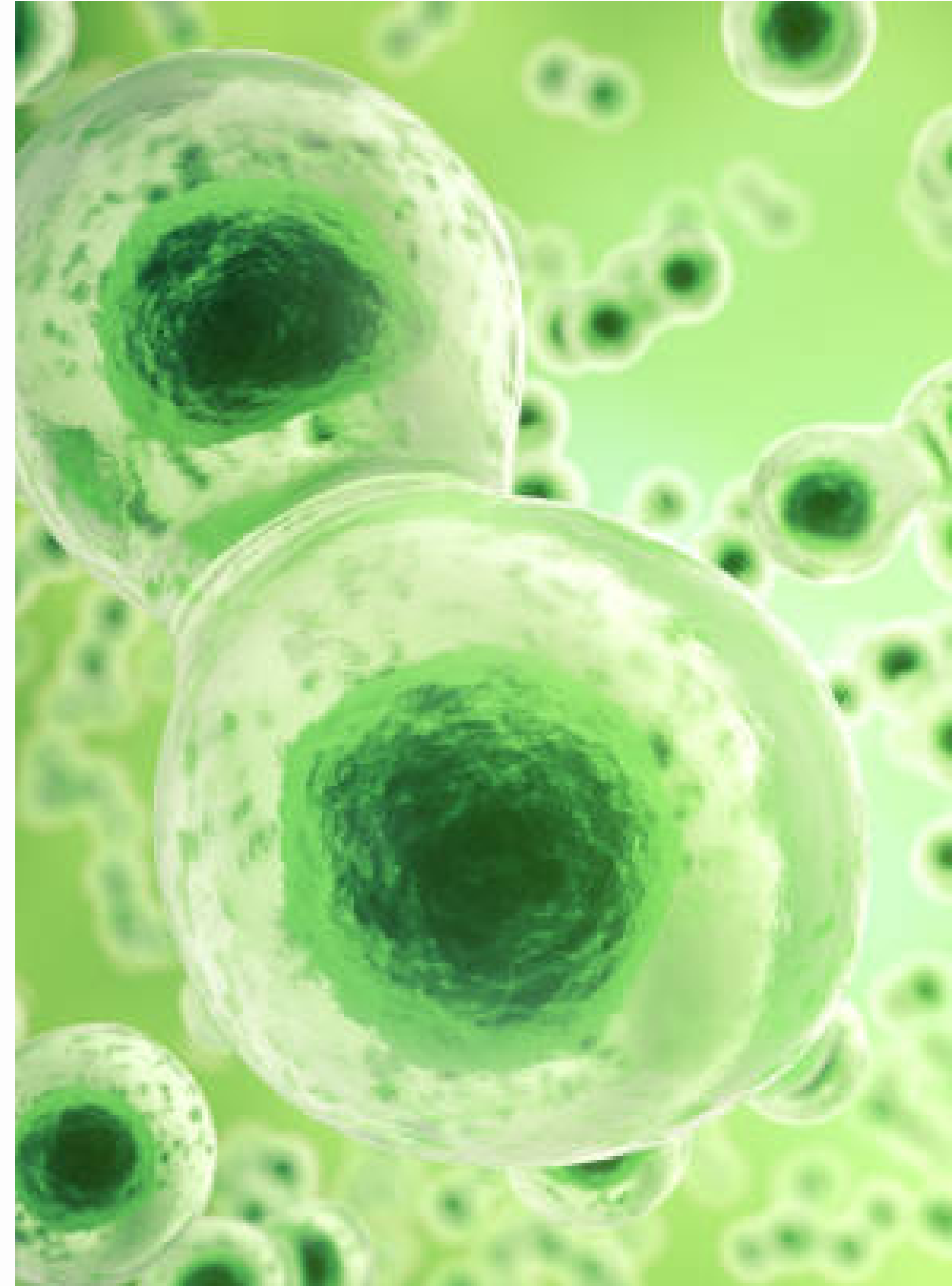
WHY LOMBARDY

**Economic and industrial context of
excellence**

**Hub of the Italian
Life Sciences Ecosystem**

**Heart of innovation
and scientific research**

**Integrated sector
and interconnected ecosystem**



LOMBARDY IN A SNAPSHOT

AMONG THE TOP EUROPEAN REGIONS



- **2nd** EU Region for GDP
- **Among the 67** out of 240 European **Strong Innovator** Regions

THE MOST ATTRACTIVE REGION IN ITALY:

FDI



- **€ 11** billion (from 2012 to date)
- **24,7 %** of 44.4 bln € Italy's FDI



1ST ITALIAN REGION FOR:



GDP

- **€ 368** billion
- **22%** of Italy's GDP



NUMBER OF COMPANIES

- About **816K** companies
- **6,300** multinational companies
- **4,2 million** employees



HUBS SUPPORTING INNOVATION

- **26%** of certified national incubators
- **18%** of national fablab

INFRASTRUCTURES & CONNECTIONS



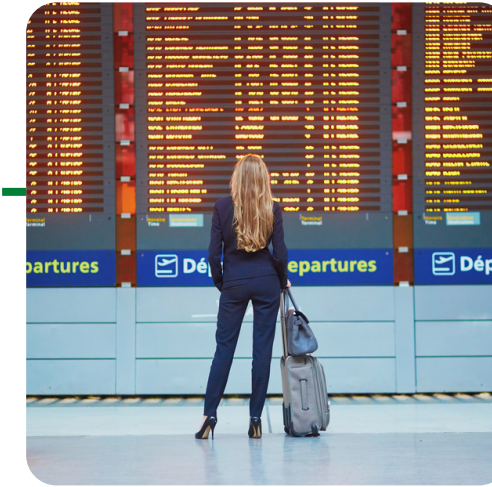
1,920 km
of railway networks



700 km
of highways



11,000 km
of provincial roads



4
international airports

Lombardy offers a wide range of direct flights to the main European and global destinations



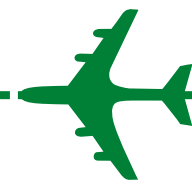
10 h to Beijing



8 h to New York



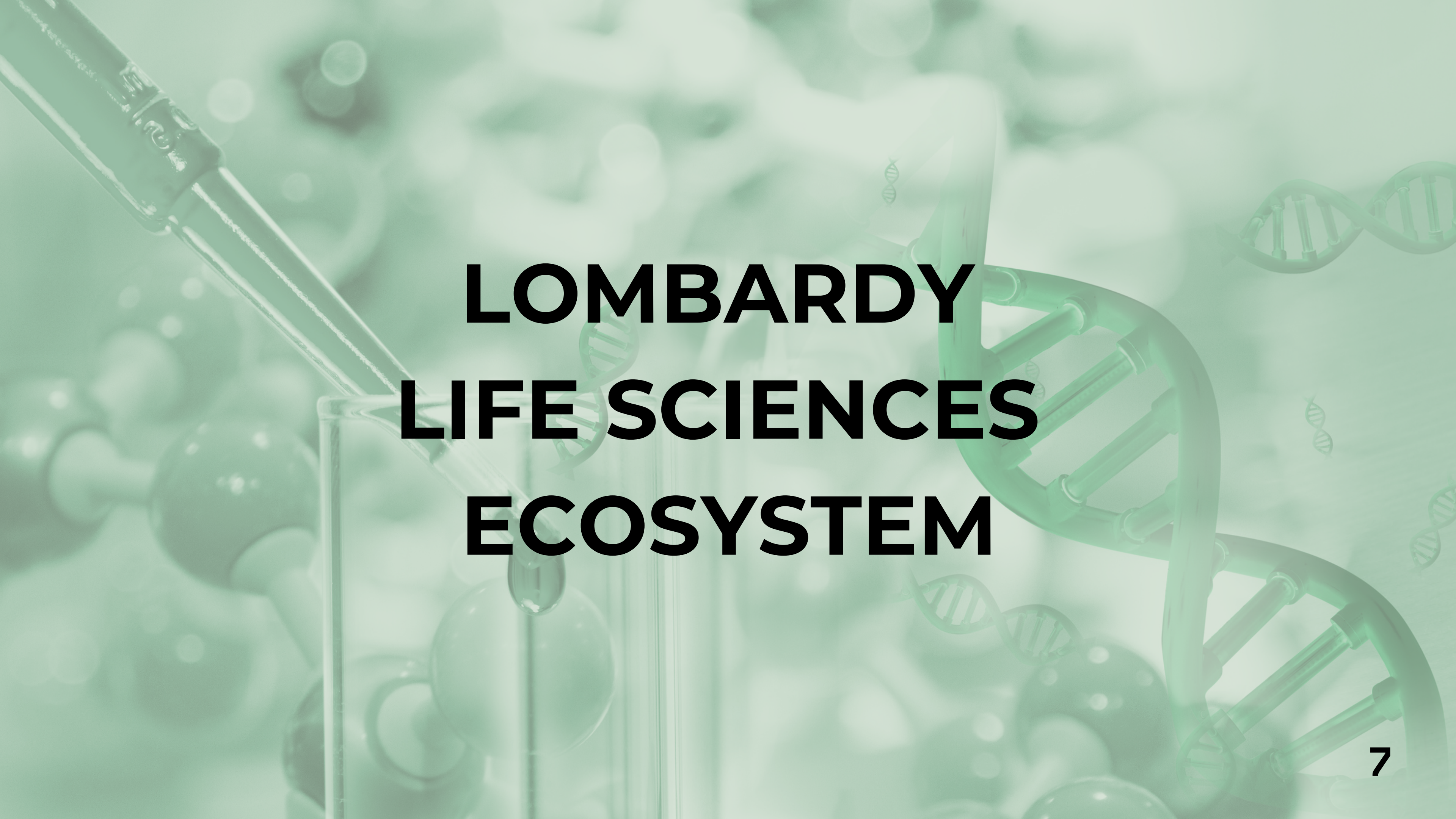
6 h to Dubai



1.50 h to London



1.30 h to Paris



**LOMBARDY
LIFE SCIENCES
ECOSYSTEM**

LOMBARDY

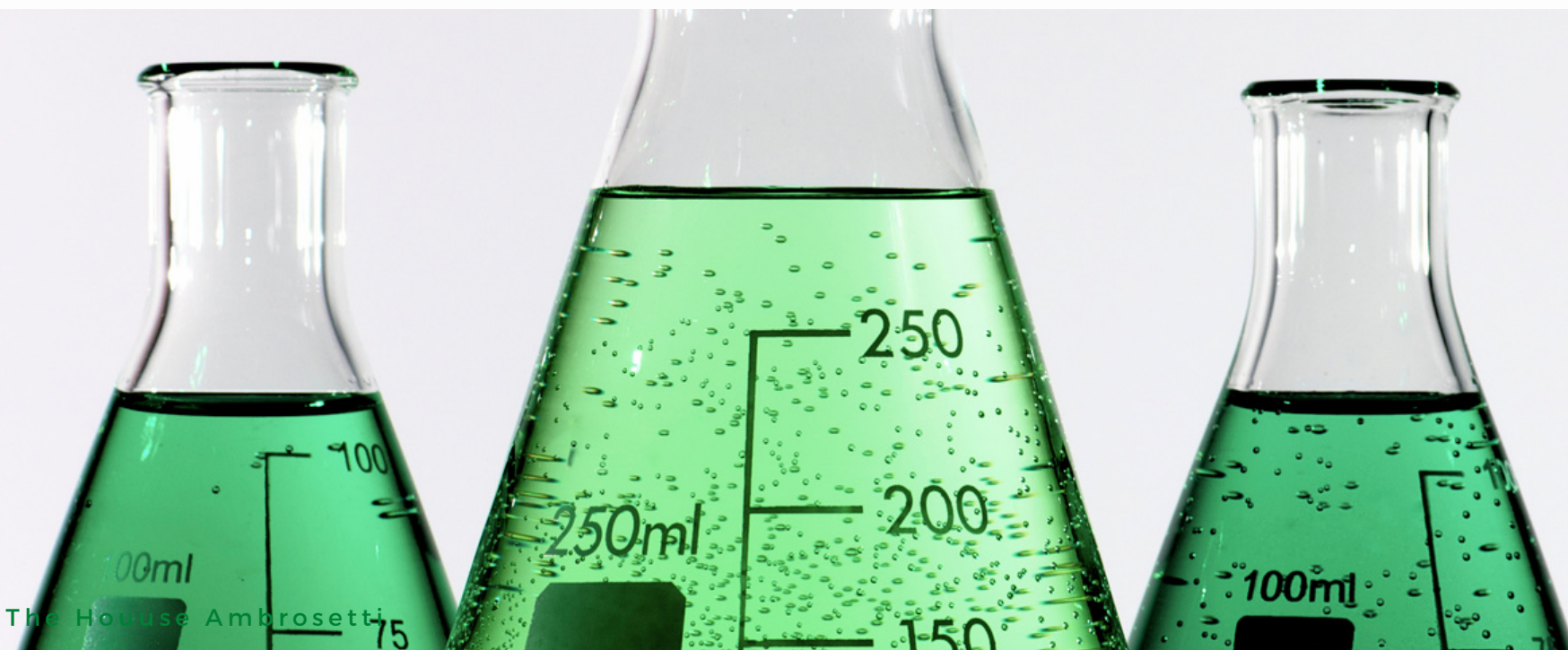
The Life Sciences Ecosystem



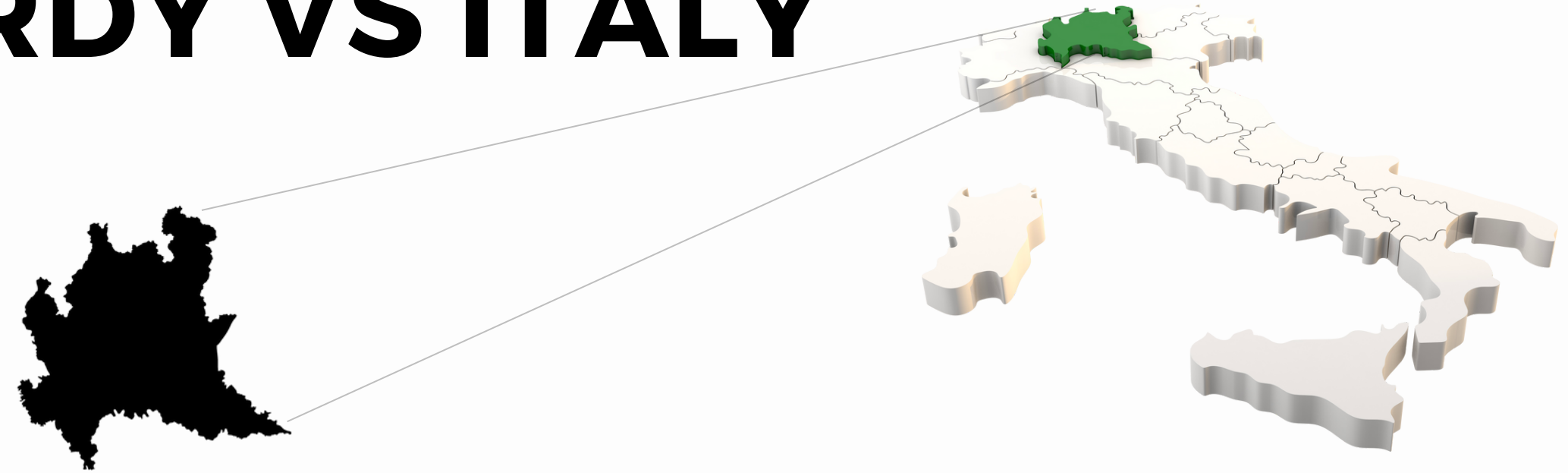
Lombardy is the **most developed Italian region** in the life sciences industry, an area of outstanding expertise for the regional economy and the national industry supply chain.

The region is one of the most important Life Sciences hub in Europe, with a **strong and dynamic ecosystem**, keen on **research and innovation**, and highly competitive in the pharmaceutical, biotech and medtech sectors.

Building on strong public-private partnerships, Lombardy hosts, within its territory, the **major Venture Capital operators, Clusters** and **Innovation Hubs** in the country.



LOMBARDY VS ITALY



29.5% LS value of production

25.6% LS value added

THE MOST DEVELOPED ITALIAN REGION IN
THE LIFE SCIENCES SECTOR



Region in Italy

- # COMPANIES
- TURNOVER
- EMPLOYEES
- R&D EMPLOYEES
- R&D EXPENDITURES
- CLINICAL TRIALS
- SCIENTIFIC PAPERS

16.9% population

19.5% LS employees

LOMBARDY LIFE SCIENCES

SUPPLY CHAIN



INDUSTRY

43.7% VP
35.9% VA

TRADE

22.2% VP
8.8% VA

HEALTH SERVICES

34.0% VP
55.3% VA

In Lombardy, there is a relevant presence of **industry and health services**, while Italy accounts more for health and social-health services.

value of production:

€ 74.5 BILLION

value added:

€ 27 BILLION

VP: value of production
VA: value added

LOMBARDY VS EUROPE

Among the **4 most advanced regions in Europe in Life Sciences** (2020 data), Lombardy has remarkable **records on scientific research** and it has strengthened its policy and investments in the technology transfer field.

Lombardia



VA per capita:
€ 604

9.9 mln
inhabitants

22% of national VA

Baden- Württemberg



VA per capita:
€ 422

11 mln
inhabitants

15% of national VA

Cataluña



VA per capita:
€ 490

7.6 mln
inhabitants

19% of national VA

Île-de-France



VA per capita:
€ 455

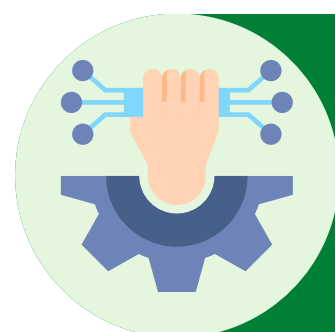
12.3 mln
inhabitants

31% of national VA

LIFE SCIENCES TRENDS IN LOMBARDY

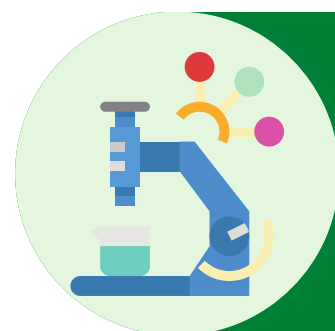
The entire public and private supply chain is working hard **to further improve the quality, efficiency and effectiveness** of the research and industry ecosystem in Lombardy.

TRENDS



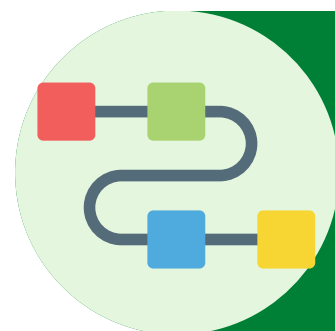
Digital transformation

ICT, Big Data, AI



Research and innovation

Technology Transfer



Supply chain

Reduce dependence

TOOLS

An **NRRP- driven approach**.

Innovative medical devices. Big data analysis.

Several **bln** euros at national and regional level.

The newly formed **FITT (Foundation for Innovation and Technology Transfer)** aims to promote the process of conveying results stemming from scientific and technological research in Lombardy.

Pharmaceutical Strategy for Europe (European Commission) for the pharmaceutical supply chain. In Italy, **30%** of local units are in **Lombardy**.

HEALTH SERVICE TRENDS IN LOMBARDY

The pandemic has highlighted the need to give a **new organization to the regional health network**, with the aim of bringing citizens closer to primary care and social welfare services and allowing them to have a direct connection with the hospital network, based on their need.

TRENDS

TOOLS



Personalized Health Care
Digital and Telemedicine

Lombardy Region is leading in the **development of telemedicine.**

Personalized medicine or **precision medicine.**

Genetic tests allowing to identify specific characteristics of the patient to be treated.

Tailor-made solutions.

The Community Houses (NRRP founding) will take care of patients guaranteeing everyone better access to treatment, continuous health and social care assistance. Teams will work in conjunction with the network of local pharmacies.



**THE INDUSTRY:
PHARMA, BIOTECH
AND MEDTECH**

THE NATIONAL INDUSTRY

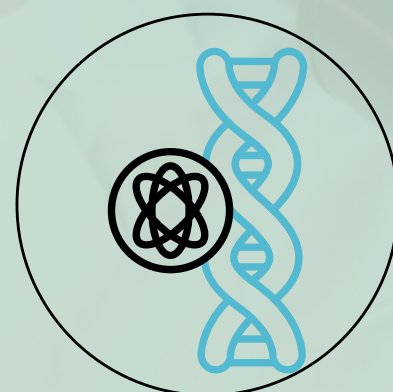


PHARMA



285 companies on
a national level

BIOTECH



790 companies on
a national level

MEDTECH



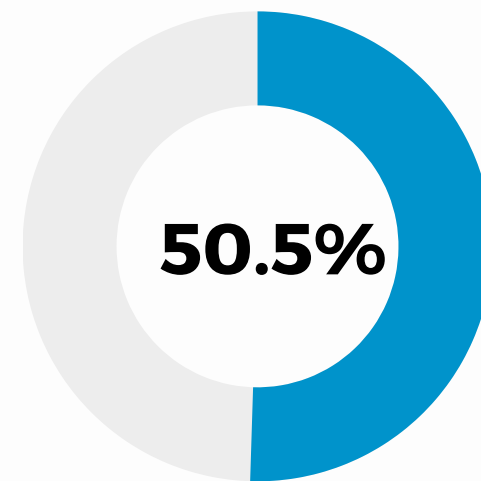
4,546 companies
on a national level

LOMBARDY LIFE SCIENCES INDUSTRY

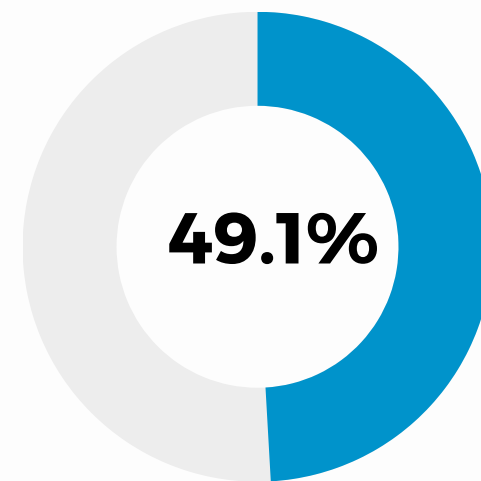


Lombardy has an **industrial specialization** within the Life Sciences supply chain.

value of
production:
€ 32.6 billion



value added:
€ 9.6 billion



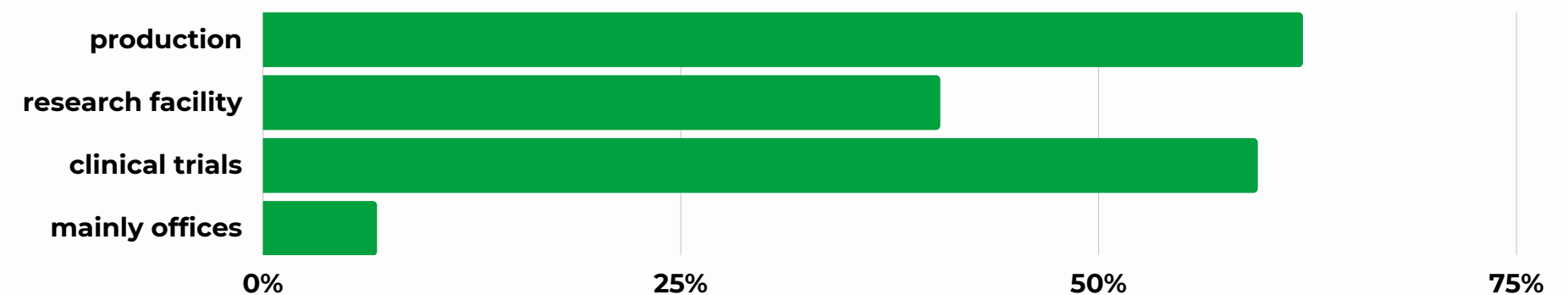
% of Italian values

BIG COMPANIES (turnover > € 100 mln):

- 131 in Italy
- **74 in Lombardy**

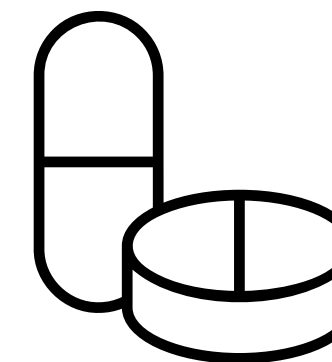
More than half of the large Italian companies active in clinical development are located in Lombardy.

Activities of the 74 major companies in Lombardy



THE LOMBARDY INDUSTRY

PHARMA 1/2

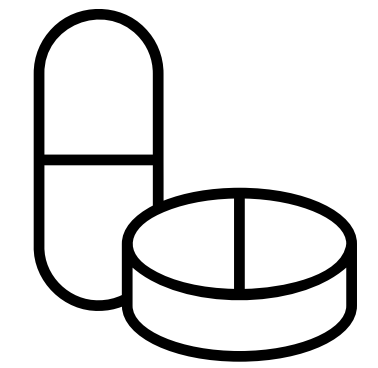


Lombardy is among the most important pharmaceutical region in UE and the **first region in Italy** for:

- number of **employees** (2021):
24,043 directly employed in the industry
+
28,561 employed in the supplier sectors
=
52,606
(35,89% of the Italian total)
- **R&D employees:**
3,131 over 6,770
on a national level (46.25%)
- **R&D investments:**
€ 448 MLN
over 1,680 on a national level

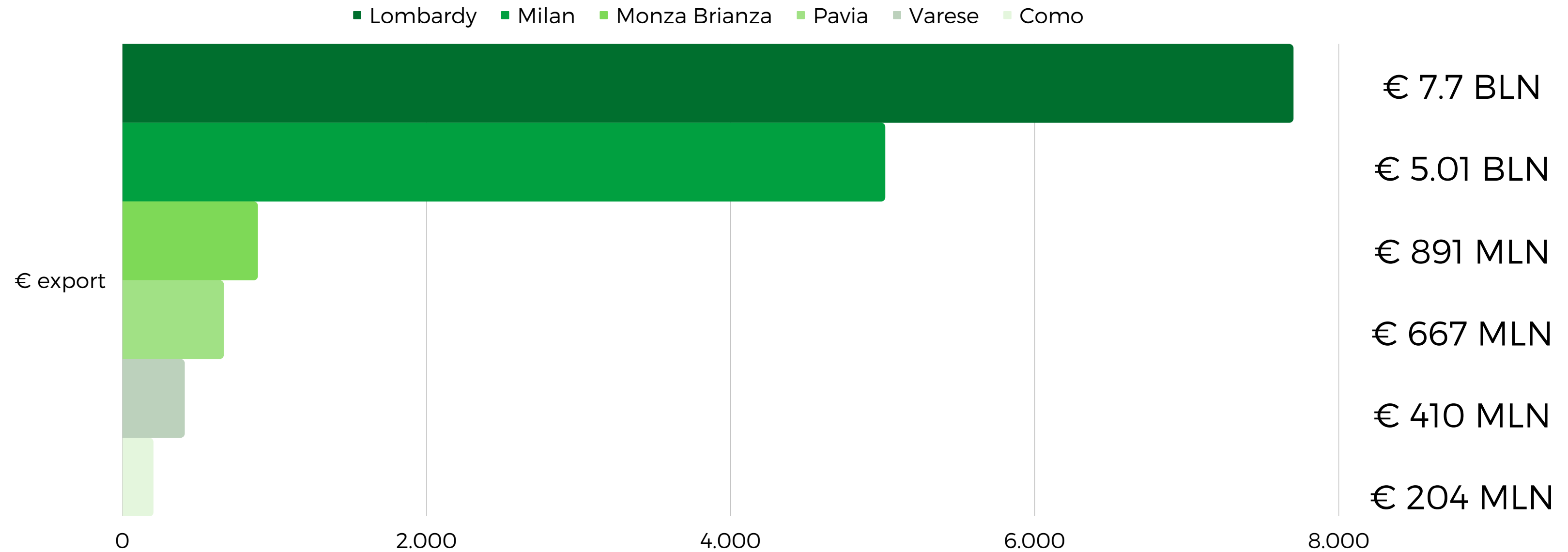


PHARMA 2/2



PHARMA MANUFACTURING EXPORT from Lombardy (2021)

€7.7 BLN (23% of the Italian total)



BIOTECH



Lombardy is the **first region in Italy** for:

- number of **companies:** 27.1% of the Italian biotech companies
- **turnover** 51% of the national biotech turnover
- **R&D investments** 36% of the national total (of which 30.3% are intramuros)
- **Patents filed:** 34% of the national total

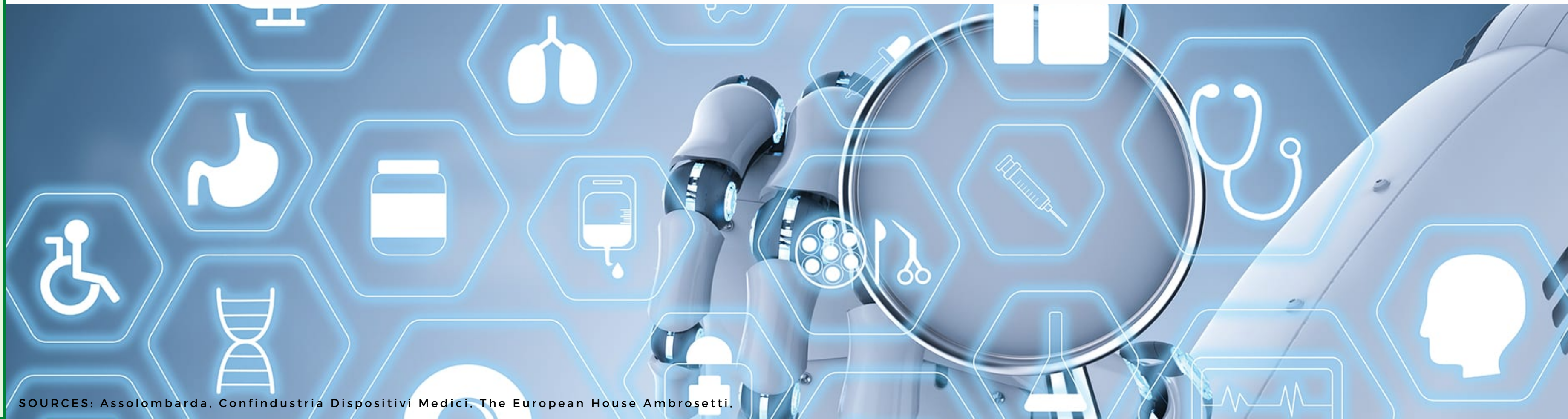


MEDTECH



Lombardy is the **first region in Italy** for:

- number of **companies:** 1,394 (30.7%)
- number of **employees:** 37,688 (40.0% of all employees in the sector in Italy)
- **R&D investments** in Medtech: 29%
- **Exports:** 31% of national export





COMPANIES AND KEY PLAYERS

National and International companies in the region

Lombardy is home to around **1,700 Life Sciences companies**. They are especially **SMEs**, but there is also a big presence of giant multinationals, like Novartis, Sanofi or Bayer.

The vast majority of lifescience companies is located in the **Milan** province, but other interested territories are the ones of **Bergamo and Monza Brianza**.



SOME KEY PLAYERS



BAYER ITALIA SPA

- **EMPLOYEES:** 1,650
- **LOCATION:** Milan (MI)
- **MAIN ACTIVITIES:** human and animals pharmaceutical products; agricultural chemicals and biotechnologies



BRACCO SPA

- **EMPLOYEES:** 3,420
- **LOCATION:** Milan (MI)
- **MAIN ACTIVITIES:** world leader in the production of diagnostic contrasting agents



NOVARTIS SPA

- **EMPLOYEES:** 2,200
- **LOCATION:** Milano (MI)
- **MAIN ACTIVITIES:** innovative medicine, generics and eyecare



ASTRAZENECA

- **EMPLOYEES (in Italy):** 800 (250 in Lombardy)
- **LOCATION:** Milan (MI)
- **MAIN ACTIVITIES:** research, development, manufacturing, and marketing of pharmaceutical products



ROCHE ITALIA SPA

- **EMPLOYEES:** 1,200
- **LOCATION:** Monza (MB)
- **MAIN ACTIVITIES:** pharmaceuticals and diagnostics



SANOFI ITALIA SPA

- **EMPLOYEES:** 2,000 (240 in Lombardy)
- **LOCATION:** Origgio (VA)
- **MAIN ACTIVITIES:** general medicine, diabetes, consumer healthcare and vaccines



DOMPÉ

- **EMPLOYEES:** 800 (100 in Lombardy)
- **LOCATION:** Milan headquarter
- **MAIN ACTIVITIES:** The EXSCALATE4CoV (E4C) consortium project to counter the Coronavirus

SOME RECENT EXAMPLES OF FOREIGN FIRMS INVESTING IN LOMBARDY



**Ekso
Bionics**

The company has inaugurated an **excellence center** in Costa Masnaga (CO), a rehabilitation center fully embedded with Ekso Bionics' technologies designed for patients with mobility problems



Flowmetric

The company has created its **European headquarters** in Bresso (MI), inside the OpenZone Campus, a scientific campus and excellence research center, fully dedicated to the life science sector



Patheon

The project consists of the **expansion of the productive capacities** in the Monza plant. Recently a new excellence center for the development of sterile injectables was opened in Monza



Ultivue

The company has inaugurated the new **branch in Milan**, which is also the first fully owned in Europe. The new offices will be able to support the activities of the company in the whole Europe.

SOURCES:
<https://eksobionics.com/it/>
<https://flowmetrics.com/>
<https://patheon.com/>
<https://ultivue.com/>

Success Stories



JULY 2020

HUMANITAS S.P.A.

The Humanitas hospital in Rozzano has successfully built in just 11 weeks the "**Emergency Hospital 19**". The new location was inaugurated in order to fight the burst of the virus, increasing the number of beds available in intensive and sub-intensive care, with a total investment of € 12 million.



FEBRUARY 2021

NOVARTIS S.P.A.

Novartis has announced an investment of **€74 million in Italy in 2021**, which will be allocated among the 207 clinical trial programs currently underway. Over the next three years, investments for a total of €250 million are planned in Italy. Among the first interventions, the donation of €720.000 to the Lombardy Red Cross.



MARCH 2021

DHL BIO PHARMA LAB

The new **DHL Bio Pharma Lab** was inaugurated in Settala (MI), dedicated to companies in the Hospital & Specialty Pharma sectors. The investment, of over €3 million, highlights the importance of the logistical side of the life science sector. The site includes a 6,000 sqm "cold store", which guarantees an innovative 360 ° management of the biotechnological product.



MARCH 2021

AGC BIOLOGICS

The USA company announced plans for the expansion of its **Cell and Gene Therapy Center of Excellence** in Milan, to increase capacities and implement viral vector suspension capabilities. With this expansion, AGC Biologics will add **two additional floors** to the suite and install **additional equipment** on the current floor. The new facilities are scheduled to begin full operation in 2022.

SOURCES:

<https://www.milanotoday.it/attualita/ospedale-virus-humanitas-rozzano.html>

https://www.adnkronos.com/farmaceutica-da-novartis-in-italia-250-mln-di-investimenti-nei-prossimi-3-anni_MxT3pyS0KxpRKl6VqWMce

<https://www.dhl.com/it-it/home/stampa/stampa-archivio/2021/dhl-supply-chain-inaugura-il-primo-bio-pharma-hub-dedicato-alla-logistica-dei-farmaci-biotecnologici-e-delle-terapie-innovative.html>



**THE SCIENTIFIC
RESEARCH AND
INNOVATION
IN LIFE SCIENCES**

UNIVERSITY HUB

HIGH-PROFILE RESEARCH AND TRAINING SYSTEM

**1st
REGION
in Italy for**

- **Universities with Life Sciences disciplines: 11**
- **Research centres, incubators and non-profit organizations**
- **Professors and Researchers in Life Sciences: 3,027**

24.9% of all University staff in Lombardy,
17.8% of the national LS staff = 17,047

**THE MOST RESEARCH
ORIENTED REGION**

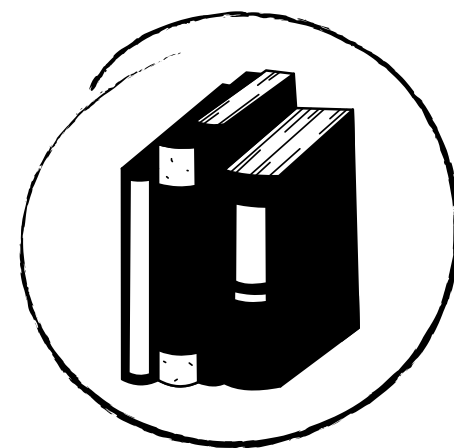
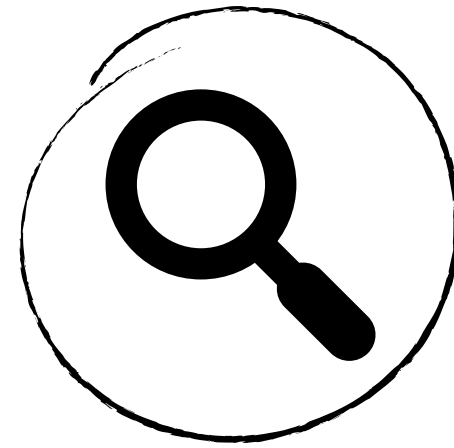


EDUCATIONAL AND RESEARCH SYSTEM

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

Specialized Research Centers of Milano Politecnico:

- Biomedical Applications
- E-Health
- LaBS
- Lucid Lab
- Near Lab
- TMB Lab



Research Centers:

- Consiglio Nazionale delle Ricerche
- Fondazione Centro San Raffaele
- Fondazione Humanitas per la Ricerca
- Fondazione Istituto Insubrico di Ricerca per la vita
- Fondazione Istituto Nazionale di Genetica Molecolare
- Fondazione per la Ricerca Ospedale Maggiore di Bergamo
- Fondazione Regionale per la Ricerca Biomedica
- Fondazione Sanità Futura
- Fondazione Telethon
- IFOM
- Istituto di Ricerche Farmacologiche Mario Negri

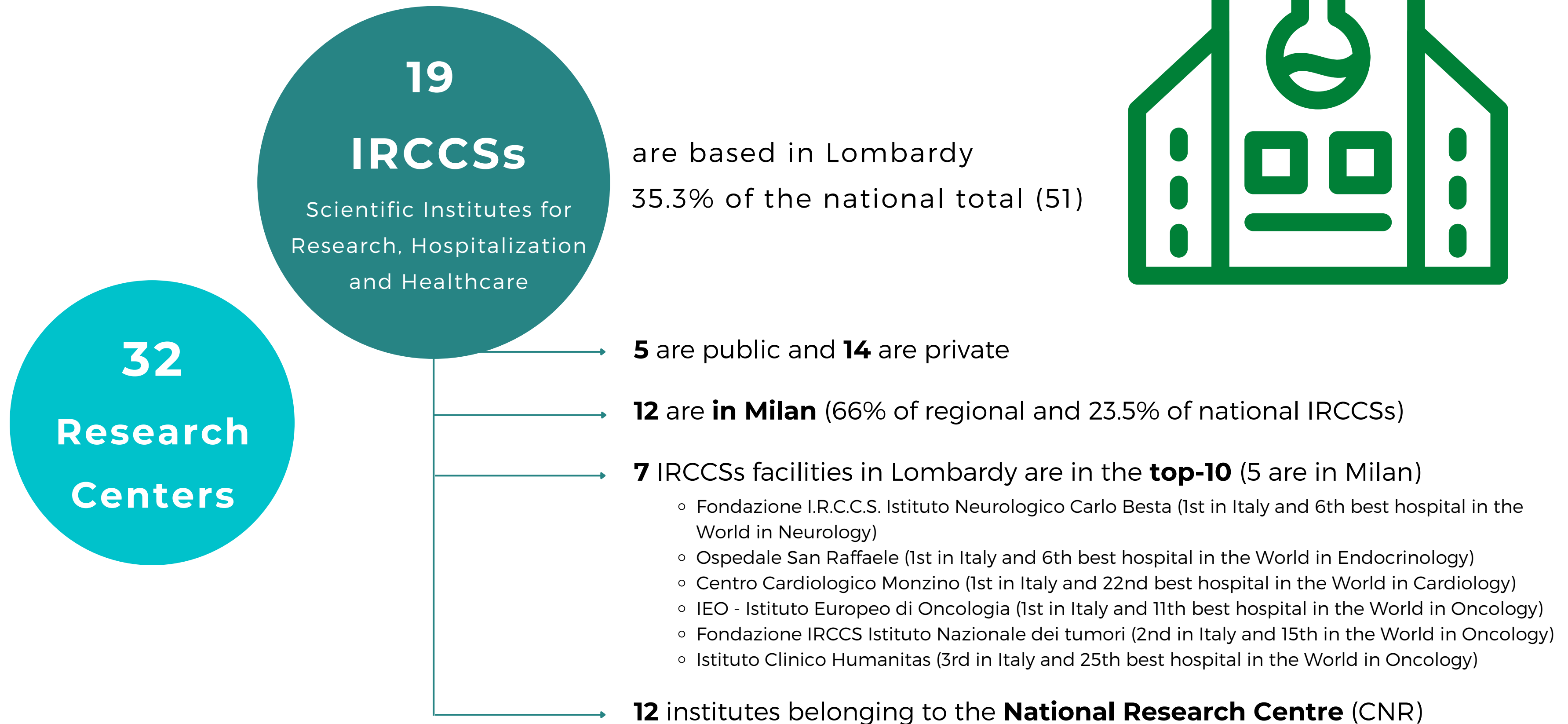
Universities with dedicated courses:

- Humanitas University
- **Milan Politecnico**
- Università Cattolica del Sacro Cuore
- Università degli Studi di Bergamo
- Università degli Studi di Brescia
- Università degli Studi di Milano
- Università degli Studi di Pavia
- Università degli Studi Milano - Bicocca
- Università Vita - Salute San Raffaele
- University of Insubria Varese - Como
- IUSS - Pavia University Institute of Advanced Studies

Technical High School Education:

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

RESEARCH FACILITIES



EXAMPLES OF INNOVATION HUBS

MIND Innovation District

An innovation, culture, and research center, Every day, the district works on the new frontiers of Life Sciences, conducts experiments, cooperates with institutes and companies, and develops new projects in the fields of biology, chemistry, genetics, and information technology.

It hosts:

- International companies
- Startups
- The **Galeazzi research and treatment hospital**
- **University of Milan Scientific Campus**
- The new **regional technology transfer, FITT**
- The **Human Technopole**



Human Technopole

It's the new research institute for Life Sciences. Its research is based on five interdisciplinary research centers: **Genomics, Neurogenomics, Structural Biology, Computational Biology, and Health Data Science.** Research activity is supported by six state-of-the-art facilities. It is also hosted in MIND.



MIND
MILANO INNOVATION DISTRICT



SECTOR ECOSYSTEM IN THE REGION

Cluster Lombardo Scienze della Vita

Lombardy's Life Sciences Cluster is a community devoted to life sciences in the Lombardy Region. It brings together public and private players involved in the diagnostics, advanced therapies, pharmaceuticals, medical devices and healthcare technologies areas.

Fondazione Regionale per la Ricerca Biomedica

Regional foundation promoting and enhancing scientific research in the Life Sciences, particularly in the biomedical field. It represents one of the main strategic platforms for boosting progress, research, development and innovation in hospitals, universities and research centres. The Foundation also aims to invest local and European resources in innovative basic and translational research projects to generate positive impact on the local healthcare eco-system and citizens.



REGIONAL STRATEGY

S3

Lombardy Region's **Smart Specialisation Strategy** (S3) for the period 2021-2027 continues the path launched in 2014-2020, aimed at declining an "integrated trajectory" of its territory development.

- The **S3**, aims to support and promote regional innovation policies, identifying resources, skills, innovative potential, priorities, such as industrial transformation and resilience of the Lombard economic-productive system, and emerging technological fields, where concentrating the **regional investments** in the next seven years.
- To do so, Regione Lombardia identified **7 specialization areas** that include and well represent a consistent part of the economic and scientific actors situated in the territory, and contribute to increasing their leadership in the respective sectors. One of them is the **Health Industry**.



REGIONAL FUNDS

ERDF 2021 - 2027

The Regional Program under the **European Regional Development Fund** over the period 2021-2027 continues the path launched in 2014-2020. The fund is structured in 4 axes. With **Axes I**, "A more competitive and smart Europe", Regione Lombardia aims to widespread **research, innovation, and technological development**, promoting knowledge exchanges between **research organizations** and **companies** and developing experimentation and complex projects. With a budget of **€1.091 bln** axis I accounts for more than **54%** of the total resources of the Fund.

Within the ERDF 2014 - 2020 is important to highlight the **Call Hub Research and Innovation:**

- More than 200 partners were involved in the call, for a total of **33 selected projects** of excellence. Projects that Regione Lombardia has now financed by providing a total contribution of **114.5 million €**
- The projects were divided into **7 ecosystems**. One of them is **Health and Life Science**.



INNOVATION & ACCESS TO CAPITAL

LIFE SCIENCES

PATENTS

- **1st region** nationally for patent applications
- Technological **areas** of patenting: medical sciences, veterinary, macromolecules

SPINOFFS

- **1st sector** nationally for spinoffs: 474 / 1,971
- **Lombardy**: 208 spinoffs (10.7% of the national total)
 - **63 in life sciences** (30.3% of regional spinoffs)

INVESTMENTS

- The **Life Sciences sector** in 2020 was the **main investment target** of Venture Capital and Private Equity investments in Italy, with Lombardy being the main target Region.



1st REGION
in Italy for
CLINICAL TRIALS



**HOW INVEST IN
LOMBARDY CAN HELP
YOU**

INVEST IN LOMBARDY: ONE-STOP-SHOP DEDICATED SERVICES



LOCATION SCOUTING

Find the best locations for your business through a dedicated network of local public institutions and private partners



NETWORKING

We are a business integrator, facilitating the connection with private and public, local and national stakeholders



BUSINESS INTELLIGENCE

Providing useful information on sectors/markets, supporting the evaluation of business opportunities in Lombardy



INCENTIVES

Overview of the tax incentives, grants, loans, and applicable bilateral conventions with institutions



PUBLIC ADMINISTRATION

We facilitate the dialogue with the public administration & support you in dealing with administrative procedures



HUMAN RESOURCES

Assistance in choosing the most suitable staff recruitment channels for your business



START OF THE OPERATIONS

Tailor-made technical support for the set-up of a new business



EXPANSION & RELOCATION

General support to the expat workers in the relocation process

CONTACT INVEST IN LOMBARDY

FOR QUESTIONS, COMMENTS
AND SUPPORT



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