

THE VALUE OF THE URBAN REGENERATION

Strategy study assessing the multidimensional impacts of the creation of the Porta Nuova area in Milan

EXECUTIVE SUMMARY



COIMA

Real Estate. since 1974



INTRODUCTION

The Porta Nuova project in Milan is one of the largest urban redevelopments carried out in the historic center of a European city. Co-developed and managed by COIMA since 2003, it aimed to completely transform an abandoned former railway yard bringing positive spin-offs not only in the neighborhood itself, but also in the **neighboring areas and in the entire city.**

COIMA with the support of The European House - Ambrosetti and TIREZIA - Technology and Innovation REsearch on Social ImpAct (centre of competence of Politecnico of Milan's School of Management), realized the impact study of the urban regeneration project investigating both the impacts associated to the **first phase of the project** (Phase 1), concluded in 2018, and the expected, forecast impacts of the **second phase**, currently ongoing and

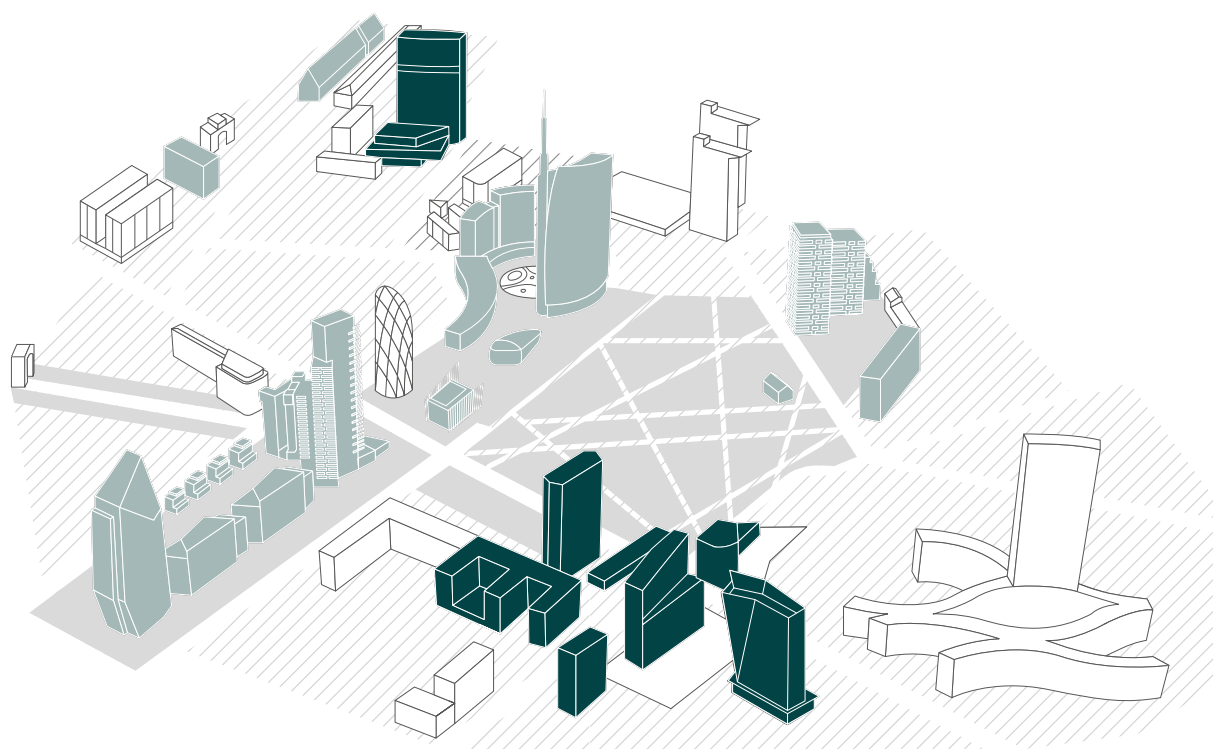
scheduled for completion in 2026 (Phase 2).

All the management activities conducted in the private and public spaces and the planning of events and activities to fuel vibrancy and support the area's attractiveness were considered especially through Fondazione Riccardo Catella initiatives and the BAM (Biblioteca degli Alberi di Milano) park programme's offering of free cultural and educational events.

These ongoing activities make up a clearly defined strategy on the part of COIMA, entitled **Porta Nuova Impact**, which embraces social, environmental, cultural innovation and digitalisation projects intended to generate impacts reaching beyond the boundaries of the neighbourhood alone and sets out to make Porta Nuova a genuine platform for experimentation and innovation.

PHASE 1: 2003-2018

PHASE 2: 2018-2026



Map of the Porta Nuova neighbourhood and breakdown of the buildings and development areas by phases. Source: elaboration by The European House - Ambrosetti and Politecnico di Milano - Tiresia using COIMA data, 2022.



Although, given the period of history when the idea of the Porta Nuova development project was launched, the issue of sustainability was not yet central for the economic actors involved, it became clear even at that early stage that COIMA - the area's developer and manager - was determined to generate tangible and intangible positive effects, which have been identified and quantified in this study.

The initial intention was to provide the development plan with added value, deriving from an a priori decision to consider the economic and social expectations and needs of stakeholders, even partly extending the boundaries of the market.

This implies being intentional and additional and not being satisfied with “just” the positive externalities generated by the project and the effects generally created in urban regeneration projects, but rather setting out to create a positive impact where it is most needed. All this has been supported by a major effort in the direction of measurability, to make it possible to determine the value generated by COIMA's Porta Nuova operation, using a multidimensional analysis model which considers both the tangible and the intangible impacts generated by the project.

This value can be observed by means of quantitative metrics and in the case studies and best practices referred to in this study. The project's tangible effects are traditionally measured by means of **economic assessment models** and their identification allows the adoption of design choices which maximise the **economic return for the developer and for the wider**

supply chain. In large-scale projects like Porta Nuova, the tangible effects occur from the construction to the management phase and are seen both in the area actually regenerated by the project - the Porta Nuova district - and in the neighbouring areas, as well as at different levels in the upstream procurement chain and downstream induced consumption figures, helping to create direct, indirect, induced and catalysed impacts. These effects, measured as sharply positive even in periods of economic and financial crisis, highlight the resilient and counter-cyclical character of the Porta Nuova urban regeneration project.

As well as these tangible effects, an urban regeneration like the one carried out in the Porta Nuova district also helps to generate intangible effects. These include, for example, impact on the **quality of life, environmental impacts, and the area's social and cultural vibrancy**, which have helped to transform Porta Nuova into a real “destination”.

Defining, and to an even greater extent calculating, a project's intangible effects is never easy and requires greater effort in analysing the intentionality and additionality which lead to the creation of **added value for the territory** in which the project is located and **for the community** which benefits from it. These characteristics constitute the paradigm of impact integrity, which gives transformative strength to sustainability, extracting a “molten core” which we can define as impact, and which has three main characteristics:



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Porta Nuova regeneration project is characterised by pioneering elements that have enabled the dissemination of innovative urban and architectural culture in Italy and have contributed to enhance environmental sustainability

26

Thanks to its constant focus on stakeholders' needs, the Porta Nuova regeneration project has, with intentionality, generated additional, measurable intangible value through a multidimensional framework

30

The Porta Nuova urban regeneration has generated economic and employment value continually, during both the construction and the operativity phase

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The regeneration of Porta Nuova has triggered the growth of the area attractiveness and vibrancy, creating a "destination"

50



01

**THE PORTA NUOVA
URBAN REGENERATION
PROJECT**

THE PORTA NUOVA URBAN REGENERATION PROJECT

The total planned investment for the two phases of the project is more than €2.8 billion. Of this figure, almost 1 billion Euro was spent on acquisition of the land, which prior to the regeneration project was subdivided into fragmented lots with different owners, creating a de facto barrier to the area's rationalisation. A further 25 million Euro was spent for sediment remediation costs. For the development phase as such, the design costs amount to 175 million Euro with construction costs exceeding 1.3 billion Euro, while a further 100 million Euro was spent on public works discounted against the urbanisation fees. These fees amounted to about 257 million Euro. The Porta Nuova development project **regenerated an abandoned railway yard in the north of the city, in a semi-central location and neuralgic** for the transport system and connections. In the early years 2000, this yard was standing derelict; it was a brownfield representing an open wound in the urban fabric which was adversely affecting the area's quality of life, social cohesion, wellbeing, safety, mobility efficiency and attractiveness.

The project involved the activation of what was, at its peak in 2012, **Europe's largest construction site (in a city centre)**, 170 thousand sqm in area, with contributions from 26 international design and architecture studios in collaboration with 259 Italian studios, 10 general construction companies and 120 manufacturers and suppliers, with a workforce of over 1,300 on site in the year when work was at its height.

This began the creation of a **new greenfield, consisting in a neighbourhood centred on community well-being and sustainability, whose development continues today.** The activities organised by Fondazione Riccardo Catella, a non-profit organisation based in the heart of the neighbourhood active since 2005, are particularly significant in this area. It promotes a culture of sustainability within the community and supports projects to improve urban space and public green areas, thus helping to improve urban life and the

social fabric within which it operates. The Fondazione was thus already providing a location open to the community at the time when the neighbourhood was still a building site, making it the first positive sign of what the Porta Nuova regeneration was to bring.

Over the years the Fondazione has promoted many other initiatives in the neighbourhood, including the multiannual "I Progetti della Gente" programme of cultural and public space improvement projects, which have generated a number of measures to improve the quality of urban life thanks to inputs from residents in various parts of Milan, or projects like "Il parco dei diritti dei bambini", "I bambini disegnano la città" (2009) and "I cantieri dei bambini" (2010), organised to place girls and boys at the centre of the neighbourhood and enable them to promote its improvement. In this context, in 2018 BAM (Biblioteca degli Alberi di Milano) was opened through a public-private partnership, signed in 2019 by the Municipality of Milan, COIMA (as developer) and Fondazione Riccardo Catella (as manager). BAM provides an excellent model, unique within Italy, and a virtuous example of the management, maintenance, cleaning, security and cultural events programming of a public space.

The 2nd development phase, regenerating an additional area of 264,000 m² (24% of the total for the regeneration project overall) further improves public spaces, infrastructures and road networks. Amongst other features, a further 20,000 m² of cycle-pedestrian spaces will be created (an increase of +15.2%).

This investment, together with a unified planning process in collaboration with public actors and residents, has enabled the development of a modern, international neighbourhood with a GBA (Gross Building Area) of **more than 1.1 million m²**, successfully **combining macro-functions** including offices, residential buildings, a park and green areas, buildings to accommodate arts and cultural events and a retail space.

INVESTMENTS FOR THE REGENERATION OF PORTA NUOVA PHASE 1 AND 2 MAIN AREAS OF INVESTMENT

(€mIn), 2003-2026

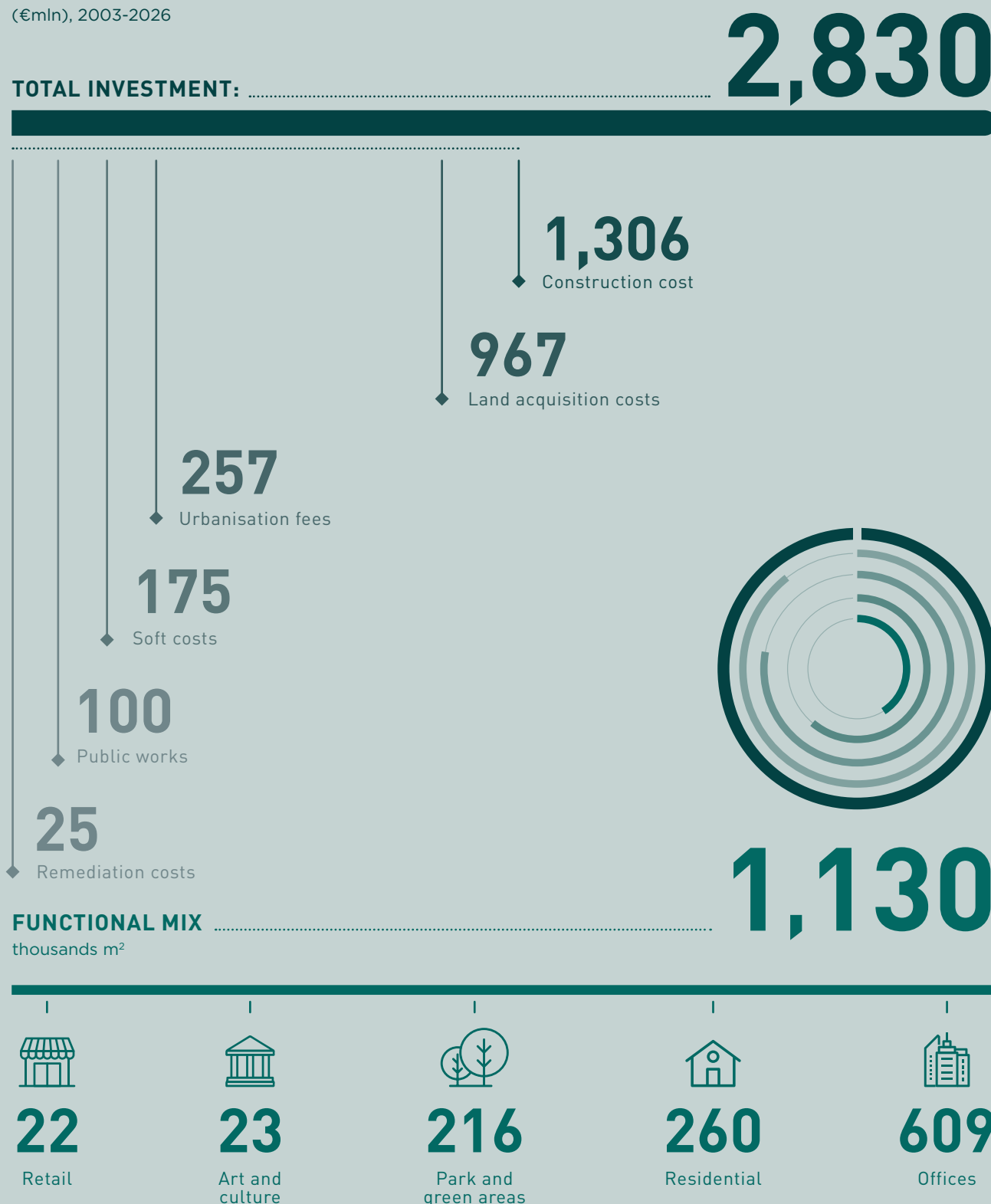


Figure 1. Value of investment and breakdown for the main construction sites of expenditure and total gross building area by the main functions (million Euro and thousand m²). Source: elaboration by The European House - Ambrosetti and Politecnico di Milano - Tiresia using COIMA data, 2022.

At the same time, investments have taken place continually over a period of more than 20 years, during which there have also been times of economic crisis and difficulty for the construction and real estate sector and for the Italian economy overall.

Porta Nuova's contribution has been particularly important in these difficult times, as it has helped to support the sector in a counter-cyclical way and encouraged the flow of international capital towards the area and into the economic system. In particular, COIMA opened the Porta Nuova Garibaldi construction site in September 2008, exactly coinciding with the global financial crisis triggered by the Lehman Brothers crash. Phase 1 of the Porta Nuova regeneration continued **over the next 9 years without interruption, with an investment of over 1 billion Euro.**

During that time, the value added of the construction sector in Italy collapsed from more than 80 billion Euro in 2008 to less than 47 billion Euro in 2014, only recovering to just over 52 billion Euro in 2019.

More recently, **construction works have progressed unabated even when faced with new shocks such as the outbreak of the Covid 19 pandemic, supply chain disruption - which hit the building sector particularly hard - and the effects of the Russia-Ukraine war. In fact, in 2018 COIMA launched development Phase 2 with an additional investment of circa 600 million Euro.**

Overall, the regeneration project is unsurpassed in terms of numbers and records on the national and European level.



PORTA NUOVA ▶



1st urban construction site in Europe in a historic centre by size, with over

170K m²



€ 2,8bln of investments¹



29 LEED-certified **buildings**, including the 1st LEED-registered building in Italy, and 1st urban regeneration project to achieve **Leed and Well for Community** certification worldwide



250 since 2019 **over 250 free events** each year designed and produced by BAM, involving **130,000 people**



1st **non-fenced park** (BAM) by size in the centre of Milan

90K m² of public green areas **160K m²** of paved pedestrian areas

5km of bicycle lanes created



26 **international** design and architecture studios

259 **Italian** studios



231m Unicredit Tower, Italy's **tallest skyscraper**

148m Solaria Tower, Italy's **tallest residential** building

¹Sum of the investments in Porta Nuova's construction phase (phase 1) and the estimated cost as of 2026 (phase 2).

02

OBJECTIVES AND METHODOLOGY OF THE STUDY

OBJECTIVES AND METHODOLOGY OF THE STUDY

The study set out to answer the question:

“what are the impacts and contribution to value creation that the Porta Nuova urban regeneration process has generated and activated in the area, the surrounding neighbourhoods, the city of Milan and the country?”

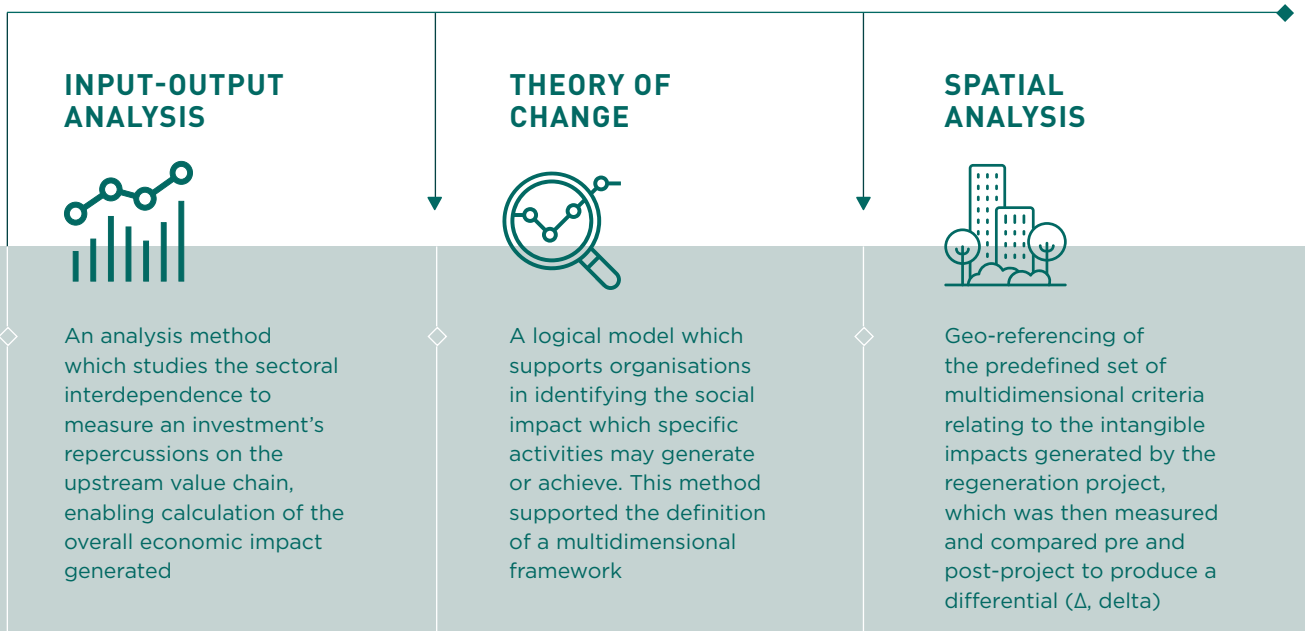
To do so, The European House – Ambrosetti and Tiresia/Politecnico di Milano have developed a carefully structured methodology based on international guidelines for assessing the impact of urban regeneration projects involving multiple construction sites.

The first step consisted of **engagement of and listening to stakeholders**, with about **50 one-to-one interviews and focus groups** and the administration of **more than 100 questionnaires**. The actors interviewed included both stakeholders within the COIMA organisation and external stakeholders involved in or impacted by the regeneration process, including investors, local government, tenants, architects, members of the public and non-profit

organisations within the area. Further analyses of the stakeholders measured their ability to influence the project, their interest in the project and the resources exchanged, helping to define the connections which make up the relationships between the stakeholders themselves.

The study was also supported by **an analysis of the documentation available and the collection of input data from more than 30 sources and databases**. These included: economic and financial data, sustainability reports and floor plans supplied by COIMA; data from the SISI portal (Sistema Statistico Integrato, the online platform for the management and dissemination of municipal statistics set up by the Statistics Unit of the Municipality of Milan); Open Data portals of the Municipality of Milan; data supplied by the Agenzia delle Entrate and Chamber of Commerce of Milan, Monza Brianza and Lodi, ...; and data from the main international databases.

Data from these sources provided the basis for a series of analyses, using the most suitable methodology for each worksite. The main methods were:



With the information collected from the stakeholder interviews and analysis of the documentation, it was possible to identify **5 distinctive features which characterise the Porta Nuova urban regeneration process**:

1

PIONEERING

Attracting for the first time in Italy substantial national and international investment in an urban regeneration project, following an organic and integrated development and pioneering design and implementation choices

2

DIFFUSION

Establishing a new modern and international district in a semi-central and neuralgic area, triggering a concentric impact in the surrounding neighbourhoods and the entire city

3

CONTINUITY

Developing a programme of continuous interventions over time that allows the initial “graft” to be reinforced to generate a greater and wider impact

4

SUSTAINABILITY

Focusing on sustainability at all levels of intervention, embracing environmental, social and cultural aspects and developing industry-leading standards and best practices for the whole sector

5

IMPACT INTEGRITY

Focusing on the social, environmental and governance effects generated by the intervention, embedding since the development strategy an impact that is intentional, additional and measurable

These distinctive features cover a series of contexts which constitute **value creation domains**: the investment for the realisation of the regeneration project; the innovative, sustainable design choices and construction solutions adopted; the partnership with the public sector and the public amenities created; the wish to create a new, attractive destination for Milan; and the focus on the needs and wellbeing of the community and the public.

These domains are able to generate **tangible and intangible multidimensional impacts**. More specifically, the methodology applied identifies and measures **9 different dimensions of impact**:

economic, occupational, social, quality of life, cultural, educational, innovation, environmental and governance.

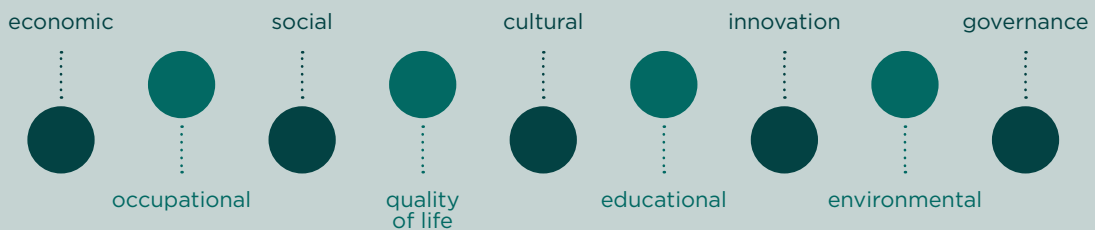
An analysis was also performed to **spatialise the impacts**, mapping the diffusion and intensity of the different dimensions of impact analysed at different territorial scales, starting from the perception of their effects as reported by the stakeholders interviewed and using a discrete quantitative scale.

To conclude, the impacts were reclassified on the basis of their **contribution to the achievement of the United Nations Sustainable Development Goals (SDGs)**.

PORTA NUOVA DISTINCTIVENESS ▶



IMPACT DIMENSIONS ▶



SPATIALIZATION OF THE IMPACT & SDGs ALIGNMENT

Figure 2. Impact measurement methodology applied to the Porta Nuova urban regeneration project (schematic). Source: elaboration by The European House – Ambrosetti and Politecnico di Milano, 2022.



03

**THE CONTRIBUTION OF
PORTA NUOVA
REGENERATION TO THE
ACHIEVEMENT OF
THE SUSTAINABLE
DEVELOPMENT GOALS**

THE CONTRIBUTION OF PORTA NUOVA REGENERATION TO THE ACHIEVEMENT OF THE SUSTAINABLE DEVELOPMENT GOALS

The study identified and measured the urban regeneration project's contribution to the creation of multidimensional value shared with the territory and stakeholders, considering both tangible and intangible impacts. The study's findings are set out below, with the impacts generated pooled into **4 key meta-messages**. These impacts have directly **contributed to the UN Agenda 2030's Sustainable Development Goals**, as explained in the below boxes:



Porta Nuova is characterised by pioneering elements of environmental sustainability that have enabled the dissemination of innovative urban and architectural culture in Italy. This focus on environmental sustainability aligns the project with goals: 6 - Ensure availability and sustainable management of water and sanitation for all; 7 - Ensure access to affordable, reliable, sustainable and modern energy for all; 9 - Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation; 12 - Ensure sustainable consumption and production patterns; and 13 - Take urgent action to combat climate change and its impacts.



Thanks to its constant focus on stakeholders' needs, the Porta Nuova regeneration project has, with intentionality, generated additional, measurable intangible value through a multidimensional framework. This has enabled it to consider and respond to the challenges set out in goals number: 3 - Ensure healthy lives and promote well-being for all at all ages; 4 - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all; 5 - Achieve gender equality and empower all women and girls; 10 - Reduce inequality within and among countries; 11 - Make cities and human settlements inclusive, safe, resilient and sustainable; 12 - Ensure sustainable consumption and production patterns; 13 - Promote actions, at all levels, to combat climate change; and 17 - Strengthen the means of implementation and revitalise the global partnership for sustainable development.



The Porta Nuova urban regeneration has generated economic and employment value continually, during both the construction and the operativity phase, contributing to goal number 8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.



The regeneration of Porta Nuova has triggered growth in the area's attractiveness and vibrancy, creating a "destination". in line with the underlying challenges of goals number 8 - sustainable economic growth - and 11 - Make cities and human settlements



For each of the four key messages, the initiatives and outcomes that contributed to the SDGs outlined above will be made explicit, with regard to environmental, social and economic impacts, respectively.

Continuous **economic value creation**, also in turbulent times
(**>€10 bln** since 2008)

08



DECENT WORK AND ECONOMIC GROWTH



Contribution to **job creation**
(**5,000 FTEs** since 2008)

08



DECENT WORK AND ECONOMIC GROWTH



Protection of traditional roots and **proximity promotion**
(**1st LEED and WELL for Community certification WORLDWIDE**)

11



SUSTAINABLE CITIES AND COMMUNITIES



06



CLEAN WATER AND SANITATION



07



AFFORDABLE AND CLEAN ENERGY



Reduction of environmental footprint thanks to innovative technologies
(**1,015 TON DI CO₂** saved)

09



INDUSTRY, INNOVATION AND INFRASTRUCTURE



12



RESPONSIBLE CONSUMPTION AND PRODUCTION



13



CLIMATE ACTION



Vibrant and highly attractive business, retail and residential centre
(**3rd** most vibrant neighbourhood in Milan)

08



DECENT WORK AND ECONOMIC GROWTH



11



SUSTAINABLE CITIES AND COMMUNITIES



Innovative PPP model to manage public areas and promote public interest with BAM
(**1st CASE** in Italy)

17



PARTNERSHIPS FOR THE GOALS



- ECONOMIC
- OCCUPATIONAL
- SOCIAL
- QUALITY OF LIFE
- CULTURAL
- EDUCATIONAL
- INNOVATION
- ENVIROMENTAL
- GOVERNANCE

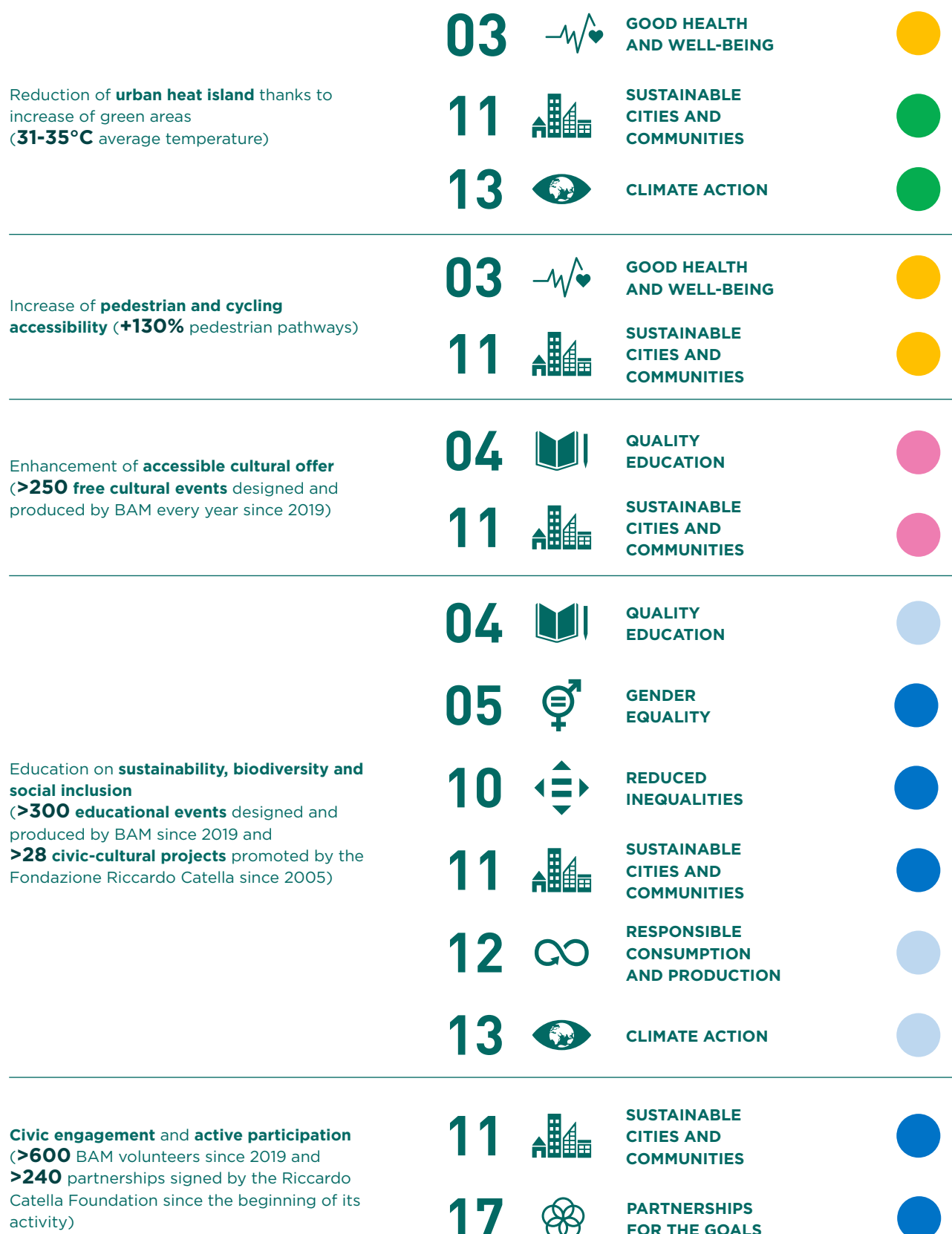


Figure 3. Alignment between the impacts generated by the Porta Nuova project and the Sustainable Development Goals (SDGs). Source: elaboration by Politecnico di Milano and The European House - Ambrosetti on the basis of various sources.

1

PORTA NUOVA REGENERATION PROJECT IS CHARACTERISED BY PIONEERING ELEMENTS OF ENVIRONMENTAL SUSTAINABILITY THAT HAVE ENABLED THE DISSEMINATION OF INNOVATIVE URBAN AND ARCHITECTURAL CULTURE IN ITALY

Sustainability has therefore been central throughout Porta Nuova’s development, ever since the origins of the project. The construction of the tunnel underneath piazza Gae Aulenti reduced traffic in the Isola neighbourhood and **increased green areas** from the 2,000 m² in the initial masterplan to the over 10,000 m² in the Stefano Boeri architect’s masterplan, in which the residential and commercial units in the via G. De Castilla area were moved into the outer belt in continuity with the Isola district, creating a second green area in addition to the Biblioteca degli Alberi Milano (BAM) Park.

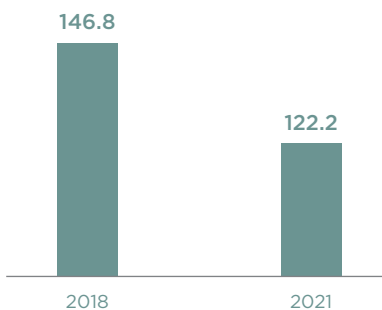
In the revised masterplan via G. De Castilla itself formed a hinge between the park and the historic neighbourhood and was designed to encourage slow mobility thanks to excellence bicycle and pedestrian accessibility. Moreover, compared to 2012 biodiversity, measured by the proportion of green areas, showed a positive

differential of +150% during the period: today the average figure is 22 m²/resident, 4 m²/resident above the Milan average. At the same time, over the same period of reference, the surface temperature in the area fell from 39-44 °C in 2011 to 31-35 °C in 2021, thanks to the creation of areas of greenery which have also had a positive impact on the surrounding districts¹.

Sustainability has thus been central throughout Porta Nuova’s development and today the neighbourhood is still recording constantly improving environmental performance. Compared to 2018, by 2021 drinking water consumption in the Porta Nuova buildings had been reduced by 16.8%. If all Italy’s residential or office buildings had achieved the same water performance as those at Porta Nuova, in 2021 the equivalent of the water consumption of 4.3 million Italian households (17.3% of the total) would have been saved.

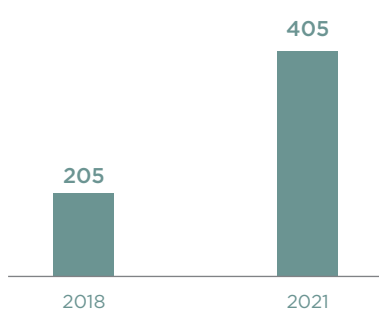
-16.8%

▼ **Drinking water consumption**
(thousands di m³), 2018-2021



+97.5%

▲ **Installed photovoltaic panel power**
(kW), 2018-2021



-8.8%

▼ **Electricity consumption**
(GWh), 2018-2021

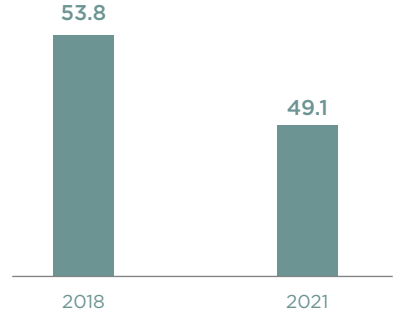


Figure 4. Drinking water consumption (thousands of m³), power of photovoltaic panels installed (kW) and electricity consumption of the Porta Nuova buildings (GWh), 2018-2022. Source: elaboration by The European House - Ambrosetti, on COIMA data, 2022.

¹These topics are also addressed in chapter "2 - thanks to its constant focus on stakeholders' needs, the porta nuova regeneration project has, with intentionality, generated additional, measurable intangible value through a multidimensional framework" in relation to the improvement of the quality of life.

With regard to energy use, Porta Nuova provides a study case for urban energy management, with very few comparable examples in Italy or in Europe.

In fact, the Porta Nuova energy system generates the electricity and the heating and cooling flows needed solely by means of a **geothermal heat pump** and a system of **solar panels** installed on the buildings, with only residual intake of electricity from external sources. Therefore, within the entire perimeter of Porta Nuova **no fossil fuels are used and there are no heating boilers**. On the contrary, COIMA has successfully made sustainable use of the energy sources already present on site, starting from the **groundwater** underneath the perimeter (which, since it retains a constant temperature of 15°C all year round, is particularly suitable for and compatible with energy efficiency needs) and the **solar radiation** striking the buildings, thanks to the installation of solar panels on constantly expanding areas.

During 2019-2021 the **power of the photovoltaic panels installed on the Porta Nuova buildings almost doubled** (+97.5%), thanks in part to the developments in the technology since the start of the project and the improvements in the conditions of purchase of photovoltaic panels.

Not only is all electricity obtained from 100% renewable sources, but between 2018 and 2021, **the electricity consumption of the Porta Nuova buildings was reduced by 8.8%**, a saving equivalent to 1,015 tonnes

of CO₂, or the annual emissions of 390 family cars. Therefore, Porta Nuova's electricity savings enabled the avoidance of social costs of €380 thousand in 2021. At the overall project level, in 2018, the Porta Nuova neighbourhood won the **MIPIM Award as Best Urban Regeneration Project**, due to the particular care taken over the neighbourhood's design and construction.

In terms of architectural design, the Porta Nuova project has promoted the adoption of architectural standards at the international leading edge in Italy and helped to establish the binomial Milan-Architecture. The number of **architecture publications concerning Milan** rose from **2.9%** of the total (relating to the main EU cities - Milan, Paris, London and Berlin) in 2000 to **10.9%** of the total in growth rate in absolute terms 3.3 times that of Paris, 4.8 times that of Berlin and 5.2 times that of London. With regard to academic publications on architecture, the Porta Nuova project provided a significant spur to the dissemination of urban and architectural culture in Milan, with positive repercussions for the city as a whole.

In fact, the Porta Nuova project was mentioned in **11.7%** of publications in the first decade of the new millennium and in **7.7%** of the total between 2010 and 2019. In 2003, when work on the area's masterplan began, Porta Nuova was the subject of **16.2%** of all 2021 academic publications on architecture.

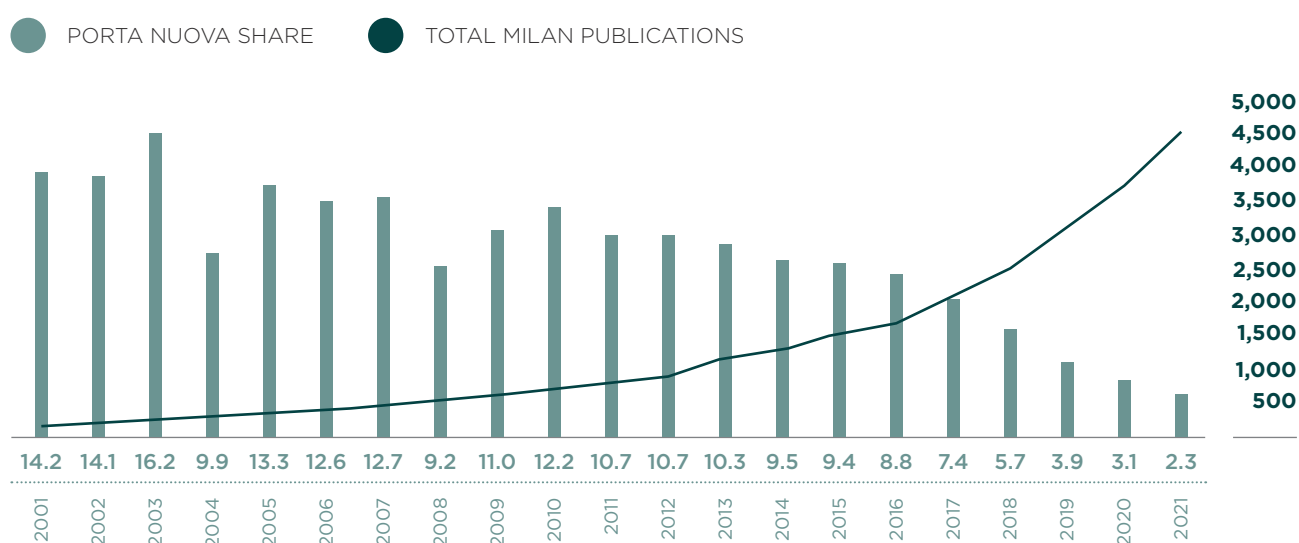


Figure 5. Academic publications on architecture in Milan (right-hand axis, orange) and share of Porta Nuova (Porta Nuova as number and % of total) 2001-2021. Source: elaboration by The European House - Ambrosetti and Politecnico di Milano - Tiresia using Scopus data, 2022.

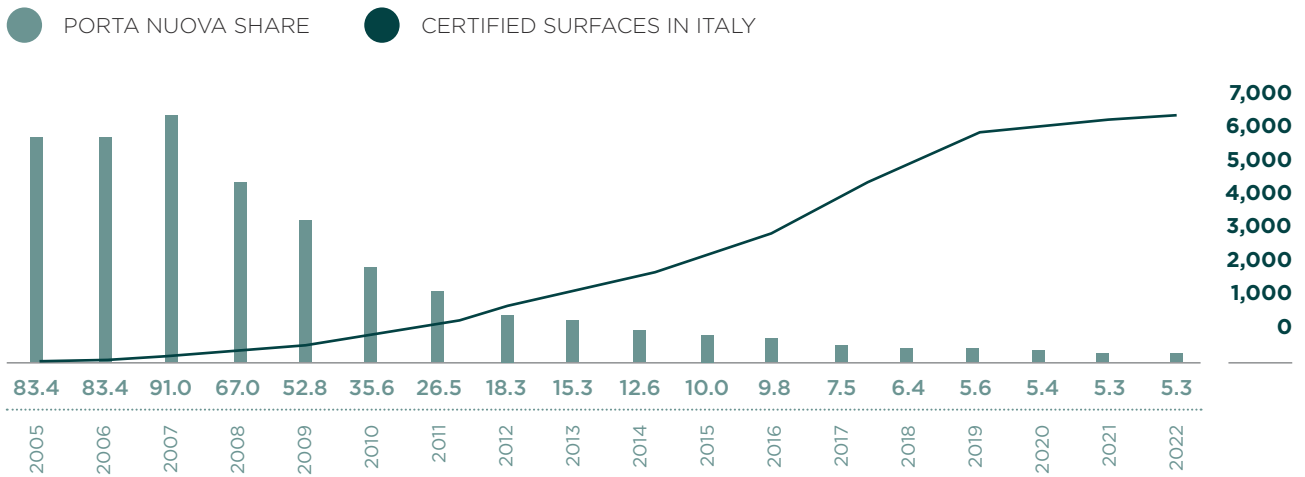
During the development of Porta Nuova, **26 international design and architecture studios** collaborated with **259 Italian studios**, thus aiding the adoption of international best practices in architectural design in Milan and Italy and generating positive spill overs in terms of improvement in professional standards in the sector.

Individual buildings at Porta Nuova are recognised internationally for their distinctiveness and construction qualities. First and foremost, the **Bosco Verticale** received the **International Highrise Award 2014/2015** (vs. 26 candidate projects from 17 countries and 5 finalists) and was named **Best Tall Building Europe 2015** (vs. 45 skyscrapers completed in 2015 in Europe) and **Best Tall Building Worldwide 2015** (vs. 115 skyscrapers completed in 2015 in the World) and it was included in the list of the world's **50 most iconic skyscrapers** of the last 50 years in 2019. **Torre Unicredit** is **Italy's tallest skyscraper** (13th tallest in EU-27) and the **1st skyscraper** built in Italy over 200 m tall (12th in EU- 27) and it was also amongst the 9 skyscrapers nominated for **Best Tall Building Europe 2013**.

The **Solaria and Solea towers** were included amongst the 16 skyscrapers **nominated for Best Tall Building Europe 2014** and, finally, the Torre Solaria is currently **Italy's tallest residential building**.

Porta Nuova has provided a model and fostered expertise in LEED certification, benefiting the entire Italian construction sector. In fact, in 2004 **not one building** in Italy held LEED certification or registration in Italy, although this kind of environmental certification was already widespread abroad, especially in the USA and the UK. **Torre Unicredit** was the **1st building in Italy** to obtain LEED certification, and the buildings constructed around the perimeter of Porta Nuova have also gradually been registered and certified.

In 2007 **Porta Nuova** accounted for **91%** of the total area for which **LEED certification had been applied** for in Italy. Porta Nuova therefore started a **virtuous path for the entire national construction sector** and today Italy, with about **6.3 mln m²** certified, is in **3rd** place within the EU-27 in terms of LEED certified surfaces.



The impact of this contribution to the adoption of LEED certification in the Italian construction industry is of the utmost significance.

In **2021**, the about **400 Italian LEED-certified buildings**, considered all together, enabled the saving, compared to other new builds during 2004-

2021, of **202 GWh of electricity**, a figure equivalent to the annual household **electricity consumption** of the entire province of Sondrio.

These energy savings therefore avoided the equivalent emission of **41,900 tonnes of CO₂** and consequent social costs¹ of **€6.2 mln**.

Figure 6. LEED certifications in Italy, trend of areas with certification LEED applied for² and Porta Nuova share (thousands of m² and Porta Nuova as % of total), 2005-2022. Source: elaboration by The European House - Ambrosetti using CBG Italy data 2022.

¹Such as economic damage caused by climate change, harm to people's health and loss of agricultural output and labour productivity.

²Only applications which passed the assessment process and obtained LEED certification were considered. Source: elaboration by The European House - Ambrosetti, on CBG Italia data.

Moreover, the adoption of LEED certification in Italy also avoided water consumption of at least 743,000 m³, equivalent to the annual water requirement of 2,340 households.

Apart from building-level LEED certification, Porta Nuova is the first neighbourhood in the world to hold LEED and WELL For Community certification, confirming its compliance with both environmental and social wellbeing criteria. To conclude, the Porta Nuova buildings were the first in Italy to obtain certification

with WiredScore, the protocol that certifies the digital connectivity and smart technologies in apartments and offices, proving the quality of the network infrastructure inside buildings and the absence of redundancy in its design.

These factors are becoming more and more important in the construction sector, especially for multinational corporations for which connectivity and IT security are central to business strategies.

PORTA NUOVA ▶



2007 Porta Nuova accounted for 91% of the total area for which **LEED certification** had been applied for **in Italy**

2022 Italy is in **3rd place within the EU-27 in terms of LEED certified surfaces**

2018 **MIPIM AWARD**
Best Urban Regeneration Project



Last but not least, Porta Nuova is the first neighbourhood in the world to have achieved LEED and WELL for Community certifications.

Porta Nuova has provided a model and fostered **expertise in environmental certification**, benefiting the Italian construction sector as a whole

26 international design and architecture studios

259 Italian studios

INTERNATIONAL BEST PRACTICES IN ARCHITECTURAL DESIGN

BOSCO VERTICALE ▶



2014 **INTERNATIONAL HIGHRISE AWARD**

2015 **BEST TALL BUILDING EUROPE**

2015 **BEST TALL BUILDING WORLDWIDE**

International awards for **DISTINCTIVENESS AND CONSTRUCTION** qualities

TORRE UNICREDIT ▶



1ST LEED REGISTERED BUILDING IN ITALY

2

THANKS TO ITS CONSTANT FOCUS ON STAKEHOLDERS' NEEDS, THE PORTA NUOVA REGENERATION PROJECT HAS, WITH INTENTIONALITY, GENERATED ADDITIONAL, MEASURABLE INTANGIBLE VALUE THROUGH A MULTIDIMENSIONAL FRAMEWORK

Intentionality is defined as the determination to **act responsibly and generate positive social impact**, starting from a recognition of the needs and interests of the stakeholders involved in the various phases of the project's development, and of those who experience its positive and negative effects. From the earliest phases of the development of the project, COIMA showed its firm intention to give serious consideration to the intangible impacts generated by the urban regeneration process - especially in terms of **quality of life and cultural, social and educational impact**.

In particular, from the outset of the project there was a willingness to engage with local actors in order to map their needs and expectations, and a preference for a local procurement chain which, as mentioned below, tended to create jobs locally.

At the same time, COIMA has always adopted a proactive approach in promoting the culture of urban regeneration and sustainability within the city and nationally, and in many cases this has helped to grow knowledge and expertise within the supply chain and the local community.

COIMA's attention to stakeholders' points of view developed in parallel with the Fondazione's activities and during 2006 and 2007, also in the light of an initial adverse response to the project on the part of residents in the Isola neighbourhood, it **organised more than 300 meetings with local actors at the Fondazione building**.

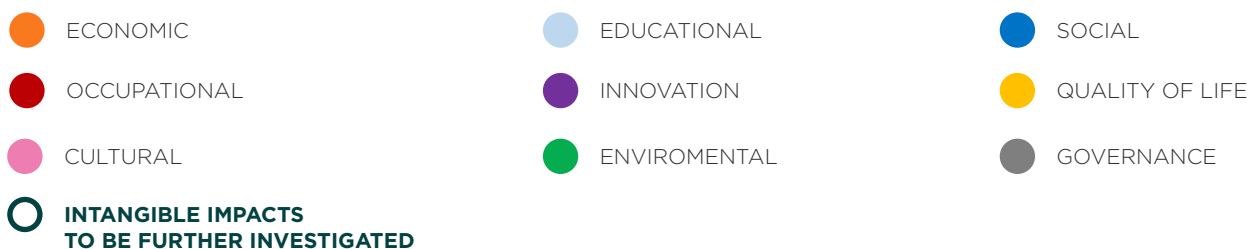
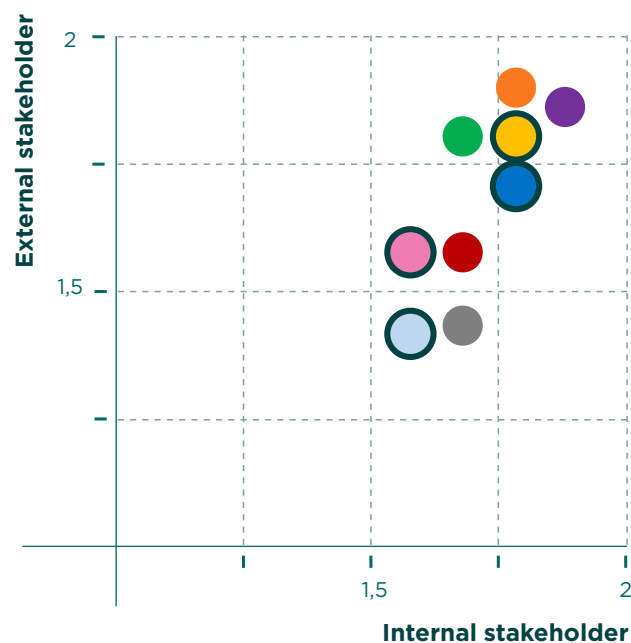
During these meetings, the stakeholders concerned

put forward a number of requests, including: maintaining local road network; protection and expansion of the green areas within the neighbourhood; safeguards for local shops and consultation with local associations to benefit from their experience; and integration of the new buildings under construction with the architectural style of the historic neighbourhoods.

This intensive sequence of meetings gave birth to a **co-design model** with the active involvement of public actors, associations and citizens, who cooperated with COIMA and the architects on a revision of the masterplan for the area's development.

First and foremost, in the preliminary phase of this study stakeholder engagement was once again fundamental: more than 100 actors within the COIMA group and from the local community were involved by means of questionnaires, in order to assess the size of the impacts generated by the project in relation to the initial objectives set by COIMA.

This analysis revealed a full alignment between the impacts identified by external stakeholders and the objectives set by COIMA and stated during the interviews. With regard to the intangible value generated by the project, in particular, impacts on quality of life and social impact were the categories considered most important by internal and external stakeholders.



This initial survey of the alignment between the impact objectives and stakeholders' perception of them was then used to produce a **model to map and spatialise the diffusion of the perceived intangible effects**. The questionnaires and interviews provided an understanding of how the various effects recorded within the Porta Nuova district are perceived in the surrounding neighbourhoods (the so-called NILs, "Local Identity Cores") and across the city of Milan.

The replies received were used to develop **impact maps**, which show how the various impacts are

perceived at the different territorial scales adopted. Positive effects can be seen to be propagated from the Porta Nuova neighbourhood towards other areas of the city: the social and cultural impacts were those with the greatest ability to generate positive results for whole city of Milan, thanks to knock-on impacts arising from the implementation of social projects also in other parts of the city. However, the cultural impact and effects in terms of quality and life appear to be perceived with greater intensity within the neighbourhood itself than in the other areas of the city considered.

Figure 7. Alignment between internal stakeholders' objectives and external stakeholders' perception. Source: elaboration by the Politecnico di Milano on the basis of the online interviews, 2022.



-1; the project generated a negative impact; **0**; the project did not generate negative and/or positive impacts; **+1**; the project generated a positive impact; **+2**; the project generated a very positive impact.

Figure 8. Spatial analysis of the perception of the impact on the Porta Nuova district, in surrounding neighbourhoods and throughout the city of Milan. Source: elaboration by Politecnico di Milano on the basis of the online interviews, 2022.

FONDAZIONE RICCARDO CATELLA FOR THE COMMUNITY

The activities organised by **Fondazione Riccardo Catella**, a non-profit organisation based in the heart of the neighbourhood active since 2005, are particularly significant.

Since then, the Fondazione has promoted a culture of sustainability within the community and supported projects to upgrade urban space and public green areas, thus helping to improve urban life and the social fabric within which it operates.

Over the years, the Fondazione has built good, lasting bonds with the community, becoming an active local player and supporting the area's cultural, economic and environmental development. From the outset, the Fondazione has always aimed **to place residents at the centre of the neighbourhood's development and regeneration process**.

The many projects undertaken in the neighbourhood included the renovation, in 2006, of the Fondazione's own headquarters, which restored a piece of industrial architecture to the community and provided it with a location where a large number of free cultural events, open to all, have been held.

In the same context, since 2008, under a pilot agreement signed with the Municipality of Milan, the Fondazione has managed, maintained and run activities in the public garden at Via G. de Castillia, 28, an area of about 4,000 m² created to provide the neighbourhood's residents with a new green space. Over the years the Fondazione has promoted many initiatives in the neighbourhood, including the multiannual "I Progetti della Gente" programme of cultural and public space improvement projects, which have generated a number of measures to improve the quality of urban life thanks to inputs from residents in various parts of Milan, with projects like "Il parco dei diritti dei bambini", "I bambini disegnano

la città" (2009) and "I cantieri dei bambini" (2010), organised to place girls and boys at the centre of the neighbourhood and enable them to promote its improvement.

Furthermore, since 2012 the Foundation has been promoting the "MiColtivo, Orto a Scuola" program with the aim of encouraging the new generations to have a correct and healthy diet through the real experience of educational vegetable gardens located in the courtyards of the city's public schools.

In 2015, the year of the Expo held in Milan on the theme of "Feeding the planet", Fondazione Riccardo Catella actively engaged the community in the creation of Wheatfield by Agnes Denes, an environmental artwork (produced in association with Fondazione Nicola Trussardi) installed in the construction site area which pointed to its destiny as a public park. During the years of work to prepare the BAM park, the Fondazione also organised a programme of initiatives for city residents to explain its evolution and enable them to play an active part in its construction through guided tours, open days and free workshops for children and families.

Additionally, in 2018 and 2019 it ran the Porta Nuova Smart Camp, a project to provide new opportunities for growth and to enable children with serious medical conditions and disabilities to enjoy Porta Nuova's public spaces and green areas.

Last but not least, since 2019, the Riccardo Catella Foundation, thanks to the public-private partnership with the Municipality of Milan and COIMA, has been responsible for the cultural programming, maintenance and safety of the BAM - Biblioteca degli Alberi Milano park.



Secondly, the generation of positive social value requires a higher level of investment, to overcome some of the shortcomings of conventional market mechanisms.

This investment also enables the development of innovative models for the provision of solutions to community needs which consist in the following factors:

LONG-TERM COLLABORATION AND SHARED OBJECTIVES AND GOALS ▶

The Municipality organised the international call for projects for design of the park, while COIMA, in close association with the Municipality, undertook its construction. In 2019, COIMA, the Municipality of Milan and Fondazione Riccardo Catella signed a public-private partnership (PPP) agreement which awarded the Fondazione a 10-year mandate for the management, through the BAM project, of every aspect of the park's life, including not only its maintenance, cleaning and security but also the organisation of a cultural programme and the creation of a schedule of more than 200 events a year, educational activities and public engagement, all entirely free of charge. Over time, this has guaranteed stability and supported the determination to pursue common goals.

MUTUAL TRUST ▶

The sharing of objectives and goals and the collaboration's long time horizon have created a climate of trust between the parties, which has contributed to the success of the collaboration and of the BAM project.

CONSTANT DIALOGUE AND DISCUSSION ▶

The successful management of this partnership has been due to the desire of both parties to engage in frank dialogue in order to find common ground and reach agreements. As the Municipality wished, the park has continued to be an open, accessible public place where events are free, placing them within reach of the entire population. The success of the Park's management has been partly due to the large amount of work put into the BAM cultural programme, to build and nurture a wide-ranging, varied local network involving large private corporates, major national and international cultural institutions (such as Filarmonica della Scala, Orchestra I Pomeriggi Musicali and Piccolo Teatro di Milano), public bodies (Municipality, City, Region and Ministries) and Private Foundations (e.g. Fondazione Cariplo).

SHARING COMPETENCES AND CONTAMINATION BETWEEN PUBLIC AND PRIVATE SECTORS

In addition to the tangible resources generated, the project has triggered a process of contamination in terms of competences and awareness between the public and private sectors (for example, the park contains more than 100 plant species and Fondazione Riccardo Catella has run a large number of programmes within the BAM project to increase and protect urban biodiversity).

CITIZEN'S INVOLVEMENT ▶

The BAM project within Porta Nuova proves the importance of cultural activities as a means of urban regeneration and the activation of public spaces, and a driver for bringing people together and for social inclusion. Ever since 2019 the BAM project has worked constantly to build a wide, close-knit community of volunteers (609 since 2019), BAMFriends (1,476 since 2019) and event participants (more than 129,000 since 2019), who share the park's values, play an active part in its programme and support its maintenance, tending and cultural offering.

These underlying factors of its success provide the bases for constructing a public-private partnership model for the management of green urban areas **which can also be replicated in other contexts**. In particular, for a fruitful partnership the two actors should fulfil a number of characteristics. The private sector partner must be a **sound, reliable, impact-aware actor** willing to engage with the public and residents to achieve real integration with the community and generate intentional, additional impact. The local government partner must adopt a **proactive approach intended to enable collaboration** with a variety of actors. Residents expect a quality of management of public spaces which may be unsustainable for the local government system alone, so finding partners to support urban development may be the right solution.

The BAM park model has already attracted interest within and beyond the city of Milan, where dialogue with two other Italian cities for the model's replication has already begun. This illustrates the project's ability to reach beyond the physical boundaries of the neighbourhood and **expand its influence and best practices**.

Thirdly, a multidimensional framework was defined in order to measure the intangible value generated by the urban regeneration project. The criteria chosen for the **Quality of Life, Cultural, Social and Educational** areas of impact, which relate to more perceptive, qualitative aspects, were selected on the basis both of the interviews with internal and external stakeholders and a review of the scientific literature.

Specifically, a comparison was made between the situations before and after the regeneration project, considering both the area within a radius of a 15-minute walk (800 metres) from the barycentre of the Porta Nuova project and the area classified as C14 by the Italian Inland Revenue (OMI Zone).

The results are expressed as a differential (delta, Δ): to provide a uniform picture of the data available prior to the regeneration, the benchmark date of 2011/2012 was used, with 2021 as the post-regeneration date of reference. In view of the multidimensional nature of the criteria studied, a variety of sources were consulted (e.g. Landsat 5 and Landsat 8 Mission, Municipality of Milan Open Data, Municipality of Milan NILs databases, etc.).

A substantial increase and improvement in the parameters measured was noted for all four impact dimensions and all criteria, not just within the perimeter of the project area but also in the surrounding neighbourhoods, while services were also offered for the whole city of Milan.

The **Quality of Life** dimension aims to assess criteria relating to health, well-being, exercise and slow mobility. The Urban Heat Island criterion measured the **Land Surface Temperature (LST)** before and after the regeneration, considering summer data: in 2011 the average temperature was around 39-44 °C, while in 2021 it was around 31-35 °C, thanks to the creation of areas of greenery which have also had a positive impact on the surrounding areas.

URBAN HEAT ISLAND (°C) ►

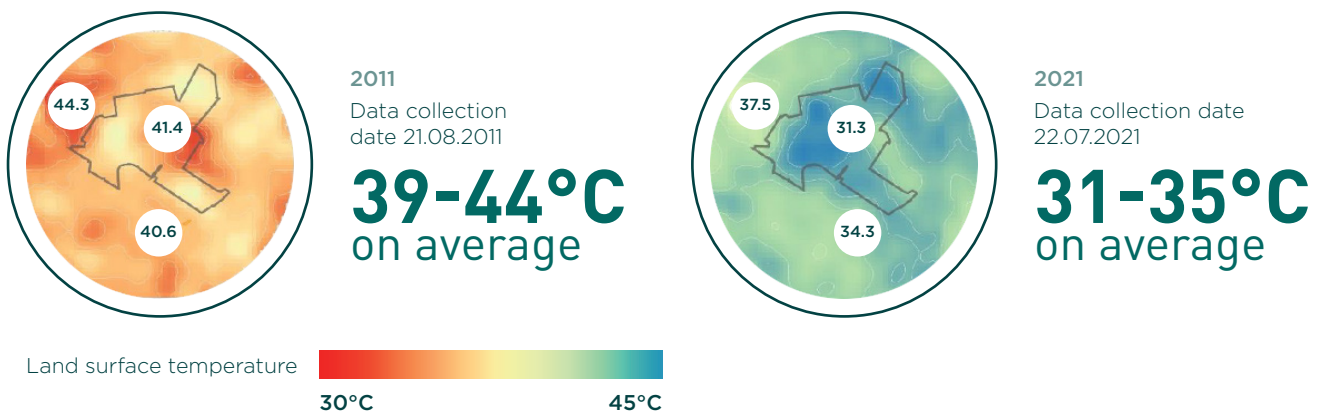


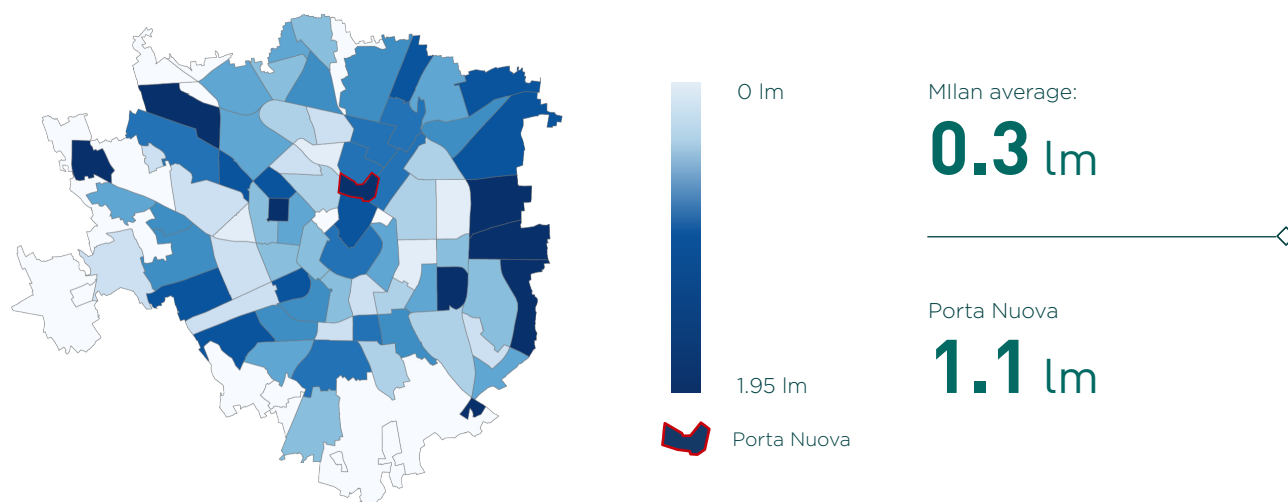
Figure 9. "Urban Heat Island" analysis. Source: elaboration by Politecnico di Milano on the basis of Landsat 5 and Landsat 8 Mission data.

Urban accessibility was measured with evaluation of both **pedestrian paths** and bicycle paths. There was a clear improvement in both the parameters examined, with a differential of +130% in the first case and +580% in the second, proving that COIMA's aim of reconnecting the Isola neighbourhood with the city of Milan was achieved also through the construction and promotion of sustainable mobility infrastructures. Moreover, the Porta Nuova neighbourhood has more cycle tracks per resident

(linear metres per resident) than the Milan average: 1.1 metres compared to 0.3 metres.

Another interesting finding is the increase in **biodiversity**, which measures the proportion of green spaces, achieved through the creation of the BAM park and the upgrading of other spaces to increase the provision of Ecosystem Services. The figures show a differential of +150% and an average of 22 m²/resident, which is 4 m²/resident more than the Milan average.

ACCESSIBILITY CICLING (lm of bicycle path per person) ▶



BIODIVERSITY (sqm of green areas per person) ▶

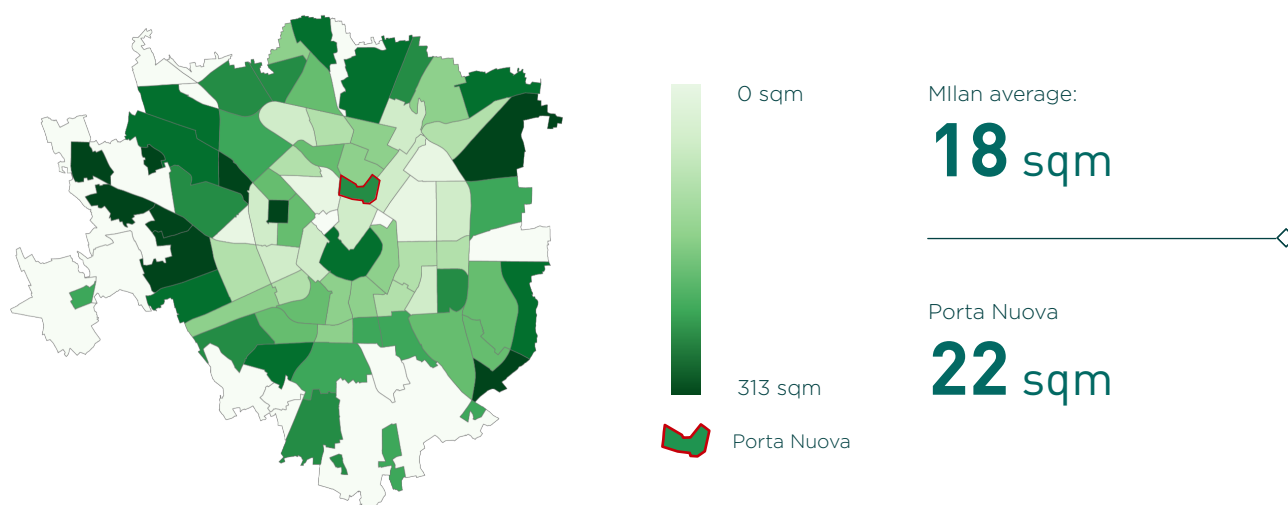
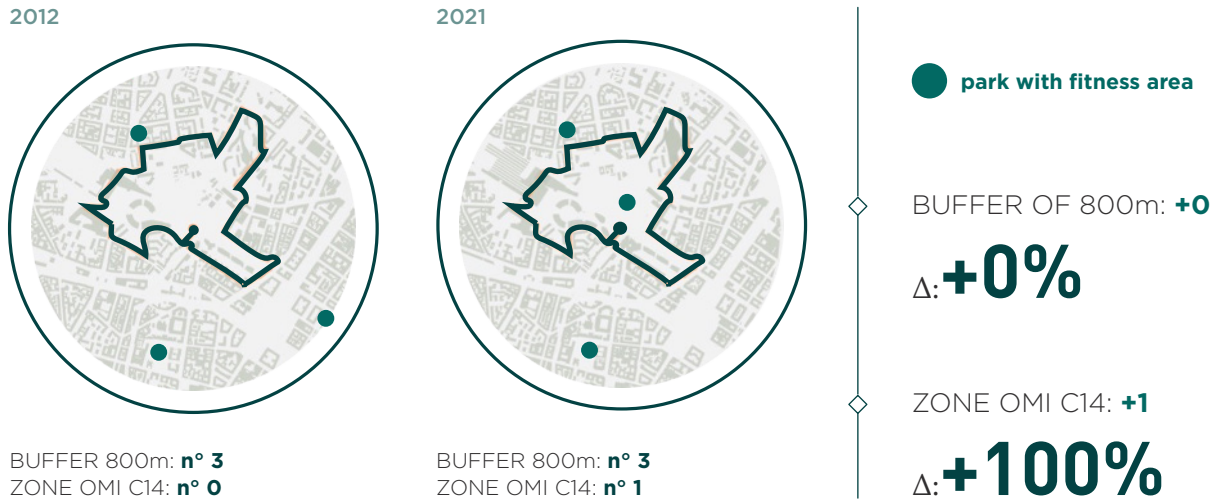


Figure 10. Analyses of “Bicycle paths” and “Biodiversity”. The analysis did not consider NILs with a population of less than 1,000 residents, and the results of outer NILs are shown. Source: elaboration by Politecnico di Milano on the basis of City of Milan Open Data.

Interesting results were also obtained for the criteria relating to both **Sports Places** (+100%) and **Restaurants** (+340%), which provided further proof of the **neighbourhood's vibrancy** and its **ability to attract different types of users** at different times of day.

PARK WITH FITNESS AREA (n°) ▶



RESTAURANTS (n°) ▶

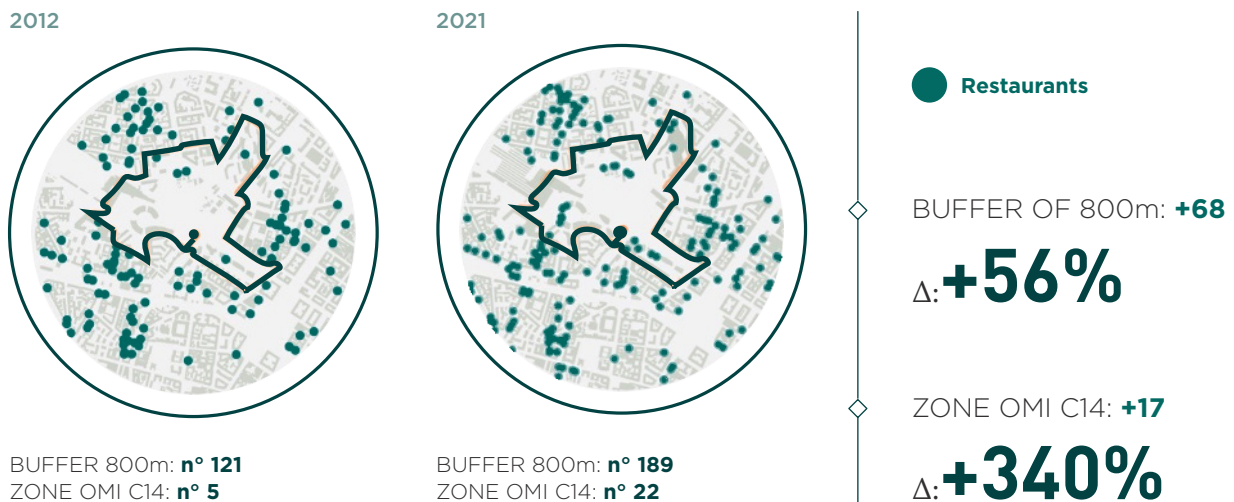


Figure 11. Sports Places” analysis. Source: elaboration by The European House - Ambrosetti and Politecnico di Milano - Tiresia using data from Municipality of Milan NIL databases, 2022.

Figure 12. “Restaurants” analysis. Source: elaboration by The European House - Ambrosetti and Politecnico di Milano - Tiresia using Open Street Map, 2022.



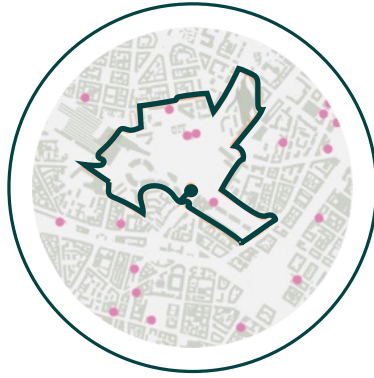
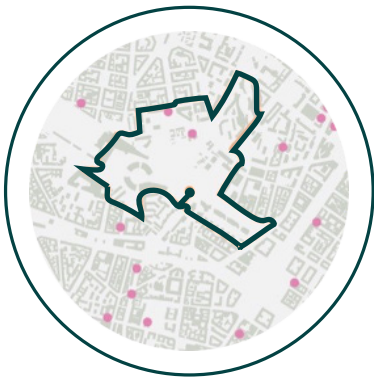
The aim of the **Cultural** dimension is to reinforce and extend the cultural resources present, enriching their diversity and fostering their intensity. Further to the area's regeneration, there was an increase in the number of **Cultural Places** (+100%) and also a rise in the coverage of Milan in academic publications, as already discussed. The BAM project, with events

inspired by the UN Agenda 2030 and subdivided into the #Openairculture, #Education, #Wellness and #Nature pillars, has made a major contribution to this dimension. Since 2019, BAM cultural programme initiatives have promoted 15 of the 17 Agenda 2030 goals, providing a total of 1,236 SDG focuses.

CULTURAL PLACES (n°) ▶

2012

2021



BUFFER 800m: **n° 15**
ZONE OMI C14: **n° 2**

BUFFER 800m: **n° 16**
ZONE OMI C14: **n° 4**

Cultural places

BUFFER OF 800m: **+1**

Δ: +7%

ZONE OMI C14: **+2**

Δ: +100%

Figure 13. "Cultural Places" analysis. Source: elaboration by The European House - Ambrosetti and Politecnico di Milano - Tiresia using data from Municipality of Milan NIL databases, 2022.

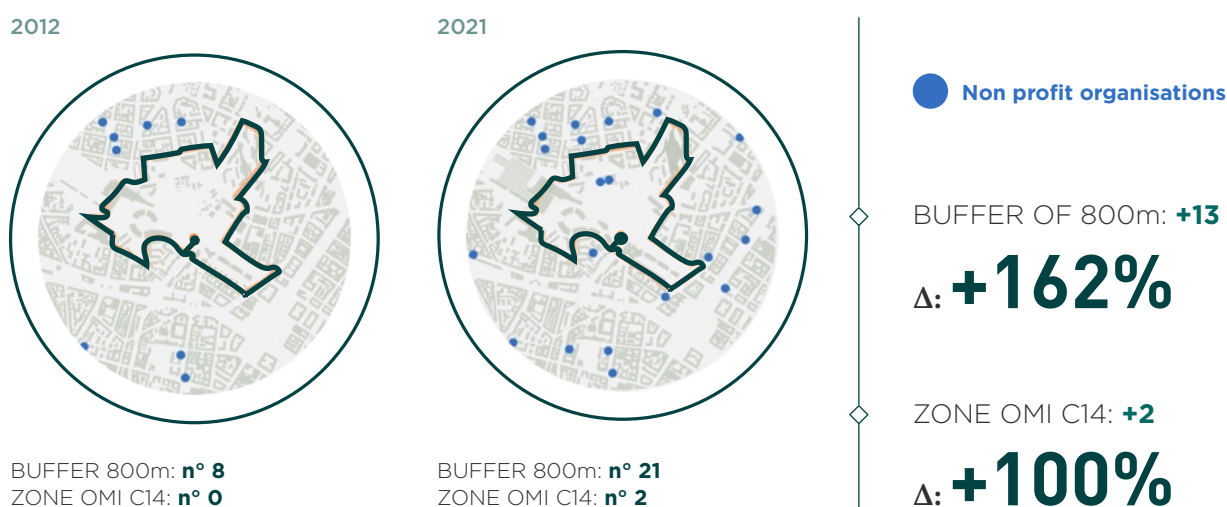


Back to the City Concert

The Social dimension assesses the promotion of social cohesion, the sense of belonging to the community and social inclusion programmes, and it is interesting to note that before the regeneration project there were no Non-profit organisations in the neighbourhood: there has therefore been an increase of +100% and of 162% within the 800 m buffer considered.

The work done by BAM has transformed a public space into a real site for social aggregation, through projects that bring together the district's various communities, who discover common ground in the shared values promoted by the park (sustainability, innovation, inclusion, enjoyment, internationalism, engagement).

NON PROFIT ORGANISATIONS (n°) ▶



The last dimension analysed within the multidimensional framework is Education: the study set out to measure the promotion of a sense of civic responsibility and of knowledge. In this context it is important to describe the work of the Fondazione Riccardo Catella in the generation of intangible values of importance to all aspects. Its many activities and initiatives have included the promotion of social inclusion projects such as:

PORTA NUOVA SMART CAMP ▶

Which is addressed to children with disabilities or serious, chronic medical conditions and their healthy peers and focuses on topics such as nature, sustainable architecture and technological innovation, in partnership with Dynamo Camp.

MICOLTIVO ▶

Which since 2012 has supported the creation of educational vegetable gardens in schools in the city's suburbs, improving green spaces and encouraging young people to adopt a good, healthy diet. This project is run in partnership with the Municipality of Milan, with scientific input from the Department of Human Sciences for Education of Milan-Bicocca University.

From 2019 to 2022, the #Education pillar of the BAM programme has included more than 300 events, as well as the involvement of Academies, Universities, Higher Education Institutions and student associations for the organisation of educational events and projects within the park's cultural programme.

Figura 14. "Non-profit organisations" analysis. Source: elaboration by The European House - Ambrosetti and Politecnico di Milano - Tiresia using data from Municipality of Milan SISI - Sistema Statistico Integrato, 2022.

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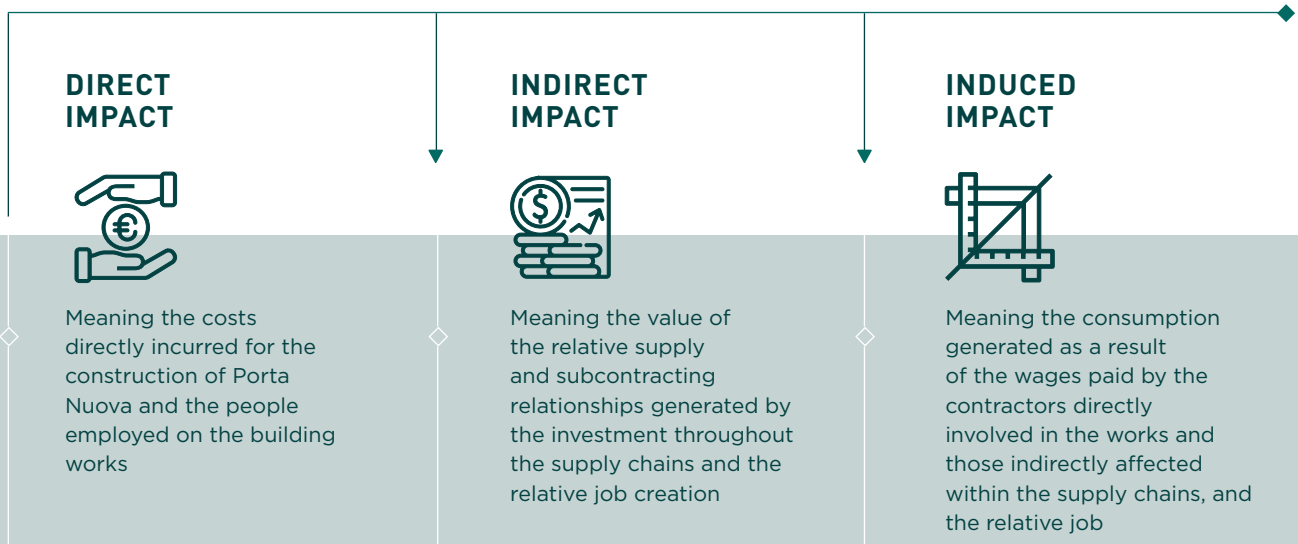
THE PORTA NUOVA URBAN REGENERATION HAS GENERATED ECONOMIC AND EMPLOYMENT VALUE CONTINUALLY, DURING BOTH THE CONSTRUCTION AND THE OPERATIVITY PHASE

The first, immediate repercussion of the Porta Nuova regeneration project was the **activation of economic and job-creation circuits** on a very large scale, fuelled first by the **construction phase** and then by the **operativity phase**.

The total investment for the Porta Nuova project, considering both development phases in the period

2008-2026, amounts to **1.6 billion Euro**, covering sediment remediation (25 million Euro), public works discounted against urbanisation fees (100 million Euro), design and other soft costs (175 million Euro) and construction costs (1,306 million Euro).

These investments generate **economic and employment impacts on three levels:**



With regard to the economic impact of the construction phase, using econometric modelling based on the theory of sectoral interdependence¹ it was calculated that the 1,607 million Euro invested directly activated further indirect investments of 2,296 and induced investments of 371, giving a **total overall economic impact of 4,274 million Euro for the construction operations**.

The **economic multiplier** of the investment is **2.7**: for each Euro invested to build Porta Nuova, an additional 1.7 Euros were generated in the economy. Following on from the construction phase, the second context in which economic and employment circuits are activated is the operativity of Porta

Nuova, whose economic impact equals the **value of the direct activities of all the functions established and their spillover effects**.

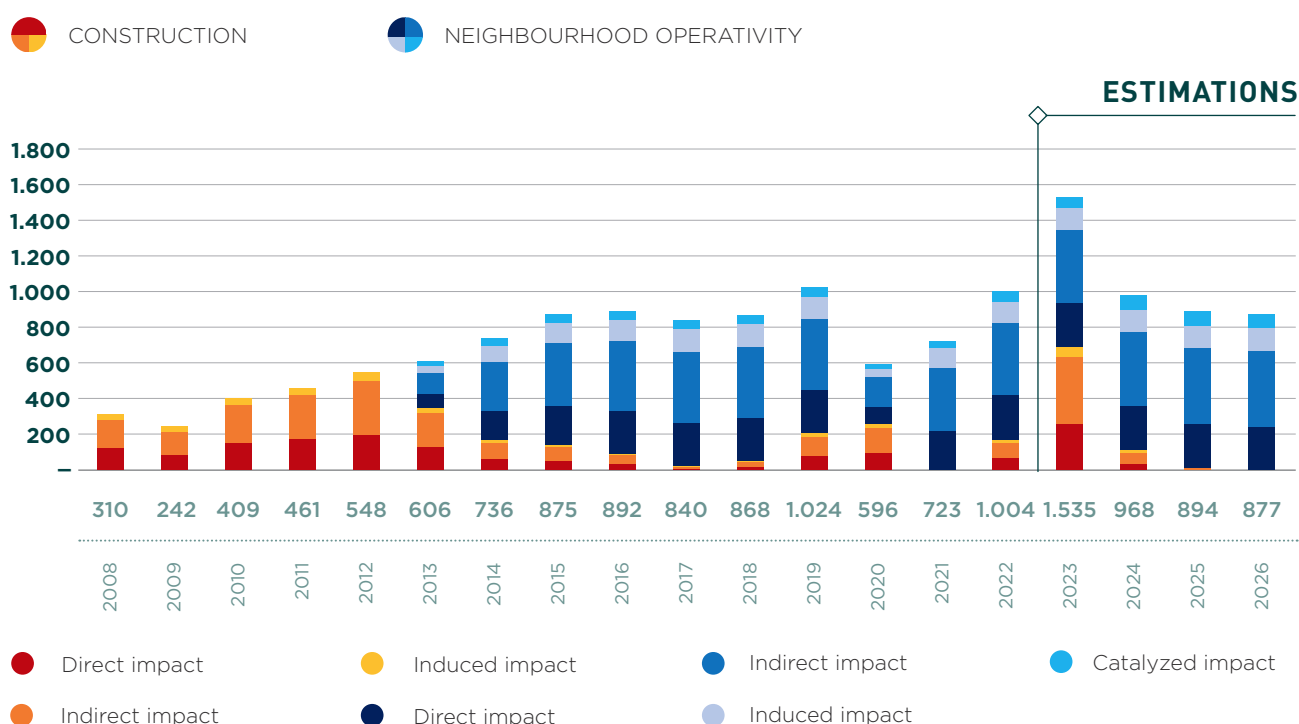
The direct impacts generated by Porta Nuova's operativity relate to expenditure for the management of the services for the use and operation of the area (parking, security, maintenance, landscaping, artists and cultural sector professionals involved in the BAM programme...); the management and maintenance of the residential and office buildings; consumption of workers, residents and city users in the area. Basically, they include all expenditure within the area and that necessary for the "life" of the buildings.

¹The sectoral independence method, developed by Nobel Laureate Wassily Leontief, is used to measure the impact of an activity in one specific sector on the economic system as a whole. With the aid of this method, economic and employment multipliers can be calculated using the statistical charts produced by the Italian Statistics Institute (Istat) which delineate, in figures, the relationships within the economic system between the producers and the consumers of goods or services (input/output charts).

Here again, the direct impacts enable indirect and induced impacts, as well as **a component defined as “catalysed impact”**, which refers to all the money spent around Porta Nuova by people attracted to the area due to the existence of the district itself (e.g. people employed by businesses in the area and residents). Currently (2022), Porta Nuova’s operativity generates a direct turnover of about 245 million Euro a year, which in turn activates 402 million Euro of indirect impact, 128 million of induced impact and 55 million Euro of catalysed impact.

Therefore, **Porta Nuova’s operativity generates a total annual turnover (in 2022) of 830 million Euro, with an economic multiplier of 3.4** (for each Euro spent at Porta Nuova, 2.4 additional Euros are generated in the economy).

The graph below illustrates the evolution over the years of the economic impact generated by the regeneration project: impacts relating to **construction** are in **shades of red** and those relating to **operativity** in **shades of blue**.



Porta Nuova’s ability to generate value has evolved and grown over time: in the initial phases (2008-2012) all economic impact related to the first component (investment in the district’s construction). Since 2013 - the year when Porta Nuova Garibaldi was completed - the first impacts relating to operativity have started to appear alongside those of the investment, and they have gradually increased over time. With the conclusion of the first construction phase, there was a reduction in the investments, which then increased again with the start of works on Phase 2.

On the other hand, the economic value generated by the district’s operativity has grown steadily: the only decrease occurred in 2020, when the restrictions arising from the pandemic significantly reduced the inflow of workers, visitors and city users and triggered a drop in the area’s turnover. The upward trend in this value was restored in the following years, and the total turnover from the operativity of Porta Nuova alone for 2026 (the year when the construction phase is scheduled to conclude under current development plans) is forecast to reach 877 million Euro.

Figure 15. Overall economic impact arising from the Porta Nuova regeneration project (€ mln), 2008-2026 (e). Source: elaboration by The European House - Ambrosetti using data from COIMA, Istat, Aida, Confcommercio and various sources, 2022

In 2022 alone, **the combined economic impact of Porta Nuova's construction and operativity was 1,004 million Euro**: to offer a comparison, this sum is equal to the amount of the funds already allocated to the Metropolitan City of Milan under the Italian government's EU-funded Covid Recovery Plan ("PNRR") for the whole period of operation of the Plan 2021-2026. If we examine the territorial distribution of this impact in greater detail, we find that the 1,004 million Euro generated was particularly important for the local economy: **almost one third of the impact (301 million Euro) is felt in Porta Nuova and the surrounding neighbourhoods** and a further 423 million Euro involves economic actors in the rest of Lombardy.

Considering the entire time horizon of the investment, from its beginning (2008) to the present (2022), **the overall economic impact amounts to 10,134 million Euro**. Once again, a geographical analysis of the effects reveals the crucial role played by Porta Nuova in the most local context (2,406 million Euro activated from 2008 to the present) and in the rest of Lombardy (5,336 million Euro).

In parallel with the economic impacts generated, both the neighbourhood's construction and operativity have **generated and supported employment**. On average, the construction phase supported 452 direct jobs (i.e. workers employed on construction

site) every year, as well as 1,446 indirect and 248 induced jobs. On average, therefore, **every year of the construction phase supported 2,146 full-time equivalent jobs**, most of them in the construction sector but also in a large number of other supply and subcontracting fields.

The **project's employment multiplier is 4.7** (for every person employed on the construction site, 3.7 additional ones are involved in the economy), proving that the building sector - and the construction of Porta Nuova in particular - is able to support long, deep supply chains with significant occupational impact.

Moreover, within the general slump in the Italian economy between 2008 and 2018, the construction sector was one of the hardest-hit: numbers employed in the sector fell by 18.7% in the period (11.3% in Lombardy), Government aid to laid-off workers in the industry increased by 96.33%, and gross building areas constructed fell by 68.9% in the residential and 65.6% in the non-residential categories respectively. Amidst this generalised, all-pervading economic downturn, COIMA launched a large construction site which, at its peak, directly involved more than 1,300 people, as well as the indirect and induced jobs created (Figure 18).

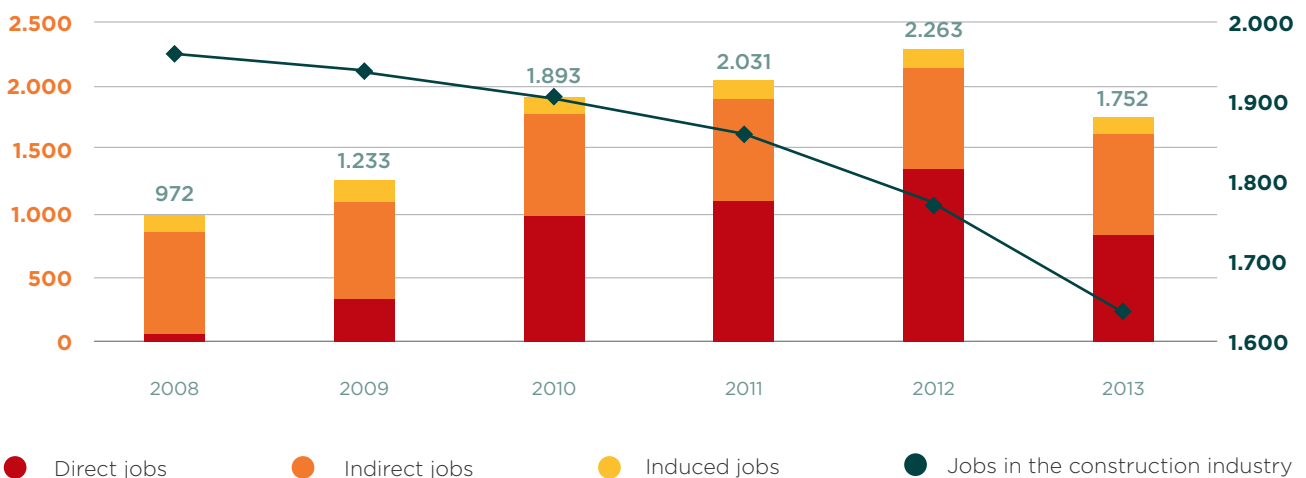
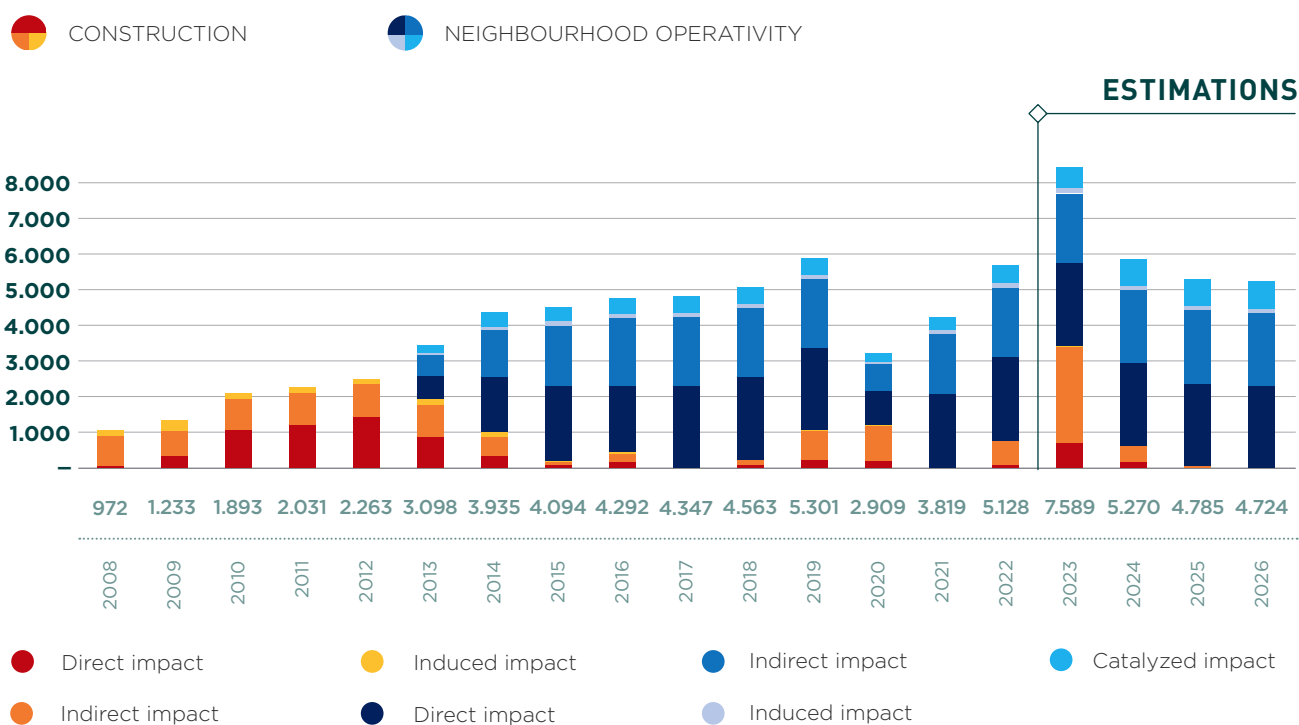


Figure 16. Employment impact of the Porta Nuova construction investment (direct, indirect and induced FTEs) and employment in the construction sector in Italy (thousands), 2008-2013. Source: elaboration The European House - Ambrosetti on COIMA data, Istat and Eurostat data, 2022

Porta Nuova’s operativity also generates a relevant employment impact: in 2022 the businesses which make up the neighbourhood’s direct impact supported 2,082 direct jobs, as well as providing indirect, induced and catalysed employment for 1,758, 107 and 488 people respectively.

Therefore, overall **Porta Nuova’s operativity has**

an employment impact of 4,415 jobs, with an **employment multiplier of 2.1**. The overview of the entire time horizon (2008-2026) provides a picture of a project with **deep and wide- reaching impacts on employment: on average, almost 5,000 jobs have been supported every year** thanks to the investments in the neighbourhood’s construction and its operativity (Figure 19).



Porta Nuova is also an **economic actor capable of generating significant tax revenues at the local, regional and national level**.

Porta Nuova’s **fiscal impact** for 2022 amounts to **143 million Euro**: this sum is an estimate of revenues from property (IMU) and waste taxes (TARI), taxes on the profits of the businesses established in the district, income taxes paid by the people employed there and the VAT revenues collected on the sums spent in the area. Most of these taxes are collected at regional and national level, but some revenue items also contribute to the budget of the Municipality itself, for a value of **6 million Euro¹** in 2022.

If this analysis is extended to the entire period (2008-

2026), the cumulative fiscal impact in terms of revenue for the Municipality amounts to 78 million Euro - at a rate which varies year by year in response to changes in the economic impact of the neighbourhood’s operativity, from which the tax revenues derive.

This is not the only revenue generated for the Municipality, as it also collected the **costs of purchase of the land which it initially owned**, worth 270 million Euro, and the total urbanisation fees paid, which amounted to 257 million Euro.

Added together, these three items (cumulative tax revenues for the Municipality, cost of land and urbanisation fees) amount to **605 million Euro**.

Figure 17. Overall employment impact arising from the Porta Nuova regeneration project (FTEs), 2008-2026 (e). Source: elaboration by The European House - Ambrosetti using data from COIMA, Istat, Aida, Confcommercio and various sources, 2022

¹IMU, TARI, additional municipal IRPEF tax

Over this period, the area directly regenerated by COIMA experienced a very sharp increase in property values. While in 2004, the year when the urban regeneration project began, the buildings within the Porta Nuova area showed a value 42.1% below that of properties in the centre of Milan and 7.8% below that of other semi-central areas (at a similar distance from the centre to Porta Nuova itself), today not only do the Porta Nuova buildings have property values almost twice the average of Milan's other semi-central areas (with a differential of +93%), but they even record significantly higher values than properties in the centre of Milan (with a differential of +36.9%). Values have grown at an annual average rate of 7.5% (4.5 percentage points higher than the annual growth rate of the other semi-central areas of Milan and 5.3 percentage points higher than the city centre). The Porta Nuova area has therefore gradually made up

the gap recorded in 2004 and today it has become a **new urban hub**, more attractive than Milan city centre in real estate terms.

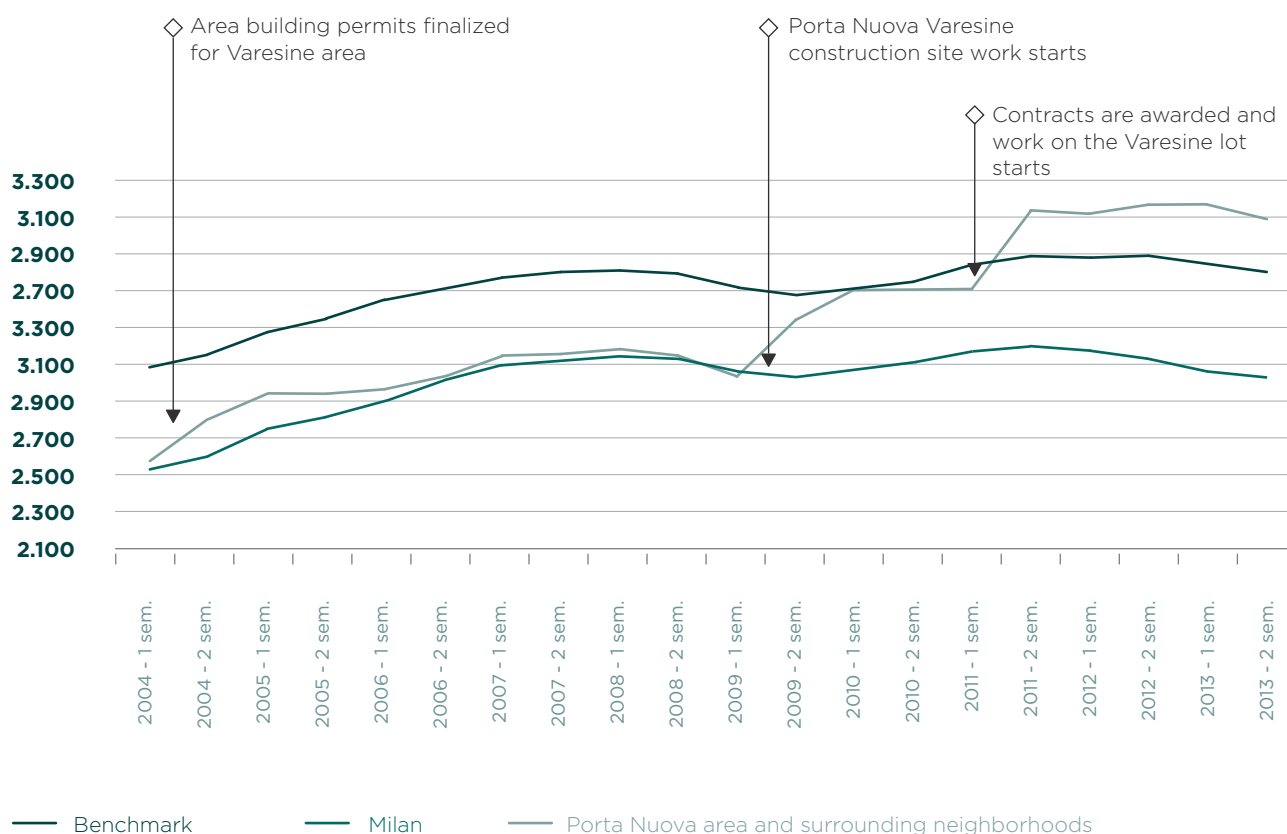
During the decade (2004-2013) real estate values in the "Porta Nuova and surrounding neighbourhoods area" increased by 849 €/m² (+38.5%).

In a context like Milan, with a constant upward trend in property prices, a differential analysis was the only reliable way of estimating the contribution of the Porta Nuova regeneration to the creation of real estate value in the areas surrounding the project: **compared to a growth in property values in the benchmark neighbourhoods of +10.5%, the increase in real estate values which can be imputed to the project is therefore +28% or, in absolute terms, 593 €/m².**



Figure 18. Property values in the Porta Nuova area, in the benchmark neighbourhoods and in Milan (€/m²) with indication of the main milestones that triggered the changes, first semester 2004 - second semester 2013. Source: elaboration by The European House - Ambrosetti and Politecnico di Milano - Tiresia using Inland Revenue data, 2022.

If, however, the analysis is focused only on **residential buildings** (located mainly in the “Varesine” lot and therefore excluding buildings for retail and office use), the impact of the regeneration (compared to the average growth of residential properties in the benchmark neighbourhoods) on the increase in economic value from 2004 to 2013 was **+15.5%**.



Compared to the period prior to the redevelopment (second semester of 2004), **residential values** in the Porta Nuova area and surrounding neighbourhoods increased by **658 €/m² (+24.1%)** compared to a growth of **8.6%** in the benchmark neighbourhoods and a Milan-wide average of **9.3%**. Compared to the trend for the benchmark neighbourhoods, in absolute value this increase is equivalent to **400 €/m² (+15.5%)**.

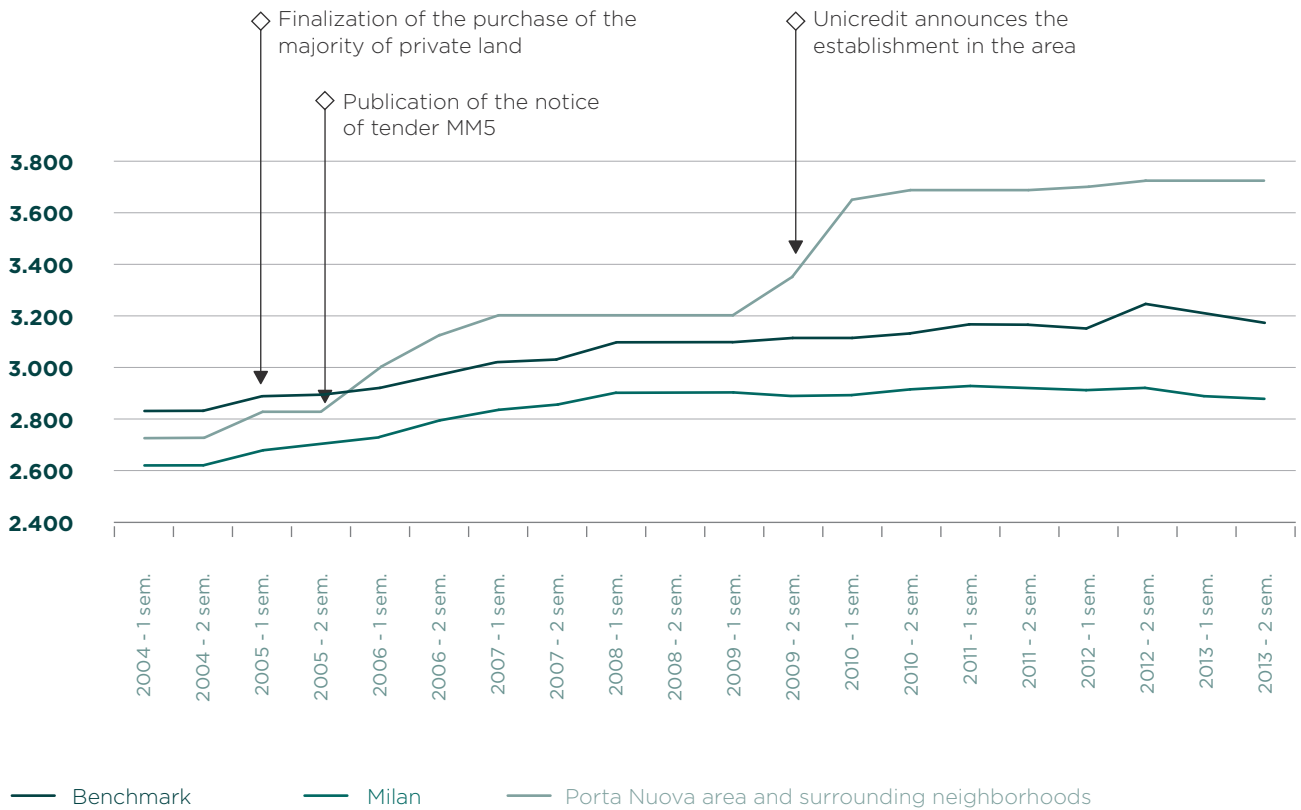
Overall, considering the gross area of the residential buildings of Porta Nuova and the surrounding neighbourhoods, the total value increased by **487 million Euro** during the decade 2004-2013. During

the decade, the value of an average-sized apartment in the neighbourhood increased by a total of **€57,904**, of which **€35,200 was due to the Porta Nuova urban regeneration**. In absolute terms, from a value of **256 €/m²** below that of the benchmark neighbourhoods, during the decade the value per square metre of residential buildings in the neighbourhood rose to exceed the benchmark average by **144 €/m²**.

With regard to the **value of offices**, the impact on the growth in real estate values over the decade compared to the benchmarks which can be directly associated to the regeneration was **+24.6%**.

Figura 19. Residential values in the Porta Nuova area, in the benchmark neighbourhoods and in Milan (€/m²) with indication of the main milestones that triggered the changes, first semester 2004 - second semester 2013. Source: elaboration by The European House - Ambrosetti and Politecnico di Milano - Tiresia using Inland Revenue data, 2022

⁷The average size of an apartment in Milan is 88 m².



Compared to the period prior to the redevelopment (second semester of 2004), over the decade the values of offices in the Porta Nuova area increased by **1,000 €/m² (+36.7%)** compared to a growth of 12.1% in the benchmark neighbourhoods and a Milan-wide average of +9.9%. The increase in the value of offices which can be directly associated to the regeneration is therefore

+657 €/m² (+24.6%): on average, these properties were worth **106€ less per square metre than those in comparable neighbourhoods**. **At the end of the decade, they were worth 551€ more**. For example, during the decade, the property value of an office of 250 m² increased by **250,000€**, of which **164,250€ was due to the Porta Nuova urban regeneration**.

Figura 20. Values of offices in the Porta Nuova area, in the benchmark neighbourhoods and in Milan (€/m²) with indication of the main milestones that triggered the changes, first semester 2004 - second semester 2013. Source: elaboration by The European House - Ambrosetti and Politecnico di Milano - Tiresia using Inland Revenue data, 2022



4

THE REGENERATION OF PORTA NUOVA HAS TRIGGERED THE GROWTH OF THE AREA ATTRACTIVENESS AND VIBRANCY, CREATING A “DESTINATION”

Thanks to the regeneration project, Porta Nuova’s attractiveness has gradually grown and it has become established as a top national and international business district and as a lively, attractive place for Milan’s residents, visitors and tourists, generating major socioeconomic and cultural impacts for the area.

In terms of its attractiveness, as of 2022 **25 large companies** have offices in the neighbourhood, among those, **18 foreign multinationals** and **17 listed companies**, which together account for **4.8%** of global market capitalisation. Microsoft, Google, Tesla, Samsung and Nike are amongst the biggest names present.

The work of BAM also plays an important role here: since 2019 it has attracted 82 partners and sponsors to support the park and its cultural programme, helping to nourish the Porta Nuova community of companies.

However, the district business attractiveness and vibrancy are not limited to the large companies with offices in the Porta Nuova business centre but also extend to businesses in the broad sense, at Porta Nuova and in the neighbouring areas¹.

In fact, according to Milan Chamber of Commerce data between 2004 and 2021 almost **30,000 new business operating** units were established in the area. The area’s attractiveness has grown very rapidly: between 2004 and 2021 the number of new business operating units opening increased by **55%**, from about 1,300 to more than 2,000, with a virtually constant upward trend (apart from the fall-off in 2020 due to the Covid-19 pandemic).

Moreover, the growth rate of Porta Nuova and the surrounding areas is **almost twice the average growth rate in the rest of Milan (+32%)**, making the neighbourhood a new economic development hub for businesses in the city of Milan.

+55% ▲

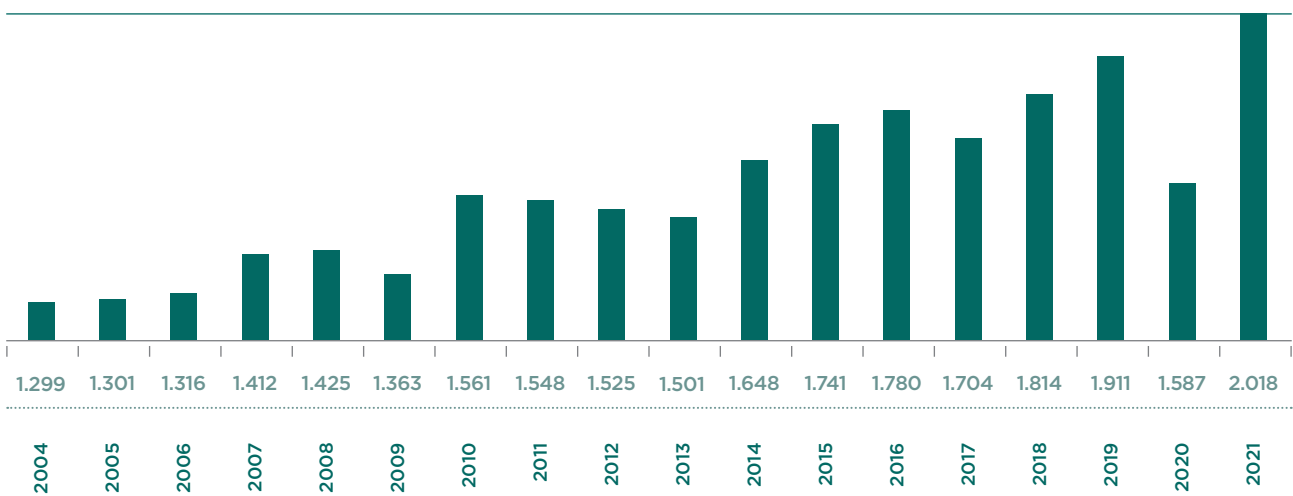


Figure 21. New business operating units registered per year at Porta Nuova and in the surrounding areas, 2004-2021. Source: elaboration by The European House - Ambrosetti and Politecnico di Milano - Tiresia using Chamber of Commerce data, 2022.

¹Analysis within the area with Postcode 20124.

In this context, mention should also be made of COIMA HT, the Coima group company specialised in Digital Transformation and Technology, which has implemented a digital platform consisting of a layer of physical features integrated within the space and an additional software layer which, in synergy with

the hardware, enables and expands the functions of the physical district.

The Porta Nuova Digital Platform uses 4 channels for direct interaction with Users (Mobile App, Website, Digital Totems, Wifi) and a series of IoT (Internet of Things) devices integrated in the various areas



+250

Security CCTV cameras

+35 

Cameras equipped with Artificial Intelligence to identify and recognise anomalous and/or potentially hazardous situations



+40

Access Point



+20

Digital Totems

5



Maxi Led screens for showing multimedia contents

2



Automated, digitalised public car parks

11



Crowdcells for monitoring and analysing flows of people within areas

9



Electric vehicle charging stations

1



SOS emergency call point

1



Fast Charge charging station

35



Footfall monitoring sensors in the retail area

1



Automated lift

1



Fleet of electric vehicles for the Neighbourhood's use

This technological complexity, harmonised and rendered accessible and user-friendly via a digitalised customer experience and tailored for the various Porta Nuova user targets (Residents, Office Workers, Visitors and Tourists), improves the neighbourhood's liveability and people's security, increases the areas' quality of service, reduces operating costs both in economic terms and with regard to environmental resources, and encourages behaviours conducive to individual wellbeing and social inclusion, the latter also furthered by accessibility and events and activities for the community, and charitable and social solidarity initiatives.

In this context, the Portanuova Milano App and

the Portanuova.com website contain storytelling tales highlighting the Neighbourhood's values and enable users to access the latest information about the schedule of online events and cultural initiatives or to explore the Neighbourhood under different profiles and from various viewpoints, from the purely architectural and design-oriented to conscious shopping.

The Portanuova Milano App is now at its second major release (April 2022, followed by various minor releases) with 9,000+ active users and a variety of both free and charity initiatives, especially around Christmas 2022.

ided by the neighbourhood's very many innovative features, Porta Nuova's regeneration also **re-established its attractiveness for the city of Milan's residents, visitors and tourists**. To measure the impact of the Porta Nuova regeneration in terms of social vibrancy, The European House - Ambrosetti developed an ad hoc index which assesses the sociability and vibrancy of 32 Milan neighbourhoods in order to assess Porta Nuova's comparative position within the urban scenario.

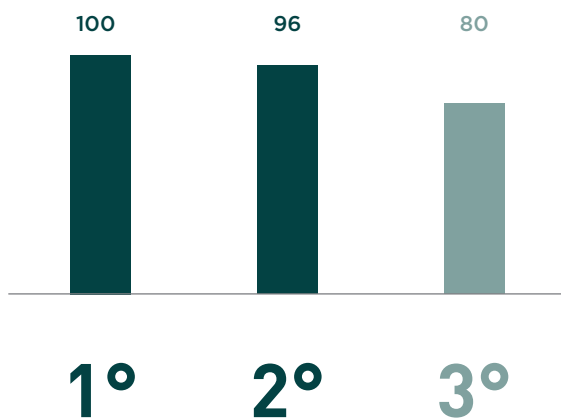
The production of the Vibrancy Index began with an analysis of the international literature in order to identify **4 key dimensions** (structural attractiveness, interaction, centrality in flows, endowment) which

include **12 KPIs** (Key Performance Indicators) at the neighbourhood level, capable of measuring the urban vibrancy of Milan's main neighbourhoods. The data collection phase was followed by the construction of a **Composite Index** which awarded a score of 0 to the least and of 100 to the most vibrant neighbourhood.

The Vibrancy Index reveals that, thanks to the urban regeneration project, today the Porta Nuova area is one of Milan's most vibrant. With a score of **80 out of 100**, today Porta Nuova is the **3rd most vibrant neighbourhood out of 32** Milan neighbourhoods analysed, after Brera and San Babila - Duomo (Figure 24).

TOP-3 MOST VIBRANT NEIGHBOURHOODS IN MILAN

(index, scale 0-100),2022



VIBRANCY INDEX OF MILAN'S 32 NEIGHBOURHOODS

(index, scale 0-100),2022



The Porta Nuova neighbourhood **performs well in all 4 key dimensions analysed** by the Index, **confirming the positive environmental, social and economic impact of the area's regeneration**.

Figura 22. Top-3 most vibrant neighbourhoods in Milan (left) and Vibrancy Index of Milan's 32 neighbourhoods (right) (index, scale 0-100), 2022. Source: elaboration by The European House - Ambrosetti using City of Milan and various Open Data, 2022.





COIMA specializes in the investment, development and management of Italian real estate assets on behalf of institutional investors, with an integrated ESG impact approach. COIMA Holding controls operating companies including COIMA SGR, investment & asset manager that manages more than 30 real estate funds with more than 10 billion euros in investments; COIMA REM, development and property manager, in more than 40 years has developed and managed properties of more than 5 million square meters; COIMA HT operates in technology to support the digital enablement of physical spaces.



The European House - Ambrosetti, which coordinated the study and led the research project, **has consolidated experience in impact assessment, also in the real estate sector, with a specific professional practice entitled Business and Policy Impact.** For the eighth consecutive year, The European House - Ambrosetti was named **Top-ranked private think tank in Italy** and 4th in the European Union and every year it produces more than **200 strategic and industrial scenarios**, undertaking advocacy, policy support and strategic research in synergy with a network of leading international experts.

The project was headed by Associate Partner Emiliano Briante, supported in this study by Matteo Zaupa, Diego Begnozzi and Carlo Mauri, under the supervision of Valerio De Molli, CEO and Managing Partner.



TIRESIA - Technology and Innovation Research on Social ImpAct - is the centre of expertise of the School of Management of Politecnico di Milano, founded by Prof. Mario Calderini, dedicated to the study of innovation, entrepreneurship and impact finance. Over the years, Tiresia has built up experience in the measurement and assessment of social impact, both through research projects and from the provision of strategic consulting to companies, investment funds, public actors and third sector organisations. As well as its research activities, Tiresia coordinates the educational offering in “Sustainability and Impact Leadership” of the Graduate School of Management (GSOM) of Politecnico di Milano.

This study was produced by Danny Casprini, Marta Dell’Ovo and Giulia Rossi under the academic guidance and coordination of Professors Irene Bengo, Mario Calderini and Alessandra Oppio.





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