

YES MILANO

MILANO FOR LIFE SCIENCES 2023

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**MILANO
FOR LIFE
SCIENCES**

LAST UPDATE: FEBRUARY 2023

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WHY MILANO

EXCELLENT
INFRASTRUCTURE

LEADER IN
PRECISION
MEDICINE

QUALITY
OF LIFE

INTERNATIONAL
OUTLOOK

COMPETITIVE
INCENTIVES

STRONG
TALENT BASE

WORLD CLASS
STRENGTHS IN
FUNCTIONAL FOOD

LEADER IN
PHARMACEUTICAL
PRODUCTION

EU
MARKET
GATEWAY

THE OPPORTUNITY



Milano is home to an internationally competitive pharmaceutical, biotechnology and functional foods hub, with strong growth prospects and a commitment to innovation across its entire value chain.

Italy is also home to one of the most advanced and efficient healthcare systems in Europe.

- Italy is EU's largest producer of pharmaceutical products and one of the main exporters of pharmaceuticals per capita. **€33.3 bln** of pharma products have been **exported** in 2021. Milano is the center of the Italian pharmaceuticals industry: the Italian exports in pharmaceutical products experienced **>85% growth** between 2016 and 2021, scoring the highest productivity in Europe. **€3.1 bln** invested in 2021. **In 2021, the employment growth in the Pharma sector increased by +9% v. 2016**, reaching 67k.

- Lombardy is the Italian most developed region in the Life Sciences sector with a turnover of **€74.5 bln** (30% of national production), a **value added of €27 bln** and **347,000 employees** (nearly 20% of national employment).

- Lombardy is Italy's top region for European health and Life Sciences investments and one of the largest recipient region.

- Italy is the **second healthiest country in the world**¹. In 2021, Italy spent \$3,451 per person on healthcare = 9.7% national GDP, slightly above the OECD average (8.8%).

- Lombardy has **1,026 healthcare facilities**, and **19** state-of-the-art research hospitals, known as **"IRCCSs"** and conducting critical research in biomedicine and healthcare services delivery. The city of **Milano** offers a state-of-the-art healthcare system, through a comprehensive network of **30 public and private hospitals**.

¹ OECD Health at glance Report, 2021

SNAPSHOT OF ECOSYSTEM



Milano boasts one of the highest concentrations of private companies, hospital facilities and research institutions in Europe and is home to the world's largest Life Sciences companies.

A large number of companies in the City specialize in the production of active pharmaceutical ingredients and raw materials, automated manufacturing plants, primary and secondary packaging, and regulatory services.

Milano is home to trade bodies, government agencies, regulators, academia and research institutes, while all the main regulators and strategic stakeholders for the Life Sciences industry are based in the area.

LOMBARDY

- Lombardy is the **richest region in Italy** with a **GDP per capita** about **32% higher** than the **national average** and **27% of the EU's**.
- **GDP per capita** is among the highest in Europe and amounts up to **€39,700** (€30,100 in Italy and €31,300 in the EU)
- Lombardy is also **home to leading scientific centers** in areas such as genomics, biomedicine and healthcare management (e.g. oncology, cardiovascular diseases and rehabilitation therapies).
- Lombardy's **population exceeds 10 million** inhabitants. In 2021, the employed **workforce** in Lombardy amounted to **4.8 million** (**72% was employed in services, 26.7% in the industrial field, 1.2% in agriculture**).
- **1,026** private and public healthcare facilities; **19** research hospitals (IRCCS); **115,210** skilled healthcare workers; **>500** R&D centers; **9** cluster sci-tech; **7** sci-tech parks; **27%** of employed population works in high-technology sectors.

LIFE SCIENCES COMMUNITY

- The Milano Metropolitan Region is home to over **250 pharmaceutical and biotechnology companies** (58% of Lombardy Life Sciences companies). Lombardy is home to around 30% of Italy's total.
- **Life Sciences trade bodies and regulators**, including the European Food Safety Authority (Parma) and EU Joint Research Center (Ispra), are based nearby Milano. The City is competing to host the European Unified Patent Court.
- Lombardy is home to over **136,000 agri-food companies** employing around **543,000 workers**.
- **+17% value added** per employee in the Pharma sector vs. major EU countries average, highlighting the high technological level achieved by production in Italy.

Life Sciences



Food & Beverage



Life sciences trade bodies and regulators



Life sciences trade bodies and regulators



MIND: Milano Innovation District

MIND is a 1 mln sqm innovation park district combining its scientific and clinical inclination in the Life Sciences sector with a unique international platform to capitalize the global and local research and business excellences.

Born on the premises of Milano World Expo 2015 themed “Feeding the Planet, Energies for Life”, the site represents an overall public-private investment of **€4 bln.**

It will host over **60,000 people/day** by 2032, making it one of the top 200 Italian municipalities in terms of population.

The district site developers, Arexpo and LendLease, in partnership with local institutions and the Italian Government, implemented a strategy to attract businesses and investments aimed at enhancing the scientific and clinical excellence of the 4 district’s anchors – **The University of Milano Statale, the Galeazzi Hospital, the Human Technopole Foundation and Fondazione Triulza** - in the smart city and life-sciences areas, securing the interest of about **100 companies** for the first 2021 office release. The Canada Pension Plan Investment Board (**CPP Investments**) recently signed a **\$200 mln deal** with Lendlease which will support the development of the West Gate Area (to be released in 2025).



Synergies created within the ecosystem evolve around 3 priority strands:

- **big data and AI, smart materials and devices,**
- **genomics, personalized medicine and value based care,**
- **advanced and additive manufacturing.**

All this is turning MIND into a breeding ground for health prevention, improved diagnostics and advanced healthcare, always keeping in mind a citizen-centred paradigm.



FEDERATED INNOVATION @MIND

Within the MIND framework, **about 40 global corporations** federated under a new legal entity, working together in a virtuous and collaborative environment, to accelerate the translation of **ideas** into new **products**, processes, and services that will contribute to the economic revival of Italy.

The new ecosystem is organized within **11 key sectors**, with the goal of creating and boosting innovation, in an open and collaborative environment.

This model is designed to go **beyond open innovation** and proprietary innovation, while contributing to the goal of making MIND a unique scientific park where all the players contribute to the ecosystem and make themselves available to create value for the whole territory. Companies joining the **Federated Innovation™ @MIND** will develop innovative projects in the areas of: Agrifood Tech & Wellbeing, Construction Tech, Greentech & Circular Economy, and Life Sciences & Health Care, among others.

The network is organized in **5 different layers of participation**, working together to develop innovation initiatives, including the possibility for companies registered in Italy, and for talents to join the network without admission costs and specific forms of commitment towards the MIND district, while being able to submit their projects to the community and find valuable partners and use the District as a test-bed to experiment their technology.

A structured system of interaction aimed at **TT** and open innovation between universities, research bodies and companies, is organised in different thematic areas with access to **research infrastructure**, know-how, funds and networks.

FROM PATIENT JOURNEY TO CITIZEN JOURNEY

MIND stems from the identification of a **systematic approach** for mapping diagnostic therapies and the related pain points: new treatments and patient needs are therefore identified, while possible interventions outside the places classically used for treatment are expanded. We like to call it: the bridge between the **City of the Future** and the **Hospital of Future**.

DIGITALIZING THE HEALTH SECTOR

Transforming cities into “distributed hospitals of the future” will be possible by combining **advanced technologies**: a digital revolution starts with the creation of a unique platform to connect existing databases. This will enable to:

- create a real-time **big-data ecosystem**, beyond traditional health-data offer new services, and measuring their impacts;
- work on the definition of a new clinical and **tech research model** that leverages shared data and new evidence generated by the data-ecosystem.

TT, OPEN INNOVATION AND START-UPS

Entry barriers in the Pharma, Biotech and Medical Devices market remains high due to techs, laboratories and equipment costs, but also because of regulatory barriers and the difficulty for smaller organisations to interact with both universities and large companies. MIND partners launched and benefit from a number of initiatives:

- **“Primary Site”** - The **IRCCS Galeazzi**, together with LendLease, Confindustria MD Confindustria MD Servizi, Bio4Dreams and Plusvalue and Confindustria MD is leading on the Primary Site pilot project aimed at supporting 10 innovative start-ups or SMEs operating in the Medical Device sector that need support to acquire or regain the CE mark.

- **“Seed4Innovation” - S4I - open innovation initiatives and a scouting program** is promoted by the **University of Milano “La Statale”** (UNIMI), to pollinating the University expertise and coaching on the best **knowledge transfer solution and business models**. **“Proof of Concept” projects and funds** are aimed at **increasing the TRL of innovative technology solutions and reducing the time to market access**. The Italian Ministry of Enterprises and Made in Italy (MISE) along with industrial and corporate partners (Boehringer Ingelheim, Chiesi Farmaceutici, Medtronic, CDP, Indaco, Bugnion, CA group, Deloitte Officine Innovazione, Sintetica SA, ST Microelectronics, Valpharma, Vertex Pharmaceuticals). Bio4Dreams and Fondazione Golinelli are supporting and co-granting the initiative.

BIO4DREAMS

Bio4Dreams

Bio4Dreams is the first Italian **business nursery** and an international aggregator specific to **early stage startups** in the Life Sciences industry. Following a tailored approach and thanks to its domestic and international academic and industrial partnerships, Bio4Dreams provides **managerial expertise**, IP support and **seed financing** in order to help projects to access the market. The company also secured the management of the shared laboratory (MIND Shared Labs™) and office spaces within the District that will host both startups and more mature corporates looking for flexible landing solutions.



Berkeley SkyDeck Europe, Milano

UC Berkeley SkyDeck, the global startup accelerator of the University of California, **Berkeley** (UC Berkeley), along with **Cariplo Factory**, one of the most important Italian innovation hubs specializing in entrepreneurship programs, and **Lendlease**, a global real estate and investment group, launched **SkyDeck Europe**, based in Milano. Startups from all over Europe are thus able **to leverage the expertise and resources** of SkyDeck's extensive network of advisors, mentors, VCs, and corporations as they **grow their businesses in the European startup ecosystem**. SkyDeck Europe set up its program at the newly developed MIND Milano Innovation District, a \$4.5 billion innovation district in the northern Italian city of Milan, which is considered to have the biggest startup ecosystem in the country. SkyDeck Europe was created with the support of two Italian stakeholders: the philanthropic organization **Fondazione Cariplo** and the Government of the Lombardy Region.

The **6-month acceleration program** includes a first quarter curated by the Berkeley SkyDeck team (offered both in-person and virtually) and a second quarter by the **Cariplo Factory** team. The second quarter of the program takes place at MIND and offers the resources and networks of some of the best Italian Universities, selected through a tender by the Cariplo Foundation. The Universities that will take part in the program are Milan Polytechnic University, University of Milan, IULM Free University of Languages and Communication, University of Eastern Piedmont "Amedeo Avogadro", University of Insubria, University Institute of Higher Studies of Pavia, and the University of Bergamo. Among the **benefits** of the acceleration program, **each startup receives an investment of €145,000 from Lendlease's private investment fund** and has the opportunity to present their project to a network of international investors during a Demo Day at the end of the program.

HUMAN TECHNOPOLE



Located inside Milan Innovation District MIND, Human Technopole is a large-scale, government-funded, research infrastructure that contributes to improving human health and well-being by developing new approaches to personalised and preventive medicine.

Today the institute employs over 350 people, including more than **220 researchers and scientific support staff**, of **30 different nationalities**, with an average age of 36 years. Over **60% of the research staff** joins HT from **abroad**.

Once fully operational Human Technopole will employ up to **1,000 scientists**, in different fields, including biology, bioinformatics, chemistry, engineering, physics, mathematics, health science and computational and data science, **to work together on research topics of biomedical relevance**.

With its state-of-the-art laboratories and facilities and highly qualified scientific staff, HT is expected to be enlisted in the **world's most advanced hubs** thanks to the acquisition

of exclusive computing, storage and imaging equipment. **Genomics studies, big data analysis and new diagnostics techniques** will be supported by unique technologies which will be made available to the wider scientific community.

To date Human Technopole has already raised **external funding worth €8.7 million** awarded to the institute's researchers through a number of grants and scholarships from European and international funding institutions.

Talent pool & Researchers

HUMAN TECHNOPOLE



Clelia Peano

Senior Manager, Genomics Facility

During her career, Clelia focused on the application of Next Generation Sequencing for the **analysis of Genomics, Transcriptomics and Epigenomics** in humans, bacteria and plants. At Human Technopole she works within the Genomics Facility which aims to provide **high throughput analysis** potential for large projects and **single-cell level analysis**, allowing to analyse various types of samples with an increasing level of sensitivity and specificity.



Malan Silva

Specialist, Cryo-Electron Microscopy Facility

Cryo-electron microscopy is an **advanced technique** which allows to visualize molecular structures at near atomic resolution, after cooling them at cryogenic temperatures. At Human Technopole, Malan works within the state-of-the-art CryoEM Facility providing support to a **highly productive, world-class scientific hub, capable of solving at high resolution**, from tissue to amino acid side-chains, the many questions faced by contemporary life science.

Polytechnic of Milano - ERC Grants

Paola Occhetta, Ph.D



Moved by a balance between inventiveness with concreteness, Paola Occhetta merges the passion for basic science with a vision towards industrial exploitation. After a **PhD in Bioengineering** at **Politecnico di Milano** and a **PostDoc** at the **University of Basel**, she was recently **awarded with a prestigious ERC Starting Grant** in the field of Organs on Chip and Artificial Intelligence, aimed at developing smart in vitro platforms to unravel mechanisms of unmet diseases. She is co-founder of **BiomimX Srl.**, Spin-off of Politecnico di Milano, incubated by Bio4Dreams at MIND, and **alumna of the Berkeley SkyDeck Europe Acceleration program**. BiomimX offers Beating Organs-on-Chip solutions to reshape the drug discovery and increase the impact of the therapies of tomorrow.

ONCOLOGY AND GENOMICS

Lombardy is one of the main contributors to CAR-T research at the national level and the region with the largest number of hospitals and research institutes dedicated to oncology. 17 of them are based in Milano.

In 2020, the Region started the three-year Pagencell Project, aimed at creating CAR-T allogeneic cell banks obtained from umbilical cords' blood and stored with an "off the shelf approach", with the participation of 5 local academic cell factories.

SAN RAFFAELE HOSPITAL

Among them, San Raffaele Hospital is also one of the of the 6 institutes of excellence selected to participate in the European consortium EURE-CART, created with the goal of bringing the EU at the forefront CAR T-cell immunotherapy. The Hospital is recognized as IRCCS (Scientific Institute for Research and Healthcare) for its research in molecular medicine and innovative treatments application, created with the goal of bringing the EU at the forefront of CAR T-cell immunotherapy.

HUMANITAS HOSPITAL

Research Hospital Humanitas, also features a CAR-T dedicated unit with hematologists expert in stem cell transplant, two teams of professional nurses with specific competences in apheresis and CAR-T patients, and a multidisciplinary team of doctors expert in the treatment of toxic collateral effects of the therapy.

Partnership San Raffaele X AstraZeneca

The collaboration seeks to **investigate** innovative **adoptive immunotherapy strategies for blood cancers using TCR**. Its objective is to find a **therapeutic application** for various types of acute **leukaemia**. The initiative will examine potential solutions to improve its **clinical success, identify toxicities**, and identify all potentially targeted **haematological tumours**.

EUROPEAN INSTITUTE OF ONCOLOGY (IEO)

IEO strives for excellence in cancer prevention, diagnosis and treatment, developing clinical and scientific research coupled with innovative organization and management, while paying constant attention to the quality of the service offered to patients. Its Women Cancer Center (WCC) brings together experts from IEO's multidisciplinary gynecology and senology programs.

NATIONAL CANCER INSTITUTE (INT)

Established in Milano in 1928, it stands as a center of excellence for pre-clinical, translational and clinical research activities, and clinical care. INT has 464 inpatient beds and provides more than 400,000 outpatient visits per year. The Institute carries out a public service characterized by a high level of diagnostic, therapeutic and research activities.

GENOMICS

Milano is emerging as a **Genomics hub**, with several leading institutes including **Human Technopole, San Raffaele Institute for Gene Therapy, National Institute of Molecular Genetics and the Italian Institute of Technology Center for Genomic Science**, which are bringing prestigious international researchers to the city as well as young talents with dedicated scholarships programs. **Large industry players** have already invested in the area: Illumina, Eurofins, Macrogen and Rose Genomics, among others.

In recent years, local universities have started to offer specific courses in this field, such as the **Master's Degree in Bioinformatics for Computational Genomics**, provided by the University of Milano and the Polytechnic.

OPENZONE



«We uniquely create value in healthcare,
by fostering community, competencies and capital»

Openzone
science oxygen business

Zambon
1906

OpenZone is a place where **Research is turned into Business**, a campus dedicated to Health on the doorstep of Milano, created by **Zambon** to consolidate its way of thinking and experiencing research in Life Sciences.

Funded entirely by private capital, OpenZone it's founded on an approach geared towards **open innovation**, conceived to build bridges between different competencies, languages, and worlds. Thanks to its recent expansion that has included a **69 million euros investment plan**, the two new towers and a completely new and environment-friendly power plant, the campus now covers an **area of 37,000 sqm**, providing space for up to **1,200 people**, reaching

20,000 sqm of office spaces and **17,000 sqm** of laboratories (1,600 of which are Good Manufacturing Practices).

OpenZone is **home to 34 organizations**, including some of the world's foremost biotechnology, pharmaceutical, and advanced gene therapy companies, such as DiaSorin, AGC Biologics, EryDel and Axxam.

OpenZone works closely with all the stakeholders in the Healthcare sector, to ensure that Milano and Lombardy are increasingly recognized internationally as territories of excellence for Life Sciences.

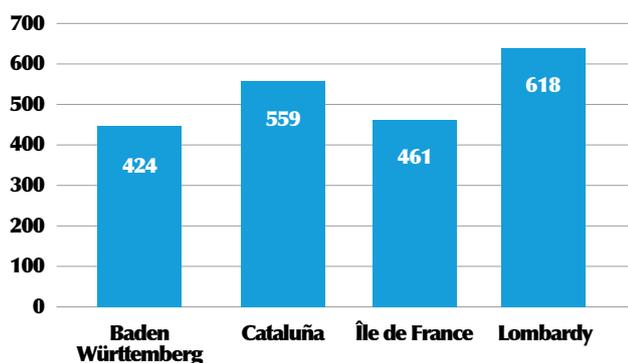
PRECISION MEDICINE

Italian Life Sciences companies have invested heavily in orphan drugs and advanced pathology treatments related to cancer and other diseases of clinical-epidemiological relevance, such as auto-immune and infectious diseases.

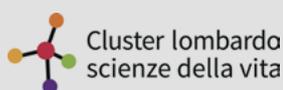
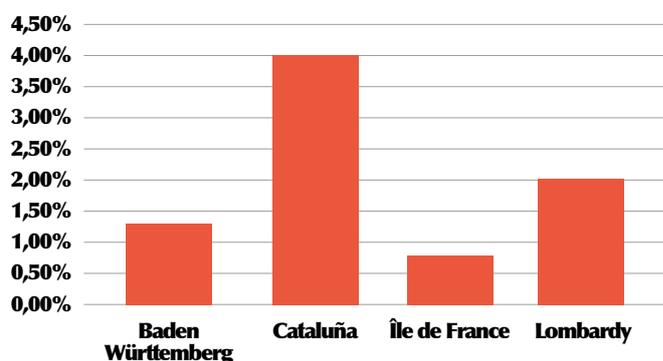
They are also at the vanguard of vaccines research. Around 300 new Biotech products are currently being tested. Over €700 mln are invested every year in clinical trials by the Pharmaceutical industry.

Lombardy: a Pharma powerhouse

Pharmaceutical industry value added Euros per inhabitant



% of pharmaceutical industry value added in the overall regional economy



CLUSTER LOMBARDO SCIENZE DELLA VITA

Lombardy's Life Sciences Cluster is the community dedicated to Life Sciences in the Lombardy region. It **brings together** all public and private organisations – **research, industrial and clinic** – which work with expertise to foster progress in this sector in Lombardy and to improve the lives of all citizens. The Cluster promotes networking among its members, facilitates the creation of **new partnerships**, even internationally to create new business opportunities, **optimises technology transfer processes** and encourages the growth of local skills and resources. The Cluster gathers more than **110 members** up to date and it is one of the members of the **Italian ALISEI Cluster**. At the international level, it is part of a network that brings together all major European bioregions and it is developing several collaborations i.e. Canada, Cuba and Israel.

FUNCTIONAL FOOD

Italy's functional foods market is the largest in Europe and the country is second in the world (after the US) in scientific production applied to nutraceutical. (source: ALISEI)

Milano is a hub for Italy's agri-foods industry, and particularly functional foods, which is renowned for its quality and innovation. The City is North of the Italian "food valley," and close to the European Food Safety Authority and European Nutraceutical Association in Parma.

In 2018, Milano's ALISEI National Technological Cluster for Life Sciences partnered with the National Technological Agrifood Cluster, C.L.A.N., to support research and technology transfer in the following areas: nutraceutical, nutritional and functional foods.

AGRIFOOD TECH

Milano has been the EU food capital since Expo 2015, themed "Feeding the Planet, Energy for Life" and is located in the 1st Italian region for Agricultural production. Discover more on the local AgriFood Tech ecosystem on our dedicated [brochure](#).

HEALTHCARE



Milano has one of the world's most efficient and advanced healthcare systems, and was early in introducing individual electronic health records. It also pioneered an integrated "one health" approach.

Milano has **multiple medical centres** dedicated to its large international community, such as the American International Medical Center and the International Health Center. 12 hospitals have emergency rooms with dedicated assistance for foreign patients.

IRCCS

Lombardy hosts **19 Research Hospitals (IRCCS)**, with **17** of them based in **Milano**, which account for **37% of the national total**. 7 of them are **LISTED AS Tech Excellence Hospitals**. Their research and clinical achievement resulted in their international recognitions in the rankings for several fields of specialty: Carlo Besta Research Hospital ranks 11th worldwide for **Neurology**, the European Institute of Oncology ranks 12th for **Cancer Research** and San Raffaele Hospital is 16th for endocrinology, conducting 880 clinical trials in 2021. **1/10 of the approved clinical trials in the EU comes from Lombardy**. Milano's Research Hospitals are also at the forefront with Humanitas Hospital and Galeazzi ranking respectively 23th in **Gastroenterology** and 25th in **Orthopedics**.



Genenta (Nasdaq:GNTA) is a clinical stage immuno-oncology company developing a cell-based platform harnessing the power of hematopoietic stem cells to provide durable and safe treatments for solid tumors. Our platform is not tumor type nor target antigen restricted and provides sustained targeted expression of therapeutic payload(s) inside the tumor micro-environment. Genenta's lead product candidate, Temferon™ precisely targets the delivery of interferon-alpha to the tumor micro-environment.

SILVER ECONOMY

In Italy, 1 citizen out of 4 is a Silver. Today, 24% of the Italian population is >65y/o (v. 19.7% in Europe), 23% in Lombardy. The Italian Silvers are expected to increase to 35% by 2050.

Silvers demand trends

An Italian Silver lives in a self-owned house, has economic means and time to help family members financially as well (30% of cases), has a rich social life and visits friends more often, plays sports (14.4% between 65 and 74), goes on holiday, and is increasingly involved in voluntary activities. Compared to a decade ago, the elderly spend more on the Internet (used by almost 30% of 65–74y/o), cultural activities and sports.

Most common diseases

32% of the population over 65 was affected by chronic pathologies and multimorbidity in 2019 (48% over 85). 3.8 mln of them were with severe reduction of autonomy in daily activities of personal care or those of domestic life. Hence, 1 mln needed to receive assistance or aid because of autonomy inefficiency. Among the >74y/o, 85% are affected by at least a chronic pathology and 67% by two diseases. Most common diseases are hypertension, arthrosis/arthritis, osteoporosis, and diabetes.

THE VALUE OF SILVER ECONOMY IN ITALY

37.2%
of the national GDP,
€321.3 bln

Silvers' consumption value:
€176.1 bln (1/4 of Italian
families' consumption)

The **Silver Economy Network** is the first network of Italian companies offering quality products and services for the over-65s, operating in the Silver Economy production chain. It develops by intensifying the synergy between companies to enhance and bring out the excellence of the Italian Silver Economy, an evolving market based on heterogeneous needs. Its vision is to gain visibility and accredit itself towards public, regional and national institutions to involve all those interested in the activities. The Network:

- **Supports the development of the Silver Economy** in Italy and promotes **innovative solutions** in favor of active aging, proposing **new ways of approaching** silver customers.
- **Favours the aggregation of companies** to create a system between services and products designed for the over-65s target.



Assolombarda is the association which gathers the companies operating in the Metropolitan City of Milano and in the provinces of Lodi, Monza-Brianza and Pavia. Part of **Confindustria** (the Italian Entrepreneurial Association), it is the **largest territorial body** of the entire entrepreneurial system in the country. It advocates for the interests of nearly **7,000 companies** (employing 415,000 people) and provides a broad range of specialized services. About over **750** of its associates operate in the **Life Sciences industry**, testifying the relevance of the sector for Milano and Lombardy Region, where it represents 13% of the local GDP for added value. In the past 10 years, Assolombarda has built a solid aggregation and valorization model to further promote what is a strategic and fast-growing compartment for the whole territory. This effort resulted in the creation of the **Life Sciences Hub**, aimed at developing a regional and national strategy to push forward Italy and Lombardy's excellence and promote it internationally.

DIAGNOSTICS AND MEDICAL DEVICES

- **Over € 16.2 bln revenues** in the Medical Devices sector with 4,546 operating companies and 112,534 people employed at the national level, with **1,394 companies (30.7%)** and **37,688 employees (40%)** in **Lombardy**, ranking **first in Italy**.
- In 2021, Italy's **R&D investments** in Medtech amounted to **€ 682.8 bln**, with Lombardy accounting for **29%** of the total. National **exports** amounted to **€ 5.4 bln**, with Lombardy accounting for **31%** of the total.



Bracco is an international healthcare group active in the field of Life Sciences and a world leader in diagnostic imaging. Bracco's products (contrast agents and medical technologies for x-ray, computed tomography, magnetic resonance imaging, ultrasound and nuclear medicine) are sold in over 100 countries and, thanks to their quality, the Group boasts leading positions in North America, China, Europe and Japan. In the Research and Development area the company invests approximately 10% of reference turnover in the imaging diagnostics and medical devices sectors and has a portfolio comprising over 2,000 patents.

Another important area of activity regards the healthcare services provided by the Centro Diagnostico Italiano (CDI), a polyclinic based in Milan. With 21 satellite units in the city and Lombardy, the CDI offers 150,000 diagnostic procedures in different services of prevention, diagnosis, rehabilitation and personalized treatment, with a focus on radio-surgery and day-surgery.

FINDING TALENTS IN MILANO

Milan stands out for the quality of its human capital and education system at every level.

The City is known as the Italian economic capital and is a dynamic and creative environment for startups.

- It counts for **8% of Italy's workforce**, (41% of Lombardy's workers) and it has the **highest employment** in financial and business services as a percentage of total employment. It also boasts some of the **most advanced scientific centres** in Europe and creates **1/6 of Italy's patents**.
- Milano has 11 universities and academies, which admit **230,000 students** each year, **17k** of which are **internationals** (Assolombarda)
- High percentage of **international residents** compared to peer cities. Increasingly becoming known as a "laboratory for creativity and innovation"
- Four of Milano's universities are specifically dedicated to Life Sciences and medicine, and are **top-ranked** in Europe: Università degli Studi di Milano ranks **34th in Pharmacy & Pharmacology**, and Polytechnic of Milano ranks **30th in Chemical Engineering**.

Young people and **women** also play an important role in Italy's pharmaceutical sector: in the last 5 years, the **under 35s** have grown by 13%; 43% of the workforce are women (29% on average in the industry), many with leadership roles. The chart below shows the average salaries for the most researched profiles in Industry.

| JOB FUNCTIONS | LEVEL | COMPENSATION KIT |
|--------------------------|-------------------|---------------------|
| Data Scientist | Junior / Senior | € 25K – 30K / >€40K |
| Clinical Project manager | Middle Management | € 58,000 – 70,000 |
| Chief Scientific Officer | High Management | € 107,000 – 129,000 |

VCs & STARTUPS



The birth rate of knowledge-intensive (KI) startups in Lombardy is 38,6 every 100,000 residents (less than 30 in Germany). Startups in Lombardy boast also a high (5.9%) and medium-high (13.5%) performance of growth, better than those in the Bayern region. Startups related to Industry 4.0 had a birth rate of 4 every 100,000 residents, with 1/3 of them experiencing a mid-high growth performance, the best results in Europe.

Over 3,900 innovative startups in Lombardy, accounting for 1/4 of the total 14,600 active in Italy. Of these 3,900, 2,700 are in Milan (70%).

VC Biotech

In 2021 venture capital investments in Europe reached the record amount of **€102.9 bln**. Biotech was one of the main target sectors: 208 firms benefited from a favourable market that allowed them to easily access and secure over € 7 bln funding, with a compound average growth rate increase of 15% from 2019 to 2021.

In the first quarter of 2022, Italy recorded a **+35% growth in VC investments** (from 311 to 420 mln), with **€47.5 mln** going to **life sciences** companies. The positive trend was also boosted by a growing institutional commitment, namely the initiatives carried out by CDP Venture Capitals, the national innovation fund that supports innovative start-ups and specialized venture funds.

In this context, **Milano** uphold its role as **Italy's financial capital and biotech hub**, further positioning itself as an innovative ecosystem hosting all the major venture capitals (Blacksheep, Claris Ventures, Eureka!, Indaco Ventures, Oltre Ventures, Panakes Partners, Prana Ventures, and United Ventures.)



VITA Accelerator

VITA Accelerator is the **Digital Health Accelerator** of the **CDP National Accelerators Network**, powered by **Healthware Group** and **Accelerace**. Each year up to 10 selected startups will benefit from the first investment of €150,000 (of which €90,000 in cash), hands-on practical support from the mentors and experts and strong ties with health system stakeholders like corporate partners and hospitals. First follow-on up to €400,000 for selected cases and up to €2 mln cumulative follow-on investments are available for the most promising startups.

RESEARCH EXCELLENCE AND CLINICAL TRIALS

Milano has a rich network of academia, research organizations, national and international regulators, government and complementary industries, which provide a unique breeding ground for science, research, innovation.

Italy is a top-three EU country for R&D in pharmacology, toxicology, and pharmaceutical research and Life trials.

Milano is one of the largest centres for pharmaceutical and medical device clinical trials, with a particular focus on rare diseases.

Milano has a strong pipeline of drug candidates. Recent breakthrough life sciences discoveries include Zalmoxis®, Strimvelis® and Holoclar®.

University of Milano ranked 1st in Europe and 4th worldwide for Covid-19 research.

UNIMI FOUNDATION



“Powered by the **University of Milano “La Statale”**, **UNIMI Foundation** represents its **knowledge transfer hub** and **technology incubator** for the nurturing of innovative startups and SMEs looking for customized laboratory spaces and offices. UNIMI Foundation offers a **6,500 sqm space** and hosts **21 companies** (mainly Life Sciences) and **4 university laboratories** to date.

The Center is the **gateway to the University’s talent pool**, drawing on the skills of **> 3,000 professors, researchers** and **technicians** from **31 departments**, bridging the academia with the market. The University is a **strategic partner** in innovative projects and processes for companies and institutions using research as the key to improve their competitive positioning. In collaboration with the University, UNIMI Foundation manages and promotes the open innovation program “Seed4Innovation” (S4I).

SOME STATS

13.5%

Among the top 10% of the international cited publications are Italians (OECD)

1,300

of European clinical trials conducted in Italy with €700 mln invested over last three years

42%

of biomedicines approved in the EU are produced in Italy

58

Italian ERC winners

€5 bln

spent on R&D in Lombardy every year

31%

of Italian patent applications to the EU patent office come from Lombardy

€349.2 mln

European Regional Development Fund allocated to Lombardy (R&D only)

to 2 out of 10

advanced clinical trials approved in the EU are Italian

COMPETITIVE BUSINESS ENVIRONMENT



In recent years, the Italian government has introduced reforms to make the country more competitive and attractive for foreign investments. As a result, Italy has now a very generous fiscal regime and incentives package that includes the reduction of the main corporate tax from 27.5% to 24%, a flat-tax rate for income or capital gains on investments earned abroad realized by individual taxpayer and special visas for entrepreneurs that want to start a company in Italy.

In Italy, companies have the possibility to build a team that lasts in time, since Italy enjoys one of the longest employment tenures in Europe (11 years), above the OECD average (10 years). The **2020 Budget Law** introduced new tax incentives with the aim of facilitating the transition to a more **digitalized economy** and promoting industry in Italy. Incentives are available in the form of capital grants, easy-term loans and tax credits and includes tax credits for new investments in tangible and intangible assets, R&D, employees' training.

Furthermore, 2019 Growth Decree introduced a new 18-months **regulatory sandbox** to **promote technological innovation** and facilitate the **development of fintech in Italy**, allowing companies to test new services and products in the financial, credit and insurance sectors. Thanks to these reforms and to the strength of its industry, Italy ranks 8th in the **Global FDI Confidence Index** (2021).

ECONOMIC INCENTIVES

Startups

Innovative Startups

Startups founded by <5y with < €5 mln revenues are exempted from certain taxes and access to flexible employment contracts. Either 15% of their costs are in R&D or 2/3 of personnel hold a Master's Degree or they are the owner/licensors/depositaries of a registered patent/software. Tax relief for investors in innovative startups (cap at €1 mln for individuals, €1.8 mln for companies).

Development Contract

The Development Contract supports large investments in the sectors of industry, tourism and environmental protection. It is made up of one or more investment projects combined to an interconnected **research, development, and innovation** project, for a minimum capex of €20 mln (€7.5 mln for agricultural products transformation projects). Multiple parties might apply to the **network contract**. Projects presented by foreign companies providing an investment of at least € 50 mln gain access to the Fast-Track procedure. It may also include the construction of public utility infrastructure. It includes:

- non-repayable grant towards facilities
- non-repayable grant towards expenses
- subsidised financing
- interest subsidy

The incentives depend on the type of project, the location of the initiative, and the size of the company.

Innovation

New Enterprises “Zero Interest Rate”

Investment programs with eligible expenses up to €1.5 mln to be implemented by micro and small companies established by no more than 12 months and composed, for more than half of members and shares, of people aged between 18 and 35 years old or by women. Program duration not less than 3 years from project completion. Benefits are granted in the form of a subsidized loan (max. 8y) with a zero-interest rate covering up to 75% of the eligible expenses.

Innovation agreement

The Innovation Agreement is aimed at projects concerning industrial research and experimental development activities with eligible costs at least equal to € 5 mln for the development of new products, processes or their improvements. Projects may have a duration of at least 18 months and not exceeding 36 months. Mix of grant and soft loan. Eligible subjects may also apply as a network. Applying companies must have at least two approved financial statements. Funds availability is announced by the Ministry of Economic Development.

FISCAL BENEFITS

Startups

Smart&Start Italia

To support innovative startups, established for no more than 60 months with a strong technological dimension. Interest-free loan up to 80% of the total investment (10y repayment). Up to 90% if the startup is composed exclusively by women or people aged <35, or if it includes at least one Italian PhD working abroad and willing to return in Italy.

Patent Box

50% tax reduction for incomes arising from direct use or licensing of qualified intangible assets: property rights, industrial patents, trademarks, designs and models, etc.

Tax Credit on Assets

Companies investing in tangible and intangible capital goods accordingly to the Industry 4.0 national strategy can benefit of a wide range of tax credits from 15% (intangible assets) to 20-40% (tangible assets). Companies investing in ordinary tangible assets can benefit of a 6% tax credit.

Innovation

Industry 4.0 training

40% tax credit on the cost of personnel employed in training courses for the acquisition and consolidation of skills in "4.0" fields.

Employment

Firms that employ workers under the age of 35 are granted a reduction in the labor taxes for the first three years of their employment, up to a maximum of € 3,000 per year.

New Residents

Employees, self-employed, researchers and professors who move to Italy and have not been resident in Italy in the prior 2 years can benefit of a special tax regime with a tax exemption equal to 70% of their incomes for 5 years (extendible under certain circumstances).

Human Capital

ITALIAN QUALITY OF LIFE

Milano and its attractive surroundings offer a modern, sophisticated way of life, in a safe, tolerant and open social and cultural environment. It is a city that makes everyone feel at home right away and has opened its doors to foreign investors and workers.

English is widely spoken. Its quality of life is among the best in the world, with high-quality housing, a comprehensive network of international schools, a state-of-the-art healthcare system, a thriving artistic and cultural environment, a unique food scene, and efficient public transportation systems.



Milano stands at the heart of Europe, connected to all its major cities.

With 3,000 weekly flights to 185 destinations, Milano has efficient and rapid connections with Italy, Europe and the world. The city is two hours by plane to most EU capital cities, and two hours drive from the Alps in the North and the seaside in the South.

Milano has three major airports: Malpensa-MPX for intercontinental destinations, Linate-LIN with convenient connections to European and Italian cities, and Orio al Serio-BGY, which is an operating base for European low-cost airlines.

Milano Central railway station is a major hub for international railway travel, with daily trains to Paris, Munich, Barcelona, Vienna, Bern, Lugano, Nice, and Marseille. The city is also at the junction of major highways networks, which connect the city to France, Switzerland, Germany, Austria and Slovenia, as well as to the ports of Genoa and Venice-Mestre.

Intercontinental Direct Flights to:
San Francisco, New York, Shanghai, Hong Kong, Tokyo, Istanbul, Tel Aviv, Riyadh, Abu Dhabi, Cyprus among others

At the heart of Europe

High accessibility by train & plane

1,001 Direct weekly trains and high-speed trains to and from EU capitals

3,681 weekly flights to Milano's 3 international airports (2019)



FIND OUT MORE

Milano&Partners is the investment promotion agency of the city of Milano, founded by Milano's Municipality and Milano's Chamber of Commerce. In collaboration with Promos Italia, it supports the soft landing of foreign investments in the metropolitan area and promotes Milano's excellence by attracting foreign talents and boosting its competitive environment.

We support foreign companies and startups expanding their business in Milan with several free of charge services throughout the entire process:

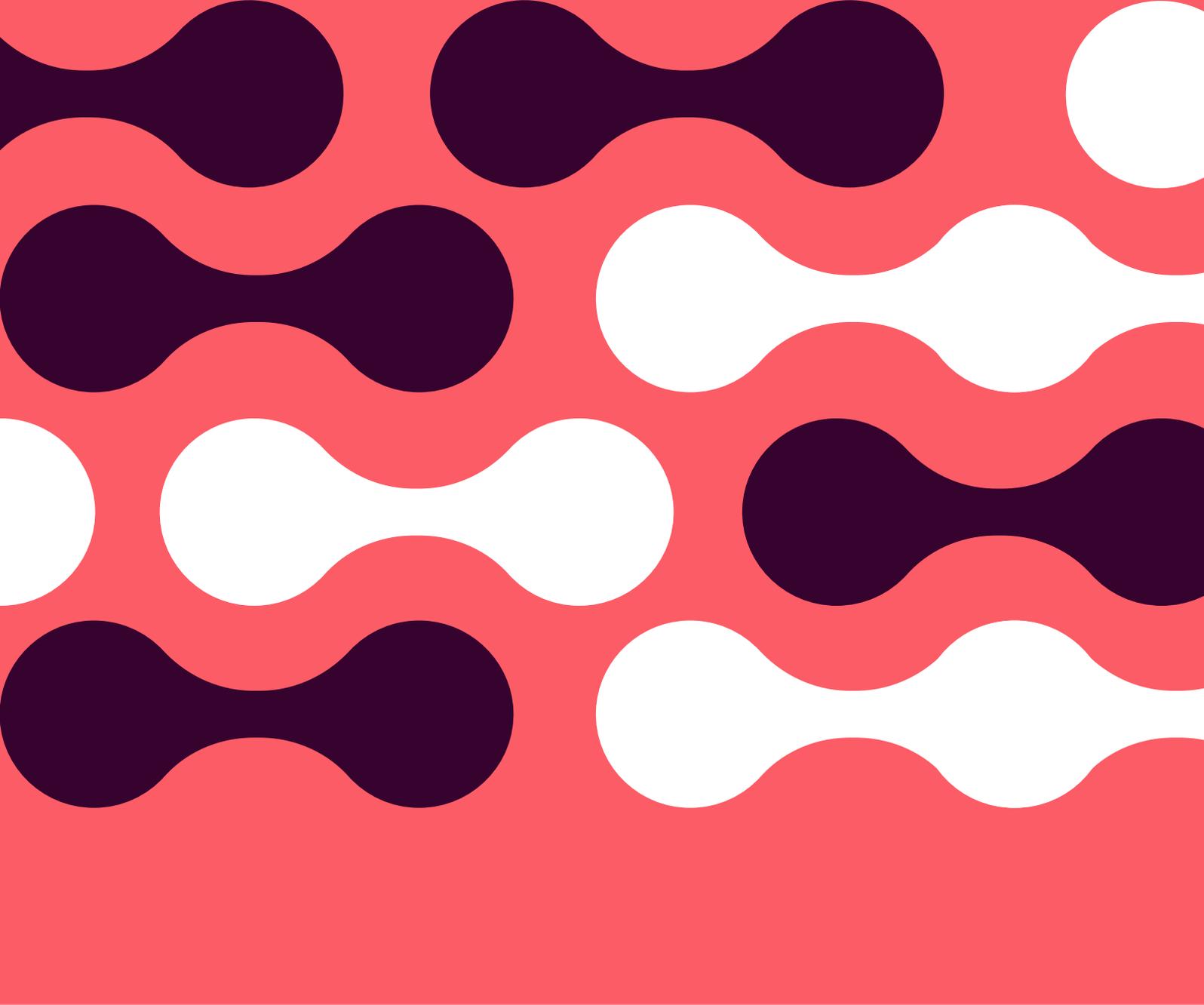
- Facilitating the dialogue with the Public Administration and providing bureaucratic support with visas, permits, and documentation.
- Specialised support accessing national and local fiscal incentives.
- Location scouting.
- Networking with local stakeholders and universities aimed at recruiting specialized human capital and connecting with potential partners.
- Information on the local supply chain (fees may apply).
- Introduction to a selected network of legal, fiscal, labour, and real estate consultants.



MILANO&PARTNERS

[Watch](#) the testimonials of the companies which have already chosen Milano!

* Information concerning Companies that are part of the Life Sciences community are updated periodically. We apologize in advance for potential omissions. If you notice any missing or wrong information please feel free to reach out.



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