



Milan's Competitiveness

Milan case study

Professor Greg Clark CBE

Dr Tim Moonen

and Jake Nunley

April 2018



Urban Land
Institute

About ULI

The Urban Land Institute is a global, member-driven organization comprising more than 40,000 real estate and urban development professionals dedicated to advancing the Institute's mission of providing leadership in the responsible use of land and in creating and sustaining thriving communities worldwide.

ULI's interdisciplinary membership represents all aspects of the industry, including developers, property owners, investors, architects, urban planners, public officials, real estate brokers, appraisers, attorneys, engineers, financiers, and academics. Established in 1936, the Institute has a presence in the Americas, Europe, and Asia Pacific regions, with members in 76 countries.

The extraordinary impact that ULI makes on land use decision making is based on its members sharing expertise on a variety of factors affecting the built environment, including urbanization, demographic and population changes, new economic drivers, technology advancements, and environmental concerns.

Peer-to-peer learning is achieved through the knowledge shared by members at thousands of convenings each year that reinforce ULI's position as a global authority on land use and real estate. In 2017 alone, more than 1,900 events were held in about 290 cities around the world.

Drawing on the work of its members, the Institute recognizes and shares best practices in urban design and development for the benefit of communities around the globe.

More information is available at uli.org. Follow ULI on Twitter, Facebook, LinkedIn, and Instagram.

ULI has been active in Europe since the early 1990s and today has more than 3,000 members across 27 countries. The Institute has a particularly strong presence in the major Europe real estate markets of the UK, Germany, France, and the Netherlands, but is also active in emerging markets such as Turkey and Poland.



Copyright ©2018 by the Urban Land Institute. ULI Europe. All rights reserved. No part of this report may be reproduced in any form or by any means, electronic or mechanical, including photocopying or recording, or by any information storage and retrieval system, without written permission of the publisher. ULI has sought copyright permission for all images and tables.

Front cover image: Milan skyline with modern skyscrapers. (Scallger/iStock)

Urban Land Institute

50 Liverpool Street
London
EC2M 7PY
United Kingdom

Tel: +44 (0)20 7487 9570
Email: ulieurope@uli.org
Web: www.europe.uli.org

Contents

.....

Acknowledgements	iv
Executive Summary	1
Milan: Past and Present	4
Milan City Competitiveness	7
Governance framework	7
Competitive climate	10
Agglomeration	12
Attractiveness to talent	14
Recommendations	17
Contributors	18
References	19

Acknowledgements

The preparation of this report was supported by a group of ULI Europe and ULI Italy staff and members, including:

Lisette van Doorn, Chief Executive Officer, ULI Europe

Elizabeth Rapoport, Content Director, ULI Europe

Amanprit Arnold, Content Manager, ULI Europe

The authors wish to thank all those in Milan and Turin who contributed to the research through participation in workshops and interviews in autumn 2017, as well as the ULI Italy Executive Committee and staff team. A list of those who gave exceptional assistance to the development of this report and the case studies is on page 18.

Author

Professor Greg Clark CBE, Senior Fellow, ULI Europe

Dr Tim Moonen, Director, The Business of Cities

Jake Nunley, Research Associate, The Business of Cities

About this case study

This case study of Milan forms part of a ULI project titled *Milan and Turin: Competitiveness of Italy's great northern cities*.

The information presented includes:

- desk research of (a) academic books, chapters, and articles about Turin's urban economy; (b) independent reports by think tanks, universities, observatories, and real estate organisations; and (c) media commentary about the city since 2015;
- a review of Milan against recognised measures of international performance;
- interviews with Italian urban specialists; and
- workshops in Milan and Turin on September 18, 2017, with ULI members and other public and private sector leaders.

The case studies of Milan and Turin, and the summary report, are designed to be read together.

Executive Summary

Figure 1: Competitiveness framework

Governance framework	Competitive climate	Agglomeration	Attractiveness to talent
Vision, strategy, and coordination	Costs and business investment	Size and scale of internal market	Human capital, liveability, and opportunity
Land use, planning system, and density	Tax and regulatory framework	Clustered specialisations	Innovation, technology, and enterprise
Infrastructure and services	Political risks	Institutional engagement	Brand, identity, and destination

This case study reviews Milan's competitiveness using a 12-point framework that consists of four main elements (see figures 1 and 2):

- **governance framework**
- **competitive climate**
- **agglomeration;** and
- **attractiveness to talent**

It summarises Milan's strengths and the threats to its competitiveness, and provides recommendations for how to improve its competitiveness.

Milan's competitiveness and confidence have appreciably recovered over the past five years. After a period of inertia when other European cities moved ahead of Milan, Italy's capital of finance, commerce, and design has benefited from improved city government and a succession of public/private projects that are now bearing fruit. As part of this renaissance, Milan is enjoying a large influx of talent and a resurgent visitor economy, and is rebuilding and restating the connection with its DNA of design, knowledge, innovation, and culture.

Competitive city or productive region?

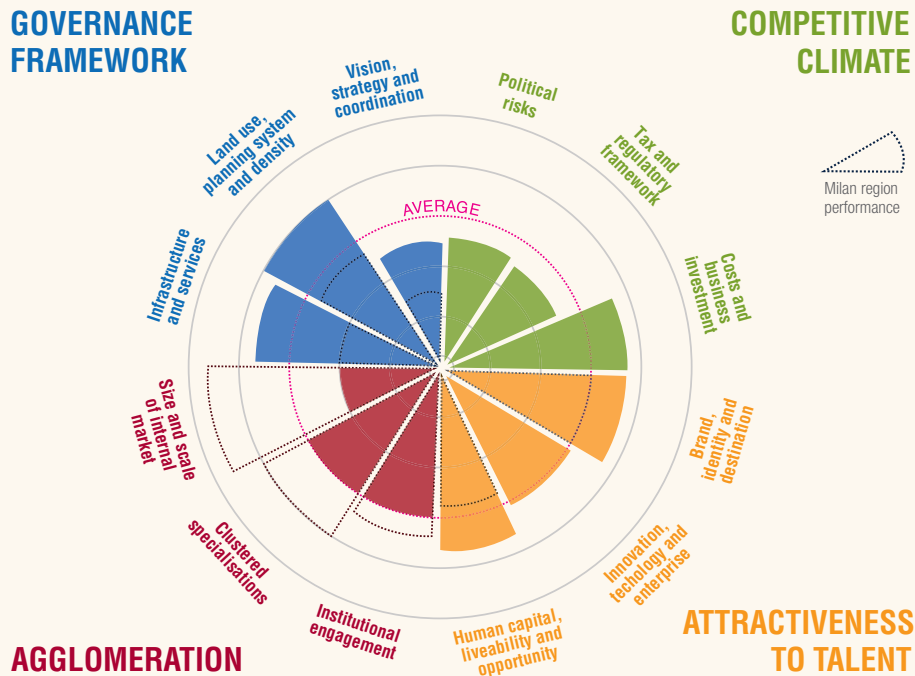
Milan is commonly compared with and measured against other urban economies at a city level (population: 1.3 million), but its true scale and dynamism fundamentally rest on its wider region – Grande Milano, with a population of 8 million.

Grande Milano is highly diversified, complementing the inner city's strengths in finance, consulting, media, and fashion with innovative clusters in agricultural technology, agrifood, aerospace, clean technology, energy, life sciences, medical instruments, and smart technologies. The regional dimension of competitiveness also encompasses a very high-quality and globally competitive university system, several international airports, and numerous small firms and industrial clusters of niche production. The economic region is a comparative global powerhouse.

Milan's formal territorial governance system is notoriously complex. However, civil society is very active, and civic and business leaders have proved their ability to create teams and mount attractive projects focused on particular opportunities, including Expo 2015 and the recent campaign to host the European Medicines Agency. Metropolitan governance reforms may eventually bear fruit and visionary strategic planning may yet be possible to support Milan's competitiveness, but the pace of new projects planned by the private sector is helping create a new fabric of cross-border, public/private co-operation that is moving the region forwards.

In international measures, Milan's quality of life continues to lag behind that of other global cities because of such factors as pollution and congestion from the outskirts to center. But the city also offers many less tangible lifestyle benefits – not always recognised in comparative studies but important to its appeal – including access to beautiful and natural surroundings, gastronomy, connectivity to other centres, and many housing and location options for families.

Figure 2: Illustrative evaluation of City of Milan according to 12 competitiveness criteria



Note: The wider Milan region is represented by the dotted lines. 'Average' represents the performance of Milan's peer cities – Amsterdam, Barcelona, Berlin, Brussels, Frankfurt, Madrid, Rome, Stockholm, and Vienna.

Milan's industrial and design districts – Brera, Isola, Lambrate, Tortona, and Certosa – illustrate the way the city is developing a high-tech, advanced manufacturing identity and grounding it in well-defined districts and neighbourhoods. The current cycle of land, transport, and development projects offers big new opportunities to create highly desirable urban locations for talent and innovation.

Milan's competitive performance depends substantially on the scale at which it is measured. To illustrate this divergence, figure 2 shows an evaluation of the city of Milan against European peer cities, but also features the relative performance of the wider Milan region.

The most recent cycle of progress means that the city of Milan performs well in terms of infrastructure, and its improved leadership means the city's land use and density are increasingly competitive. It also has a strong brand, offers economic opportunity, and has a greater appeal to talent than the wider region. Conversely, it is at the regional scale that the agglomeration effects become much more visible. However, the region needs a series of coordinated efforts in order to address its deficits in terms of fragmented governance, connectivity, and land use, as well as its competitive climate. As a region, Milan has the clear potential to become one of Europe's most competitive locations.

Recommendations

Communicating Milan's competitiveness

- Milan has yet to tell its story to the world – that of a region that has transformed itself from a centre of industry to a richly diverse post-industrial area. In particular, the region's breadth of assets and interlocking clusters can be communicated much more clearly. At this point in the cycle of recovery, it is important to agree on and promote an agenda about the kind of city Milan wants to become over the next 20 years.
- The public/private Osservatorio Milano benchmarking collaboration is an important step in measuring and monitoring Milan's comparative performance. More can be done to better document and communicate Milan's advantages, however. The city needs to continue expanding the data project in order to tell a clearer and richer story (including in English) to a variety of international audiences about what the Milan region really is and why it offers unique opportunities.

Milan and Italy, Milan and the Alpine region

- The economic gap between Milan and Italy has grown dramatically in the past decade and is set to continue growing over the next decade. This presents two imperatives. First, Milan must differentiate its business environment and level of transparency from Italy's less favourable business brand through a clear promotional and awareness-raising effort. Second, Milan must collaborate with other cities in the region to pursue the emergence of northern Italy and the Alpine region as an increasingly integrated economic unit. Doing so will provide Milan with the advantages of scale and visibility offered by leading global regions. In the longer term, Milan may need to secure nationwide support for its global

role, including by encouraging development of an Italian 'system of cities' that can spread to the rest of the country such benefits as supply chain development, business expertise, and specialist talent.

Making more use of soft power and soft governance

- Given the apparent obstacles to creating a more streamlined and effective governance model in metropolitan Milan, the city's business leaders should prioritise 'softer' governance solutions – public/private partnerships, project preparation and delivery, and influence on and example-setting for the government. Examples of catalytic projects that may help build a regional alliance include big land and real estate projects, university partnerships, airport development, co-operation between Milan and Turin, trans-Alpine trading initiatives, and joint agendas such as creating smart cities and promoting urban innovation. Though longer-term strategic planning may also have a positive impact, it will be more important as a soft governance tool to identify strengths, weaknesses, opportunities, threats, and collaboration priorities rather than a programme to be pursued by a metropolitan authority.

A smart city and region

- Milan has begun to make good progress on smart city applications, inter-operable systems, the sharing economy, open innovation, urban services, and sustainable mobility. Because such elements are important to its alignment with future thinking, Milan should move quickly to demonstrate how this transition to status as a smart city may improve urban productivity and the ability to accommodate entrepreneurship. Milan's role as a 'lighthouse' city within the EU Horizon 2020 programme is a good example of this potential.

Partnership with Turin

- Because they are the two largest cities in northern Italy and have improved connectivity and complementary strengths, there is a strong rationale for Milan and Turin to expand their collaboration and joint positioning while retaining their strong individual identities. Both cities would benefit from greater mutual understanding of the networks of companies and the flows within and between them. This would inform the kind of economic and R&D projects leaders in the two cities could undertake and the segments in which the combined region could be promoted globally.



(ilbusca, iStock)

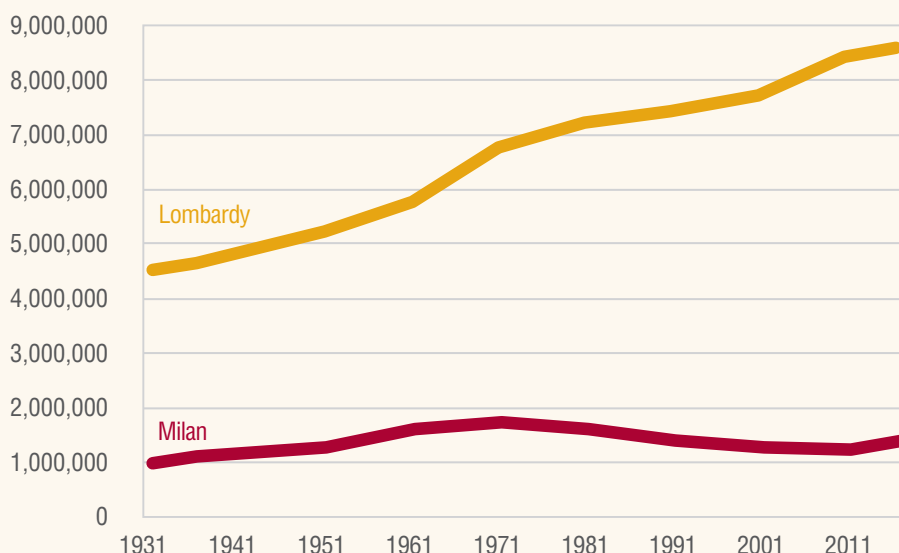
Milan: Past and Present

Milan's history as a European capital of industry, commerce, design, and innovation dates back more than 100 years. The capital of the Lombardy region established itself as a city of trade and technical know-how by hosting five international exhibitions between 1871 and 1906. By the end of that cycle, it was also the commercial and rail hub of northern Italy.

In the 1950s, Milan became Italy's 'capital of the miracle' as the country boomed, and established itself firmly as the national financial, media, architecture, and industrial design centre. The city's emerging industrial export brands (Pirelli, Alfa Romeo, Falck) and fashion brands (Armani, Prada, and Versace) gained global renown. But in the 1980s, Milan began to face its own painful process of deindustrialisation. The city looked to replace the lost heavy industry with growth in banking, television and media, advertising, and publishing. For a while, the motto 'Milano da bere' – 'Milan is good enough to drink' – was popular and summed up the city's post-industrial confidence and glamour.

At that time, Milan was still commonly regarded and rated as the third city for business and culture in Europe behind London and Paris.¹ But gradually the city became a victim of institutional inertia and political competition within and between governments, which resulted in a lack of strategic thinking about Milan's future in the new global economy. Milan's lack of strategic coordination together with the relative and rapid improvement of other European cities, resulted in the city's steady decline in comparisons with other global cities over the next 20 years.

Figure 3: Population of Milan relative to the surrounding Lombardy region (excluding Milan), 1931–2017



Source: Istat

During the 1990s, Milan failed to support the internationalisation of its small and medium-size enterprises (SMEs) or to provide an enabling climate for business and investment. Infrastructure deficits grew. In 2006, around the time when the core city population fell to its lowest point since 1945, the Organization for Economic Co-operation and Development (OECD) warned that Milan "seems to have lost part of its historical drive."²

Over the past five years, after the challenges of the financial crisis had passed, Milan has begun to witness *il nuovo rinascimento* ('the new renaissance'), energised by its hosting of the 2015 Expo and propelled by its capacity for innovation and urban vibrancy. Since 2008, its core has added nearly 100,000 residents – most of them young people – and the city is now making steady and recognised improvements in its physical and economic development.

Milan's performance today against global benchmarks

In city benchmarking studies, Milan performs well according to a wide range of influential global measures and ranks alongside other large second-tier European cities.

Because Milan's spatial development and governance are complex, international measures do not use widely shared definitions of the city or city-region when comparing the city to others. This, combined with the lack of data at any urban scale other than the administrative city of Milan, means that most international studies analyse Milan as if it is a city of 1.4 million people.

“ Milan is extremely difficult to describe, according to international standard patterns – world city, metropolitan region, global city, global city-region. . . . [This is] a geo-historical trait of Milan and its regional background. ”

- Professor Matteo Bolocan Goldstein, Politecnico di Milano, 2017³

Figure 4: The different spatial scales of Milan

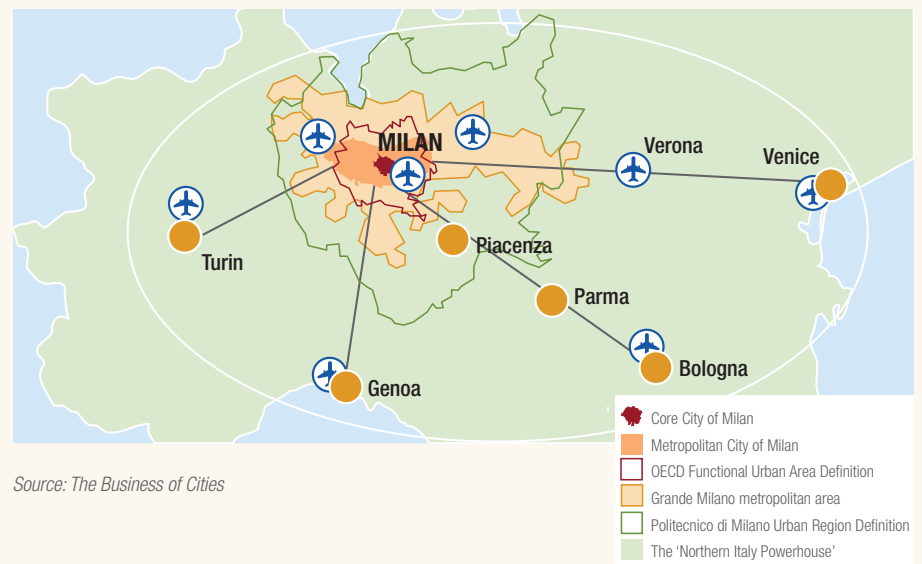
	Population	Size	Number of municipalities	GDP	Cities/regions of similar economic size
Milan core city	1.4 million	182 km ²	1	€61 billion	Grand Lyon, Greater Manchester
Metropolitan city of Milan	3.2 million	1,575 km ²	134	€144 billion	Berlin, Barcelona metropolitan area
OECD functional urban area	4.2 million	2,640 km ²	252	€180 billion	Melbourne, San Diego
Grande Milano region	7.5 million	8,100 km ²	858	€250 billion	San Francisco Bay Area, Greater Sydney
Politecnico di Milano region definition	12.5 million	30,000 km ²	1,500+	€400 billion	Ruhr region
'Northern Italian Powerhouse'	16 million	46,000 km ²	2,000+	€500 billion	Greater London, Paris/Ile de France

However, the urban footprint and agglomeration of the functional Milan region spreads much more broadly (see figure 4 and regional map). The Milan metropolitan area accounts for a population of at least 3 million to 4 million, many definitions identify the city's functional urban population as 7 million to 8 million, and a 2016 study by Politecnico di Milano evaluating the real region put the population at 12.5 million.

In terms of the wider zone of activity in the Po Valley, Milan is at the centre of an advanced industrial region of nearly 20 million people. Currently, however, Milan's advantages of scale and its ability to leverage the assets of other nearby cities are rarely captured in international comparative measures.

Partly as a result of these size and measurement issues, Milan's prominence in international indexes is not matched by its performance. It is the fifth most frequently ranked city amongst its ten peers, which reflects its profile and status, but ranked last for the number of top ten positions it achieved in 2016 and 2017 (see figure 5).

The many different definitions of the Milan region.



Source: *The Business of Cities*

Figure 5: Frequency of appearances of European cities in benchmarking indexes and rankings in the top ten, January 2016 to July 2017.

City	Total index appearances	Percentage of top 10 rankings
Amsterdam	151	42
Berlin	140	39
Stockholm	133	37
Madrid	126	26
Milan	110	6
Barcelona	109	30
Vienna	107	33
Frankfurt	94	23
Brussels	91	12
Rome	89	19

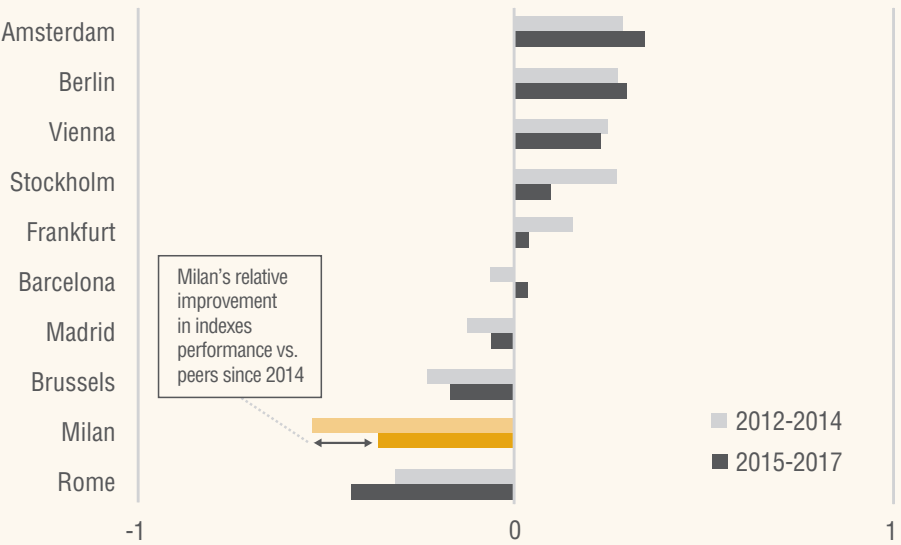
Analysis of Milan's performance against that of its European peers across every publicly available index since 2012 shows that Milan continues to underperform compared with cities that in functional size are smaller. This partly reflects the aforementioned issue of measurement at the city scale, but also reflects the fact that several of Milan's key strengths – creativity, culture, design, and innovation – are not easily captured in comparative and objective terms.

Even so, this analysis shows that of these ten cities, Milan has recorded the largest relative increase in overall city performance between 2012 and 2017 (see Figure 6). Even though the benchmarks underestimate Milan's size, they do capture its recent progress and improvement.

Since 2016, Milan has performed well in indexes measuring human capital, destination and brand reputation, connectedness, and shared mobility, but it tends to perform less well in indexes assessing governance, sustainability, educational attainment, and adaptation to the digital economy.

The Osservatorio Milano, a new joint effort between the municipality of Milan and industry partners such as Cushman & Wakefield, Google, and Mastercard, has been established to benchmark the competitiveness and attractiveness of the city compared with others in Europe. This is an important step in identifying and communicating Milan's competitive advantages. The scorecard contains more than 200 indicators measuring attractiveness in such areas as human capital, innovation, smart technology, equality, and accessibility. The report concludes that while the city must work to continue to attract tourists and investors, it must also become more green, more smart, and more liveable for its residents.

Figure 6: Comparison of Milan's performance with European peers across all global and Europe-wide indexes between 2012–2014 and 2015–2017



Source: *The Business of Cities*

Figure 7: Five areas where Milan outperforms and underperforms compared with its European peers

Index	Ranking
Euromonitor International City Destinations Ranking	27th of 100
Resonance World's Best City Brands	26th of 100
Arcadis Sustainable Cities Mobility Index	18th of 100
2thinknow Consulting Innovation Cities Global Index	29th of 500
QS Student Cities	33rd of 100
IESE Cities in Motion Index: Governance	79th of 181
Deutsche Bank Mapping the World's Prices 2017: affordability	37th of 47
Brookings Redefining Global Cities: higher education attainment	86th of 123
Nesta, et al.: European Digital City Index	46th of 60
TomTom Traffic Index, global	118th of 189

Milan City Competitiveness

In this section, Milan's competitiveness is assessed using a framework that consists of four main elements:

- **governance framework**
- **competitive climate**
- **agglomeration;** and
- **attractiveness to talent**

Governance framework

Vision, strategy, and coordination

Over the past 15 years, Milan has witnessed an improvement of city government, which has overseen and approved a process of regeneration and transformational projects that are now bearing fruit.

On the other hand, however, Milan has long been described as an 'unthinking metropolis' because of the inherited complexity and dysfunction of the wider region's governance framework.⁴ Recent years have seen the emergence of formal metropolitan-scale initiatives, but these interventions do not yet translate into co-ordinated implementation of a shared vision and strategy for Milan's future.

Milan's multi-tier governance system is a complex one: there are 134 municipalities in the Metropolitan City of Milan (which is the same size as Greater London), and 100 more in the functional region.⁵ But there is no agreed definition of the metropolitan area nor any fully fledged form of metropolitan government. Milan's economic and spatial footprint continues to outgrow the governance framework, resulting in fragmentation of key systems, such as transport, and perpetuating the gap between core and peripheral Milan.⁶

Multiple attempts have been made to launch a metropolitan-level strategic plan, including the 1961 Piano Intercomunale Milanese (PIM), a voluntary effort, and the 2006 province-led City of Cities initiative.⁷ The establishment of the Metropolitan City of Milan triggered the creation of a new strategic plan, but it lacks detail on execution and, crucially, has no financial mechanism.⁸ The plan has been followed by a simplified Metropolitan Manifesto in an attempt engage local governments, universities, and private companies.⁹

Most observers doubt that Milan can create the local government buy-in or national government support to move forward with a shared metropolitan growth strategy any time soon. On the one hand, this lack of coordination generated costs and delays which hamper the city's competitiveness. These include the costs of competing land uses, the slow pace of implementing infrastructure upgrades, and the obstacles to growing clusters strategically. On the other hand, in this vacuum, Milan's private and nonprofit sectors have become highly engaged and active in mounting projects that encourage urban restructuring and foster emerging clusters.

Land use, planning, and density

Milan is a medium-density city by European standards, with a centre of gravity that is moving slightly northwards. The core city of Milan is nearly twice the size of central Paris and central Barcelona, but less than half as dense. The area defined by the new Metropolitan City of Milan boundary is almost identical in size to Greater London, but is home to only 40 per cent of the population. At this limited metropolitan scale, Milan's density is comparable to that of cities such as Brussels and Greater Manchester.

Over the past 30 years, the suburbanisation of population and re-urbanisation of jobs has created a complex set of dynamics in the Milan region. The functional economy stretches northward to the Alps and has a polycentric urban form.¹⁰ Whereas the core and some northern parts of the metropolitan area are characterised by a medium-density urban form (reaching up to 7,200 inhabitants per square kilometre in some city centre districts), in the south, low-density settlements are more common (with an average density of 300 inhabitants per square kilometre).¹¹

“ Citizen political behaviour in Milan has become less tribal and more pragmatic. Milan is now leading the development of the region with catalytic urban projects. ”

- ULI workshop participant, September 2017



The Milano Porta Garibaldi railway station. (Sharon Gallo, iStock)

Density is increasing because of population growth, migration, and an increasing number of city-centre redevelopment projects that encourage density and more sustainable urban living. Most international migration has taken place in the outer suburbs and fringes, creating pockets of density well outside the historic core.¹²

Projects totalling well over 2 million square metres are currently under construction or in planning in Milan, many of which promote sustainable, higher-density urban living. Several of these projects are in the northwest of the city, within the new Metropolitan City boundary.¹³ Two key redevelopment projects are underway or recently completed:

- The **Scali Ferroviari di Milano** project is engaging multiple tiers of government to re-activate at least seven disused areas of railway land by adding new mass transit infrastructure, affordable housing, and sustainable mixed-use development.¹⁴ These areas add up to well over

1 million square metres and are being unlocked by the forthcoming Circle Line, which is one of the key rail upgrades in Metropolitan Milan over the next decade, benefiting from around €1 billion of national rail investment. The project promises to have a catalytic effect in showcasing a different model of human-scale, cycle-friendly urban living.

- The strategically located **Expo site** is being converted to a world-class, 1 million-square-meter science and technology park under the management of a company 70 per cent owned by the city and Lombardy region. Located just inside the green belt, the park is already set to have three key anchor institutions – Human Technopole, the scientific campus of Università degli Studi di Milano, and a large hospital. The scale and quality of this future urban district could become a reference point for Milan's revival and leadership.¹⁵

A number of other projects also have added or are set to add much-needed residential and commercial space:

- **Porta Nuova**, situated just one kilometre from Milan Cathedral, is a mixed-use project located in an abandoned industrial district between two of the region's main transport hubs.¹⁶ Completed in 2014, the project combines offices with retail space, culture, and a walkable lifestyle. The public plazas have provided an important source of foot traffic and enabled visitors to travel easily from one popular section of the city to another.¹⁷
- **City Life**, just three kilometres to the west, is a major residential and commercial development located on the former grounds of Milan's trade fair.¹⁸ It is well served by public transport links due to its proximity to new M5 line stations, and two of the towers are Gold certified under the Leadership in Energy and Environmental Design (LEED) program.¹⁹
- **Milanosesto**, located in the suburb of Sesto San Giovanni, is one of the city's largest residential projects. It will provide more than 8,000 residences, plus feature hotel, office, and retail space.²⁰
- **Milano Santa Giulia** is the city's largest residential project. Located about 15 minutes by car or Milan Metro from the city centre, the 1.2 million-square-meter former industrial zone is located near a motorway, rail, and Metro stations.²¹ The project will host Sky's European headquarters, other offices, a retail and entertainment district, and enough housing for about 60,000 people.²² It also aims to be the first neighbourhood in Italy fully meeting LEED standards and fully equipped with smart technology.²³

The combined effect of these projects is likely to be substantial, allowing Milan to accommodate the next cycle of demand and demonstrate its embrace of 21st-century urbanism. Together they offer significant new opportunities to build desirable urban sites for talent and to foster innovation.

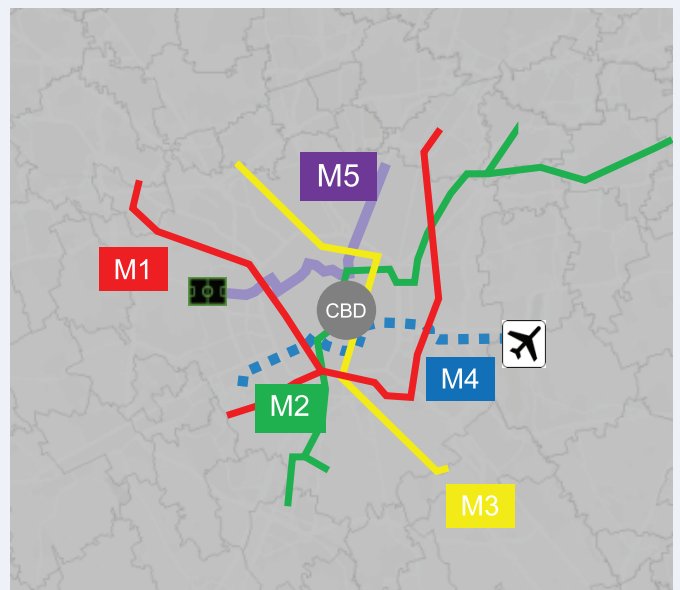
At the same time, there are also plans to redevelop Milan's inner suburbs. The Suburban Plan is primarily focused on the maintenance and reclamation of public housing in five districts. The €300 million plan also prioritises improving transport connectivity and mixing land uses to ensure that the suburbs can continue to be attractive relative to the dynamic changes happening elsewhere in the city.²⁴

Infrastructure and services

Milan has seen its infrastructure improve significantly in recent years and has started to catch up with leading peers in Europe. In terms of transport, the city has co-invested not only in new Metro lines and new highway links, but has also upgraded existing Metro lines and extended high-speed rail links to Milan-Malpensa Airport and Brescia to reduce travel times. Milan now has the strongest transport and mobility system in Italy, though its scores in a European and global context are still moderate.²⁵ Digital infrastructure is also catching up: the central city is the site of a pilot of the new Italian 5G network and has 100 per cent coverage of fibre to the home.²⁶

Perhaps the biggest boost to Milan's connectivity is the new M5 Metro line linking Bignami in the north of the city to San Siro in the southwest.²⁷ It provides the only direct Metro link to the San Siro stadium, and improves access to key centres such as the Bicocca University and the Niguarda hospital.²⁸ The new line has unlocked the historic neighbourhood of Isola, an underserved quarter which is now the focus of redevelopment, and provides the first Metro station in the Sempione area. The line establishes the Garibaldi district as a key national and international transport hub, allowing interchanges with the suburban and regional rail network and the Malpensa Express.²⁹ The 2011 extension of the M3 line from Maciachini to Comasina has created a similar interchange hub adjacent to the northern railway station in Affori FN.

Metro lines in relation to the Milan central business district. The M4 line is scheduled to open in 2022.



The delayed 21-station, 15-kilometre M4 line is due to open in 2022 and should provide a functional and cost-effective connection between Linate Airport in the east of the city to suburbs in the west. The M4, which will also connect with the M1 and M2 in the city centre, is likely to make a big difference in airport access across the metropolitan area.³⁰ The carrying capacity of the new M4 and M5 lines is much greater than that of the original lines – 24,000 passengers per hour in one direction for the M4 and 18,000 for the M5 – which will help provide more efficient throughput to key job districts.³¹

Investment in Milan-Malpensa Airport and inter-city rail links to Treviglio and Brescia are also significantly reducing journey times and the need to change trains. These additions bring several strategic locations within a 40-minute journey and boost capacity for both passenger and freight services.³² At the regional level, Milan will be connected to Genoa via a new high-speed rail link that will enable passenger trains to reach speeds of up to 250 kilometres per hour. This link will also shorten the journey time for cargo traffic coming from east of the Mediterranean.³³ Meanwhile, the new Ceneri Base Tunnel will offer a faster rail connection between Zurich and Milan beginning in 2020, shortening the journey time to just under three hours.³⁴

Despite these important upgrades to the rail system, 58 per cent of trips between the central city of Milan and the metropolitan area are still made by car, and the percentage is higher at the regional scale. Investment in the road networks has emerged as a strategic priority. The new 62-kilometre BreBeMi motorway, designed to provide an alternative to the previous motorway between Brescia and Milan, opened in 2014.³⁵ The Milan Outer Eastern Bypass (TEEM) also reduces travel time along a key section of ring road to 15 minutes from 25 minutes to an hour.³⁶ Despite this progress, suburb-to-suburb travel remains a key deficit and is a priority for the Sustainable Urban Mobility Plan moving forward.

An important dimension of the next cycle of Milan's infrastructure is the adoption of smart and secure digital systems that improve transport flows, infrastructure safety, and digital connectivity. This has been a focus for the city in recent years.

Overall, recent infrastructure additions have helped the central city of Milan catch up with other leading European cities. Infrastructure is no longer viewed as a competitive disadvantage. In the next period, the city will need to continue the rate and speed of infrastructure investment, including through use of new financial tools and joint ventures.³⁷

Competitive climate

Costs and business investment

The high or uncertain costs of labour, energy, and rents, as well as high or uncertain indirect costs, have been a disadvantage for Milan in the past, but have become a more favourable factor in recent years. National reforms in 2014 and 2015 to ease rigidities in the labour market and reduce the costly barriers to hiring and firing workers have begun to make labour costs more competitive.³⁸ The recent Industry 4.0 initiatives mean that companies that invest in technological assets can also receive depreciation incentives on their expenses, as well as tax credits for incremental expenditures on research and development. Together these offer big incentives for corporations moving to Italy.

Overall business costs have become more competitive in Milan relative to the inflated costs in other European cities. Stable residential and office prices have increased affordability for businesses and boosted activity in Milan. Housing prices in Italy have fallen more than 20 per cent since 2008, and renting a house costs on average 12 per cent less than in 2012, although the rental market is small.³⁹ Office space take-up from January to September 2017 was the highest ever recorded in the Milan.⁴⁰ Business investors have increased their activity and their confidence has risen in response to the recent introduction of reforms, ongoing signs of an economic recovery, low interest rates, and strong liquidity.⁴¹

International perceptions regarding business costs and business investment in Milan are partly shaped by the city's association with Italy's business brand. Italy is only ranked 46th of 190 countries for ease of doing business by the World Bank, and 54th of 180 countries in Transparency International's Corruption Perceptions Index.

Tax and regulatory framework

Italy's tax and regulatory framework has historically constituted a competitive disadvantage for Milan. High regulatory burdens and insufficient regulatory quality have weakened the business and investment climate.⁴² Tax rates have been one of the three most commonly cited concerns about business in Italy.⁴³ But recent reforms targeting improvement have had a wide positive impact, and in some areas of regulation Milan now performs well. Those familiar with doing business in Milan also have much more positive perceptions, but Milan faces a challenge in differentiating itself more clearly in the international arena.

Italy ranks 46th among 190 countries worldwide for ease of doing business, up from 50th, although in terms of paying taxes (e.g. time required to comply with major taxes, total tax and contribution rate, and ease of postfiling) it ranks 112th.⁴⁴ Numerous reforms have been introduced since the financial crisis to improve regulation, digitisation, transparency, and dispute resolution mechanisms,⁴⁵ and in some cases these have put Italy on a par with western Europe and US arrangements. Tax rates have also been reduced to encourage investment: in 2017, the corporate tax rate was reduced from 27.5 to 24 per cent. Additional incentives to replace taxes on individual incomes or capital gains earned abroad with a lump-sum payment are also helping attract people who have left the country, company executives, and portfolio managers.

Political risks

Though Milan exposure to political and geopolitical risk is moderate, three ongoing areas of risk deserve mention:

- national constitutional reforms and short political cycles;
- national migration challenges and the rise of Euroscepticism/populism; and
- structural challenges to the banking system.

The challenges Italy faces in delivering constitutional reforms have raised political concerns that affect Milan.⁴⁶ The most recent general election

resulted in a hung parliament, and the country's two populist parties – the anti-establishment Five Star Movement (5SM) and the far-right League party – emerged strongest.⁴⁷ Following the agreement of the two parties on new parliamentary speakers, the likelihood of a populist coalition government favouring changes to the country's role in Europe is rising. Some unexpected outcomes of this might have implications for Italy's long-term future in the Eurozone and its ability to service its euro-dominated debt.⁴⁸

Political reaction to the steady influx of migrants and refugees presents a second source of risk, as anti-EU sentiment grows.⁴⁹

A third source of risk is the ongoing weaknesses of the Italian banking system. In 2017, the Italian government stepped in to rescue Italy's third-largest bank, but concerns regarding insolvency and a potential showdown between the Italian government and the European Commission remain.⁵⁰ New rules that bondholders must take the hit in the event of a public bank bailout puts a large number of household retail investors at risk.

These political risks are not of Milan's making, but as Italy's main centre of business and finance, the city is affected by how well these risks are managed by national and supra-national governments. Milan's challenge is partly to support good national policy, and partly to demonstrate that its own strong systems of city government, management, and transparency insulate it from national risks.



The Galleria Vittorio Emanuele II, the oldest shopping mall in Europe. (scallger/iStock)

Agglomeration

Size and scale of internal market

Milan has the competitive advantage of a large customer base and central strategic location in Europe. It is first and foremost a large market in its own right: a metropolitan region with 7 million to 8 million people, with more than 280,000 firms in the core Metropolitan City and another 100,000 firms beyond. The metro region has the second-highest gross domestic product in continental Europe and enjoys a 40 per cent productivity advantage over the rest of Italy because of its concentration of finance and business services.⁵¹ It is, in effect, the economic nucleus of the Po Valley (with 16 million people) and the whole of northern Italy region (with 26 million people).⁵² The number of companies and consumers to serve is a major reason that 3,000 multinational companies are located in the region, generating €169 billion in annual turnover.⁵³

But Milan's market size and scale are constrained by diseconomies that arise at this wider scale. The region's development pattern imposes significant transport, public service, and environmental costs. The region has high mobile connectivity but poor internet speeds at the regional level and a smaller digital economy than its peers.⁵⁴ The size and scale of Milan's market has also been constrained by the financial crisis, which hit demand in the Lombardy region particularly hard.

Clustered specialisations

The core city of Milan has internationally competitive clustered specialisations in three core sectors: finance and consulting, fashion and design, and biotechnology and life sciences.

At the regional level, Milan possesses a wide range of mature, specialised clusters, many of which intersect.

“*Milan's strength lies in the coexistence of different development engines – research, universities, multinationals, the creative industry, high value-added services – together with a strongly interconnected entrepreneurial fabric that characterizes the Grand Milan, the 'infinite city'. . . . A dense entrepreneurial fabric has always been the key to Milan's success.*”

– Carlo Sangalli,
President of the Milan Chamber of Commerce⁵⁵



A stylised map showing the economic dynamics among Milan and other cities in Lombardy.

Source: MiWorld/Politecnico di Milano.

The annual Milan Fair, which hosts 37,000 enterprises from across northern Italy, makes it possible for smaller businesses located in industrial districts to negotiate deals, absorb economic disruption, and bounce back over the long term.

Milan's finance cluster consists of 10,000 companies which employ more than 70,000 people.⁵⁶ Almost all of Italy's most important banks are based in Milan, and numerous mergers have led some Milanese banks to become important international players.⁵⁷ The cluster now hopes to benefit from relocation of some of London's financial institutions after Brexit in 2019, with strong support from the national government.⁵⁸ Meanwhile, Milan's inherited expertise in manufacturing, business, management, and finance has fostered a competitive advantage in consulting, most of which is clustered in the city centre.

Milan also enjoys a long-established competitive advantage in fashion and design. Most firms in this field are small, and many are spatially concentrated in Navigli in the Ticinese neighbourhood, encouraging interaction and trust among fashion houses and designers. Other important design districts include Brera, Isola, Tortona, and Certosa.



Milan's Navigli design district. (Max Pixel)

Overall, the cluster benefits from three specific assets: the excellent organisational capacity of firms; networks of SMEs able to form flexible production frameworks and produce niche goods; and a local textile sector that provides high-quality raw materials to designers. Today, there are 13,000 fashion enterprises in core Milan, and the fashion industry generates €13 billion in annual revenues – about 20 per cent of the city's GDP.

Together, Milan's industrial and design districts illustrate the way the city is developing a high-tech, advanced manufacturing identity and grounding it in visible, well-defined districts and neighbourhoods. But two factors combine to limit the success of the design cluster in international markets:

- Links between firms and universities need improvement. Companies are often unaware of what research is being conducted at universities, and university researchers are unaware of what innovations are needed by firms. Analysts point out the need for more joint R&D facilities with state-of-the-art resources.⁵⁹
- The northerly dispersion of design firms operating outside the fashion industry limits the ability to translate small-scale expertise into large-scale commercial success.

Milan's biotechnology and life sciences cluster is a third important driver of the city's competitiveness. Milanese biotech firms have built strong links with the health care system, and the city now hosts a number of renowned scientific research institutions, such as the IFOM-IEO campus, the biggest molecular oncology research centre in Europe.⁶⁰ These strengths have given rise to successful spinoff companies such as Genenta and have helped Italy rise to second in Europe in the number of biotech publications.

However, a strong institutional presence has not yet translated into rapid commercialisation or technology transfer partly because several of the leading hubs are spatially isolated and often compete against one another.⁶¹ Still, hopes are high that Milan's emerging expertise in food innovation, along with the Italian government's decision to turn the Expo site into a research centre dedicated to big data and genomic science, signals a change in scale and co-operation across the cluster.⁶²

Institutional engagement

Institutions in Milan engage strongly with the economy. In 2017, the Italian government established a task force – involving city authorities, the Bank of Italy, the national Revenue Agency, the Milan Chamber of Commerce, and the Italian Commission for the Stock Exchange – to bring firms and banks to Milan post-Brexit.⁶³ The City of Milan and the Chamber of Commerce collaborate closely to support businesses and to establish new initiatives and incubators that bring together the public and private sector more effectively.⁶⁴

The Chamber of Commerce is especially active, employing five companies dedicated to supporting the business and market system.⁶⁵ These companies help internationalise SMEs,⁶⁶ reach out to Latin American companies,⁶⁷ support scientific and technological development, and provide information and training to new entrepreneurs.

Across the region, many of the public and private initiatives in place overlap and duplicate one another. Milan would benefit from a single locus of business leadership that can channel a single voice about how best to manage agglomeration and economic development, as is done by the Amsterdam Economic Board and the Stockholm Business Region.

Attractiveness to talent

Human capital, liveability, and opportunity

Milan's jobs base, amenities, climate, and lifestyle consistently attract domestic talent and provide good opportunities for existing residents. But compared with European peer cities, its quality of life is compromised by traffic congestion and pollution from the outskirts to center, and a lack of access to key public amenities such as high-quality education and green space. A 2016 PwC study placed the city third among 30 global cities for health care, and seventh for rent affordability. But the city performed much worse with regard to crime levels, access to public parks, well-being of older people, and opportunities for the younger generation.⁶⁸

Key areas of improvement required to strengthen Milan's performance in international rankings

- Pollution, especially PM2.5 (particulate matter) pollution
- Traffic congestion, especially during the morning rush hour
- Access to public services and parks
- Educational attainment
- Internet speeds

Urban sprawl, longer commutes for workers, and the traffic that results all erode Milan's quality of life and shape international perceptions of the city. The introduction of a daytime city-centre congestion charging scheme in 2012 was a welcome intervention, but congestion and air pollution remain high.⁶⁹ The scheme has reduced traffic 28 per cent, concentration of PM10 (particulate matter) by 18 per cent, and carbon dioxide emissions by 35 per cent.⁷⁰

Milan's dynamic and productive labour market and its specialisation in high value-added sectors are big drivers of the city's appeal. The city's unemployment rate, at 8.4 per cent, is far lower than that of Italy, 12.7 per cent, and the Eurozone, 11.6 per cent.⁷¹ The city's reputation for style, its relatively low home prices, and 2013 legislation that facilitates visas and more flexible employee contracts have all increased its appeal to entrepreneurs.⁷² But the wage gap in Milan compared with other leading European business cities is high, and the departure of young and well-educated Milanese residents for Germany, France, and the UK constitutes a worrying trend. In 2015 and 2016, the Lombardy region had the most emigrants in Italy, and over one-third of those choosing to move were well-educated 18- to 34-year-olds.⁷³



A street in Milan. (querbeet/iStock)

In addition, skills and broad-based educational attainment of Milan's population leaves a lot of room for improvement: of the 23 largest metropolitan regions in Europe, Milan ranked last in terms of higher educational attainment, at 19.2 per cent, according to a Brookings study.⁷⁴ This is despite the fact that the city is home to several renowned universities that are among the best in Europe. In the QS World University Rankings, Bocconi University ranked fourth in Europe for economics and sixth for business and management, while the Politecnico di Milano ranked seventh in the world for design and 14th for architecture.

However, Italian government talent initiatives have started to have an impact. A five-year tax exemption for highly skilled workers who return to Italy after more than five years of working abroad has already benefitted 4,500 people, while tax exemptions for researchers that have worked abroad have brought 2,000 people back to the country.⁷⁵ There is optimism that when the final terms of the Brexit deal become clearer, Italian emigrants and startups inside and outside the EU will consider relocating to Milan in larger numbers.⁷⁶

Innovation, technology, and enterprise

The Milan region inherits a strong culture of innovation and entrepreneurship. More than a decade ago, the OECD cited Milan's substantial but under-exploited capacity for innovation as a factor in the city's declining competitiveness.⁷⁷ Recent government-led initiatives designed to promote innovation hold promise, and numerous institutions are tapping into new innovation opportunities. But several challenges remain, and investment in startups is still low compared with Milan's European peer cities.

“ In order to maintain its southern European leading role, Milan needs to upgrade high-level business services, as well as to invest in both its traditional assets and innovation. ”

- Dr Simonetta Armondi and Dr Stefano Di Vita,
Politecnico di Milano

There are now signs of a step change in Milan's approach to innovation and a rise in the number of startups.⁷⁸ These signs include:

- The attraction of leading information technology firms such as Google, Microsoft, and Samsung.
- The provision of strategic locations for innovation. The former Expo site is being converted into a complex of seven new research centres focusing on medical genomics, agriculture and food science, and big data analytics.⁷⁹ This is intended to create spillovers with the IFOM-IEO campus and the San Raffaele hospital.⁸⁰
- An improved regime for startups. In 2016, the Italian Ministry of Economic Development launched the €13.7 billion Industrial National Plan 4.0 to support digitisation.⁸¹ The plan enables startups and SMEs investing in new assets to apply for hyper- and super-depreciation, grants them a 30 per cent tax deduction for investments of up to €1 million in innovative start-ups and SMEs, and provides a 50 per cent tax credit for R&D investment.⁸² Many recent legislative changes to visa and tax rules have also been designed to foster innovation.⁸³

The city was home to more than 900 startups in 2015, many in software, IT, and science, and this figure has risen since then.⁸⁴

The main perceived challenges to Milan's innovation ecosystem are:

- Ensuring that bureaucracy does not deter business startups, especially by entrepreneurs for whom Italian is not their first language.⁸⁵ Some legislative changes have not had the desired effect because of ambiguity regarding what constitutes an 'innovative startup'.
- Improving networking between coworking spaces and startups.⁸⁶
- Improving the avenues and incentives for universities to collaborate and interact with SMEs.
- Developing a more defined startup culture and a clearer grasp of what makes a startup successful and competitive. Recent increases in the number of accelerators and venture capital firms will help, but the size and experience of Italian venture capital firms will need to grow.⁸⁷



The Piazza del Duomo (Cathedral Square) in Milan. (bennymarty/iStock)

Brand, identity, and destination

In 2006, the OECD advised Milan that it should develop a strategic branding approach to enhance its international image.⁸⁸ In the 12 years since, Milan has responded with a variety of initiatives, led by the city government and other public and private agencies across a range of sectors and with different outlooks and interests.⁸⁹ Milan has begun to improve its profile as a highly attractive city surrounded by a dynamic, distinctive, and productive region. But the overlap and duplication of messages mean that the world has not yet learnt a compelling narrative about what exactly Milan stands for or where it is going.

Milan inherits a longstanding and resilient global reputation in key sectors, especially fashion, design, and retail. The city is still Europe's fourth most attractive for retailers, and Design Week and Fashion Week remain among the most high-profile events on the global calendar, transmitting an image of Milan as a 'fashion world city'.⁹⁰ Milan's 40-year reputation as a fashion and design capital is not only a function of its industrial agglomeration or of a quintessential Milanese style; it is also driven by the city's powerful association among expert buyers and consumers as a place where cutting-edge fashion is launched and sold. High-profile global ambassadors also support Milan's elite fashion status and provide the city with free marketing.⁹¹

Milan's tourist brand (including luxury tourism) is also improving in the current cycle. Over the past seven years, the number of nights spent by tourists in Milan has increased by 60 per cent, and the 2015 Expo was a big boost to Milan's visibility, attracting 5 million international visitors.⁹² In 2017, Milan overtook Florence to become the third-most-visited destination in Italy.⁹³ But visitors only stay for 2.4 nights on average, often just to attend one-off fairs or events, partly because awareness of and access to the city's full spectrum of assets and attractions is limited.⁹⁴

Despite the presence of many multinational firms, Milan's business brand remains below its potential. Among some audiences, the city is still perceived as a warehouse and production city rather than a city of creativity and openness. Milan also does not yet possess a compelling identity for innovation or leadership as a city of the future although these are now priorities. City Hall and the Milan Chamber of Commerce are promoting 'Milan Smart City', and the 2015 Expo showcased Milan's growing expertise in sustainability, food, and biotechnology.

In principle, Milan should have the brand advantage of high visibility in prestigious sectors, a vibrant and varied consumer economy, and a rich array of annual and one-off events. But this advantage has yet to be realised: Milan is only just starting to create a compelling story about its role and contribution in the new world of cities.

Recommendations

Communicating Milan's competitiveness

- Milan has yet to tell its story to the world – that of a region that has transformed itself from a centre of industry to a richly diverse post-industrial area. In particular, the region's breadth of assets and interlocking clusters can be communicated much more clearly. At this point in the cycle of recovery, it is important to agree on and promote an agenda about the kind of city Milan wants to become over the next 20 years.
- The public/private Osservatorio Milano benchmarking collaboration is an important step in measuring and monitoring Milan's comparative performance. More can be done to better document and communicate Milan's advantages, however. The city needs to continue expanding the data project in order to tell a clearer and richer story (including in English) to a variety of international audiences about what the Milan region really is and why it offers unique opportunities.

Milan and Italy, Milan and the Alpine region

- The economic gap between Milan and Italy has grown dramatically in the past decade and is set to continue growing over the next decade. This presents two imperatives. First, Milan must differentiate its business environment and level of transparency from Italy's less favourable business brand through a clear promotional and awareness-raising effort. Second, Milan must collaborate with other cities in the region to pursue the emergence of northern

Italy and the Alpine region as an increasingly integrated economic unit. Doing so will provide Milan with the advantages of scale and visibility offered by leading global regions. In the longer term, Milan may need to secure nationwide support for its global role, including by encouraging development of an Italian 'system of cities' that can spread to the rest of the country such benefits as supply chain development, business expertise, and specialist talent.

Making more use of soft power and soft governance

- Given the apparent obstacles to creating a more streamlined and effective governance model in metropolitan Milan, the city's business leaders should prioritise 'softer' governance solutions – public/private partnerships, project preparation and delivery, and influence on and example-setting for the government. Examples of catalytic projects that may help build a regional alliance include big land and real estate projects, university partnerships, airport development, co-operation between Milan and Turin, trans-Alpine trading initiatives, and joint agendas such as creating smart cities and promoting urban innovation. Though longer-term strategic planning may also have a positive impact, it will be more important as a soft governance tool to identify strengths, weaknesses, opportunities, threats, and collaboration priorities rather than a programme to be pursued by a metropolitan authority.

A smart city and region

- Milan has begun to make good progress on smart city applications, inter-operable systems, the sharing economy, open innovation, urban services, and sustainable mobility. Because such elements are important to its alignment with future thinking, Milan should move quickly to demonstrate how this transition to status as a smart city may improve urban productivity and the ability to accommodate entrepreneurship. Milan's role as a 'lighthouse' city within the EU Horizon 2020 programme is a good example of this potential.

Partnership with Turin

- Because they are the two largest cities in northern Italy and have improved connectivity and complementary strengths, there is a strong rationale for Milan and Turin to expand their collaboration and joint positioning while retaining their strong individual identities. Both cities would benefit from greater mutual understanding of the networks of companies and the flows within and between them. This would inform the kind of economic and R&D projects leaders in the two cities could undertake and the segments in which the combined region could be promoted globally.

Contributors

ULI would like to acknowledge the following people who assisted with the development of this report and the case studies by taking part in research workshops and interviews.

Mario Abis	Makno
Luigi Aiello	Prelios
Angela Airoidi	Makno
Davide Albertini Petroni	Risanamento SpA
Prof Alessandro Balducci	Politecnico di Milano
Alessandro Busci	Prelios
Prof Mario Calderini	Politecnico di Milano
Jacopo Della Fontana	Studio D2U
Marco Dettori	Assimpredil Ance
Prof Giovanna Fossa	Politecnico di Milano
Renato Galliano	Director of Urban Economics and Labour, City of Milan
Nicholas Garattini	Generali Real Estate
Andrea Marani	Studio GOP
Claudio Piccarreta	JLL
Silvia Rovere	Morgan Stanley SGR
Giancarlo Scotti	President, ULI Italy
Domenico Siniscalco	Morgan Stanley
Gianni Verga	Engineer
Corrado Vismara	Savills Larry Smith
Cristiana Zanzottera	BNP Paribas

References

- ¹ Cushman & Wakefield (1990). 'European Cities Monitor'. Cushman & Wakefield: London.
- ² OECD (2006). *Milan Territorial Review*. OECD: Paris.
- ³ Armondi, S. & Di Vita, S. (2017). *Milan: Productions, Spatial Patterns and Urban Change (Built Environment City Studies)*. Routledge.
- ⁴ Dell-Agnese, E. & Anzoise, V. (eds.) (2011). 'Milan, the Unthinking Metropolis,' *International Planning Studies*, 16(3): 217-235. Available at: <https://www.tandfonline.com/doi/abs/10.1080/13563475.2011.591143?journalCode=cips20>.
- ⁵ OECD (n.d.). 'Metropolitan areas.' Database. Available at: <https://stats.oecd.org/Index.aspx?DataSetCode=CITIES>.
- ⁶ Del Fabbro, M. (2017). 'Lessons from Milan's emerging metropolitan debate.' Available at: <http://citiscopes.org/commentary/2017/06/lessons-milans-emerging-metropolitan-debate>.
- ⁷ OECD (2006). *Milan Territorial Review*.
- ⁸ Silva, C.N. & Buček, J. (eds.) (2016). *Local Government and Urban Governance in Europe (The Urban Book Series)*. Springer.
- ⁹ Corvi, D. (2015). 'Per un nuovo stile di pianificazione strategica Milanese.' Available at: www.pim.mi.it/per-un-nuovo-stile-di-pianificazione-strategica-milanese/.
- ¹⁰ Pucci, P. & Colleoni, M. (eds.) (2016). *Understanding Mobilities for Designing Contemporary Cities*. Springer: Basel.
- ¹¹ Berlin Senate Department for Urban Development and Housing (n.d.). 'Lombardy Region: The Metropolitan area of Milan.' ENVIBASE project. Available at: www.stadtentwicklung.berlin.de/archiv_sensut/umwelt/uisonline/ervibase/handbook/lombardypartner.htm.
- ¹² Manfredini, F. & Curci, F. (2015). 'Processes of urban regionalization in Italy: a focus on mobility practices explained through mobile phone data in the Milan urban region.' Presentation, 27th May 2015. Available at: https://ec.europa.eu/jrc/sites/jrcsh/files/manfredini_urbanisation_workshop_27may2015.pdf.
- ¹³ PwC (2016). *Real Estate Market Overview – Italy 2016*. PwC Italy. Available at: <https://www.pwc.com/it/it/publications/assets/docs/real-estate-2016.pdf>.
- ¹⁴ Stevens, P. (2017). 'MAD architects presents scali milano plans to transform milan's disused railyards.' Available at: www.designboom.com/architecture/mad-architects-scali-milano-masterplan-historical-future-milan-design-week-04-10-2017/.
- ¹⁵ Ravizza, S. (2018). 'Milano, Statale: sì al progetto Expo. Vago: «Una rivoluzione per la ricerca».' Available at: http://milano.corriere.it/notizie/cronaca/18_marzo_07/milano-statale-si-progetto-expo-vago-una-rivoluzione-la-ricerca-ec4e13aa-21ce-11e8-a665-a35373fafb97.shtml?refresh_ce-cp; Fotia, F. (2016). 'Milan: the Human Research Center for scientific research arrives in the Expo area.' Available at: <http://www.meteoweb.eu/2016/09/milano-nellarea-dellexpo-arriva-il-centro-ricerca-scientifica-human-technopole/753797/>; Ansa (2018). 'New Galeazzi Hospital in Expo area.' Available at: http://www.ansa.it/lombardia/notizie/2018/02/14/nuovo-ospedale-galeazzi-in-area-expo_f8e46e59-df64-4609-a922-9f892f1975ef.html.
- ¹⁶ Sanderson, R. (2013) 'Qatar buys into Milan Porta Nuova property project.' Available at: www.ft.com/content/03794b80-be51-11e2-bb35-00144feab7de.
- ¹⁷ Urban Land Institute (n.d.). 'ULI Case Studies – Porta Nuova.' Available at: <https://casestudies.uli.org/porta-nuova/>.
- ¹⁸ Rackard, N. (2013) 'In Progress: CityLife Milano / Zaha Hadid Architects.' Available at: www.archdaily.com/338830/in-progress-citylife-milano-zaha-hadid-architects.
- ¹⁹ Turismo Milano (n.d.). 'General information.' Available at: www.turismo.milano.it/wps/portal/tur/en/artecultura/architetturaemonumenti/grattaciel-earchitetturamoderna.
- ²⁰ Milanosesto (n.d.). 'Homepage.' Available at: www.milanosesto.it/en/#home.
- ²¹ Risanamento SpA (2017). *Milano Santa Giulia. Our project, your retail*. Available at: <https://www.designinternational.com/sites/default-files/2017-06/16%20Milano%20Santa%20Giulia.pdf>.
- ²² Milano Santa Giulia (n.d.). 'Homepage.' Available at: <http://www.milanasantagiulia.com/?lang=en>.
- ²³ Milano Santa Giulia (n.d.). 'Building the Future.' Available at: <http://www.milanasantagiulia.com/building-the-future/?lang=en>.

- ²⁴ TeMA, Milan Chamber of Commerce (2017). *Milano Building the Future 2017*. TeMA: Milan. Available at: www.temamilano.it/files/great_milano_web.pdf.
- ²⁵ Eltis (2017). 'Milan 'most eco-mobile' city in Italy.' Available at: www.eltis.org/discover/news/milan-most-eco-mobile-city-italy.
- ²⁶ Ernst & Young (2017). 'Milan: The New Financial Centre.' Presentation. Available at: www.selectmilano.com/wp-content/uploads/2017/04/12_EY_GFCI-in-Milan.pdf.
- ²⁷ MiCo Team (2016). 'Milan metro line 5 awarded in London.' Available at: www.conventionbureaumilano.com/technology/milan-metro-line-5-awarded-in-london/.
- ²⁸ CityMobil2 (n.d.). 'Local transport plans reviewed and automated transport systems assessment in Milano.' Available at: www.citymobil2.eu/en/upload/Deliverables/PU/D13.1_Milan.pdf.
- ²⁹ Bianco, C. (2014). 'Milan opens Zara-Garibaldi section of line M5.' Available at: <http://metroautomation.org/milan-opens-zara-garibaldi-section-of-line-m5/>.
- ³⁰ Wantedinmilan.com (2016). 'Milan's new metro line to bring traffic disruption.' Available at: www.wantedinmilan.com/news/milans-new-metro-line-to-bring-traffic-disruption.html.
- ³¹ Briginshaw, D. (2015). 'Milan completes first of two automatic metro lines.' Available at: www.railjournal.com/index.php/metros/milan-completes-first-of-two-automatic-metro-lines.html.
- ³² Global Rail News (2016). 'Treviglio-Brescia high-speed line opens'. Available at: www.globalrailnews.com/2016/12/13/treviglio-brescia-high-speed-line-opens/.
- ³³ Railway-technology.com (n.d.). 'Genoa-Milan High-Speed Railway Line (Terzo Valico).' Available at: <https://www.railway-technology.com/projects/genoa-milan-high-speed-railway-line-terzo-valico/>.
- ³⁴ SBB (2016). *The new Gotthard Tunnel – Switzerland through and through*. SBB AG: Bern. Available at: https://company.sbb.ch/content/dam/sbb/de/pdf/sbb-konzern/medien/hintergrund-dossier/Gotthard/Flyer_PONS_en_2016.pdf.
- ³⁵ OECD (2016). *OECD Territorial Reviews: Bergamo, Italy*. OECD: Paris.
- ³⁶ Automoto (2015). 'Teem, inaugurata la nuova Tangenziale Est Esterna di Milano.' Available at: www.automoto.it/news/teem-inaugurata-la-nuova-tangenziale-est-esterna-di-milano.html.
- ³⁷ Padania Classics (n.d.). 'The Mother of all Motorways.' Available at: www.padaniaclassics.com/en/the-mother-of-all-motorways/#.
- ³⁸ Eurostat Press Office (2016). *Hourly labour costs ranged from €4.1 to €41.3 across the EU Member States in 2015*. Eurostat Press Release (2016: 61). Eurostat Press Office: Luxembourg. Available at: <http://ec.europa.eu/eurostat/documents/2995521/7224742/3-01042016-AP-EN.pdf/453419da-91a5-4529-b6fd-708c2a47dc7f>.
- ³⁹ 21srl.com (n.d.). 'Residential real estate market in Milan: The Trend is Uphill.' Available at: www.21srl.com/en/mercato-immobiliare-residenziale-a-milano-il-trend-e-in-salita/; Roberts, H. (2016). 'Milan, Italy's most business-focused city, looks to rival London.' Available at: www.ft.com/content/521a2d60-a2b2-11e6-aa83-bcb58d1d2193.
- ⁴⁰ CBRE (2017). 'Milan Office, Q3 2017: Marketview.' Available at: <https://www.cbre.com/research-and-reports/Milan-Office-MarketView-Q3-2017>; JLL (2017). *Global Market Perspective*. JLL: London. Available at: <http://www.jll.com/Research/JLL%20Global%20Market%20Perspective%20May%202017.pdf>.
- ⁴¹ Caldarera, M. (2017). 'FDI: Italy has successfully moved up three spots in 2017.' Available at: www.exportiamo.it/aree-tematiche/13363/fdi-italy-has-successfully-moved-up-three-spots-in-2017/; Savills (2016). 'Cross border investment dominates Italian real estate activity in H1 as total volume tops €3.4bn'. Available at: www.savills.co.uk/_news/article/110559/206131-07/2016/cross-border-investment-dominates-italian-real-estate-activity-in-h1-as-total-volume-tops--3.4bn.
- ⁴² European Commission (2016). 'Europe 2020.' Available at: http://ec.europa.eu/europe2020/pdf/2016/ags2016_challenges_italy_en.pdf.
- ⁴³ Schwab, K. (2016) (ed.). *The Global Competitiveness Report 2016–2017*.
- ⁴⁴ World Bank (2017). 'Ease of Doing Business in Italy.' Available at: www.doingbusiness.org/data/exploreeconomies/italy?topic=paying-taxes.

- ⁴⁵ OECD (2015). *OECD Regulatory Policy Outlook 2015: Country Profile – Italy*. OECD: Paris. Available at: www.oecd.org/gov/regulatory-policy/Italy-web.pdf;
- Ernst & Young (2017). 'Milan: The New Financial Centre.'
- ⁴⁶ Kirchgaessner, S. & Giuffrida, A. (2016). 'Italian PM Matteo Renzi resigns after referendum defeat.' Available at: www.theguardian.com/world/2016/dec/04/matteo-renzis-future-in-the-balance-amid-high-turnout-in-italy-referendum.
- ⁴⁷ Kirchgaessner, S. (2018). 'Italy: Five Star and League parties likely to form governing alliance.' Available at: <https://www.theguardian.com/world/2018/mar/25/italy-elections-five-star-movement-and-rightists-strike-deal-to-elect-speakers>.
- ⁴⁸ Bryson, J. & Kinnaman, A. (2017). 'A Pre-Election Primer on the Italian Economy.' Special Commentary. Available at: <https://www08.wellsfargomedia.com/assets/pdf/commercial/insights/economics/special-reports/italian-political-risk-20170608.pdf>; The Local (2017). 'Police order dozens of migrants to move from Milan station.' Available at: www.thelocal.it/20170503/dozens-of-migrants-moved-from-milan-station.
- ⁴⁹ Smith, O. (2017). 'EU leaders meet in Rome but growing Euroscepticism in Italy threatens to TORPEDO bloc.' Available at: www.express.co.uk/news/world/783829/Treaty-of-Rome-Eurosceptics-EU-leaders-eurozone.
- ⁵⁰ Watts, W. (2016). 'Why Italy's banks could ignite a eurozone crisis.' Available at: www.marketwatch.com/story/why-italys-bank-crisis-could-be-ticking-time-bomb-2016-07-21.
- ⁵¹ Equinix (2017). 'Milan Metro: Offering unparalleled connectivity through Milan's only carrier-neutral retail data centers.' Available at: www.equinix.co.uk/resources/data-sheets/milan-metro-data-sheet/.
- ⁵² Perulli, P. (2014). 'Milan in the age of global contract,' *Glocalism: Journal of Culture, Politics and Innovation*, 3, Globus et Locus. Available at: www.glocalismjournal.net/Issues/GLOBAL-CITIES/Articles/Milan-In-The-Age-Of-Global-Contract.kl; Euromonitor (2017). Milan City Review. Euromonitor Publications Ltd: London. Available at: www.euromonitor.com/milan-city-review/report.
- ⁵³ Invest in Milan (n.d.). 'Home page.' Available at: www.investinmilan.it/.
- ⁵⁴ Leal Trujillo, J. & Parilla, J. (2016). 'Redefining Global Cities.' Available at: www.brookings.edu/research/redefining-global-cities/.
- ⁵⁵ TeMA, Milan Chamber of Commerce (2017). *Milano Building the Future 2017*.
- ⁵⁶ Invest in Lombardy (n.d.). 'Why invest in Milan.' Presentation. Available at: www.investinlombardy.com/storage/app/media/province/Milano/why-invest-in-milan-logo-cciaa.pdf.
- ⁵⁷ OECD (2006). *Milan Territorial Review*.
- ⁵⁸ Roberts, H. (2016). 'Milan, Italy's most business-focused city, looks to rival London.'
- ⁵⁹ Cusinato, M. et al. (2017). 'The Milan Fashion Cluster.' Available at: www.hhs.se/contentassets/f51b706e1d644e9fa6c4d232abd09e63/sse-milan-fashion-cluster.pdf?t_id=1B2M2Y8AsgTpgAmY7PhCf%3D&t_q=chloe+le+cocq&t_tags=language%3A%3Dsv&t_ip=66.249.76.147&t_hit.id=Sublime_Site_Models_Media_DocumentData/_3c1f4bb4-cec7-4883-b01a-8e44b9a6d380&t_hit.pos=11.
- ⁶⁰ Biotechnitaly.com (n.d.). 'The Piedmont Biotechnology Cluster.' Available at: www.biotechnitaly.com/pdfuffici/piemonte.pdf.
- ⁶¹ Labiotech (2017). 'Coming from Behind: How Italy is Revamping its Biotech Industry.' Available at: <http://labiotech.eu/italy-biotech-ecosystem-revamping/>.
- ⁶² EMA Milano (n.d.). 'Life sciences.' Available at: www.emamilano.eu/esperienza/1-life-sciences/.
- ⁶³ Ernst & Young (2017). 'Milan: The New Financial Centre.'
- ⁶⁴ Sgaragli, F. & Montanari, F. (2017). *Accelerating Milan's local ecosystem for social innovation*. Milan White Paper on Social Innovation. Fondazione Giacomo Brodolini: Milan. Available at: www.lavoroformazioneincomune.it/wp-content/uploads/2017/04/Milan-White-Paper-2017-WEB.pdf; Weiss, M. (2017). 'Bocconi, Camera di Commercio e Comune: Milano accelera sull'innovazione.' Available at: www.lastampa.it/2017/03/06/edizioni/milano/bocconi-camera-di-commercio-e-comune-milano-accelera-sullinnovazione-n4SnL9J0un0rQzD5lkpN/pagina.html.
- ⁶⁵ Speed MI Up (n.d.). 'Chamber of Commerce – Who We Are.' Available at: www.speedmiup.it/chi-siamo/camera-di-commercio-di-milano/.
- ⁶⁶ Promos, Milan Chamber of Commerce (n.d.). 'Sviluppo commerciale'. Available at: www.promos-milano.it/I-Nostri-Servizi/Sviluppo-Commerciale/?In=625.

- ⁶⁷ Promos, Milan Chamber of Commerce (n.d.). 'Search for international partners.' Available at: www.promos-milano.it/I-Nostri-Servizi/Ricerca-Partner-Internazionali/Virtual-Matchmaking--Trova-Il-Tuo-Partner-Commerciale-Online.kl.
- ⁶⁸ PwC (2016). *Cities of Opportunity 7*. PwC. Available at: www.pwc.com/us/en/cities-of-opportunity/2016/cities-of-opportunity-7-report.pdf.
- ⁶⁹ C40 Cities (2015). 'Milan's Area C reduces traffic pollution and transforms the city center.' Available at: www.c40.org/case_studies/milan-s-area-c-reduces-traffic-pollution-and-transforms-the-city-center.
- ⁷⁰ Berrini, M. & City of Milan (n.d.). 'The challenge: transform the Urban Mobility model to make Milano a more Livable city.' Available at: www.eiseverywhere.com/file_uploads/d23dc9cc58635262e5d20a4e48f4d087_MILANO_LONG.pdf.
- ⁷¹ Invest in Lombardy (n.d.). 'Why invest in Milan.' Presentation. Available at: www.investinlombardy.com/storage/app/media/province/Milano/why-invest-in-milan-logo-cciaa.pdf.
- ⁷² Roberts, H. (2016). 'Milan, Italy's most business-focused city, looks to rival London.'
- ⁷³ Edwards, C. (2016). 'Brain drain: More Italians than ever are moving abroad.' Available at: www.thelocal.it/20161006/over-100000-italians-moved-abroad-in-2015; The Local (2017). 'Nearly 50,000 young people left Italy last year.' Available at: <https://www.thelocal.it/20171017/italy-migration-young-people>.
- ⁷⁴ Leal Trujillo, J. & Parilla, J. (2016). 'Redefining Global Cities.'
- ⁷⁵ Ernst & Young (2017). 'Milan: The New Financial Centre.'
- ⁷⁶ Cox, R. (2017). 'Cox: Milan is dark horse in post-Brexit bank race.' Available at: <http://uk.reuters.com/article/us-italy-banks-breakingviews-idUKKBN19D10Q>.
- ⁷⁷ OECD (2006). *Milan Territorial Review*.
- ⁷⁸ TeMA, Milan Chamber of Commerce (2017). *Milano Building the Future 2017*; Growing Leader (2016). 'According to the FT, Milan is the capital of innovation.' Available at: www.growingleader.com/according-to-the-ft-milan-is-the-capital-of-innovation/.
- ⁷⁹ Margottini, L. (2016). 'Why many Italian scientists aren't happy with a new, €1.5 billion research hub.' Available at: www.sciencemag.org/news/2016/03/why-many-italian-scientists-arent-happy-new-15-billion-research-hub.
- ⁸⁰ Invitalia (2011). Investment Opportunities: Life Sciences. Available at: www.italchamind.eu/public/document/ead98fe6-7f0e-401e-98df-0426d5a5cfc7.pdf.
- ⁸¹ MIT Technology Review Insights (2017). 'View from the Marketplace: Italy Transforms Itself into a High-Tech Hotbed.' Available at: www.technologyreview.com/s/603856/italy-transforms-itself-into-a-high-tech-hotbed/; Ernst & Young (2016). *Italy is Back: Opportunities and new paradigm in doing business with the United States*. Available at: [www.ey.com/Publication/vwLUAssets/ey-italy-is-back/\\$FILE/ey-italy-is-back.pdf](http://www.ey.com/Publication/vwLUAssets/ey-italy-is-back/$FILE/ey-italy-is-back.pdf).
- ⁸² Nexia International (2017). 'Italy launches Industrial Plan 4.0.' Available at: <https://nexia.com/publications/global-insight/global-insight-april-2017/news-round-up/italy-launches-industrial-plan-4-0/>.
- ⁸³ Roberts, H. (2016). 'Milan, Italy's most business-focused city, looks to rival London.'
- ⁸⁴ TeMA, Milan Chamber of Commerce (2017). *Milano Building the Future 2017*.
- ⁸⁵ Sanderson, R. (2016). 'Milan, Italy's biggest start-up hub.' Available at: www.ft.com/content/6511f548-2cb9-11e6-a18d-a96ab29e3c95.
- ⁸⁶ Abirascid, E. (2016). 'Milan Startup Ecosystem.' Available at: www.startupblink.com/blog/milan-startup-ecosystem/; Romoli, A. (2016). 'Welcome To Milan: Italy's Biggest Startup Hub.' Available at: <http://magazine.startus.cc/milan-italys-biggest-startup-hub/>.
- ⁸⁷ Amerio, M. (2016) 'The Italian startup dilemma.' Available at: <https://venturebeat.com/2016/12/17/the-italian-startup-dilemma/>.
- ⁸⁸ Dell-Agnese, E. & Anzoise, V. (eds.) (2011). 'Milan, the Unthinking Metropolis.'
- ⁸⁹ European Urban Knowledge Network (2015). 'Brand Milano: how to develop the brand of a city from its symbols.' Available at: www.eukn.eu/e-library/project/bericht/eventDetail/brand-milano-how-to-develop-the-brand-of-a-city-from-its-symbols/.

⁹⁰ JLL (2016). *European City Retail Profilesw 2016: Milan, Italy*. JLL: London. Available at: <www.jll.com/Documents/destination-retail-2016/doc/European-Retail-City-Profile-Milan-2016.pdf>; TeMA, Milan Chamber of Commerce (2017). *Milano Building the Future 2017*.

⁹¹ Jansson, J. & Power, D. (2010). 'Fashioning a Global City: Global City Brand Channels in the Fashion and Design Industries,' *Regional Studies*, 44(7): 889-904. Available at: www.tandfonline.com/doi/pdf/10.1080/00343400903401584?needAccess=true.

⁹² Expo Milano 2015 (2015). 'Expo effect on tourism brings in extra 100 million euros.' Available at: www.expo2015firenze.it/en/?p=319; www.euler-hermes.com/mediacenter/news/Pages/press-release-Euler-Hermes-study-Expo-Milan-2015.aspx.

⁹³ Sanderson, R. (2016). 'Italy's Renzi looks to Milan as Rome loses lustre.' Available at: www.ft.com/content/35cc18ac-8666-11e6-a29c-6e7d9515ad15.

⁹⁴ OECD (2006). *Milan Territorial Review*.



Urban Land Institute

50 Liverpool Street
London
EC2M 7PY
United Kingdom

Tel: +44 (0)20 7487 9570
Email: ulieurope@uli.org
Web: www.europe.uli.org