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# The evolution in planning and designing new corporate headquarters in Milan: Perspectives for urban resilience

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**Abstract**. Metropolitan cities can play a primary role in the creation of more resilient urban environments, by developing public interventions that improve social cohesion, and economic and environmental sustainability. The metropolitan city of Milan has emerged among the first European cities that successfully overcame the economic crisis without losing their leadership role. Thus, we analyzed the Milanese experience as an example of urban resilience, in the context of a Research Project of Relevant National Interest (PRIN) entitled "Metropolitan Cities: Economic-territorial strategies, financial constraints, and circular regeneration".

In a first stage, we studied the investments of the major real estate players who have directed their attention to Milan. Our scrutiny showed that most of the investments concentrate in recent urban renewal programs, which entail the re-location of corporate headquarters. A conspicuous portion of commercial real estate hosts fashion companies, as Milan attracts many brands from all over the world.

In a second stage, we investigated in more detail the property settlement dynamics that drive corporate real estate development and re-location in the territory of Milan. This showed some urban clusters that the service and fashion sectors are respectively interested in.

Finally, we looked into the re-location strategies of eight leader companies, half of which in the fashion sector and half in the general services. Through interviews with their real estate managers, we scrutinized their choice of location in Milan, their environmental sustainability requirements, and added value that they expect to obtain. The fashion sector resulted as particularly keen on rehabilitating divested sites or abandoned buildings, inherited from previous industrial/productive activities.

Our scrutiny demonstrated that regeneration projects, can successfully meet the objectives of companies, while matching the goals of public interventions to improve social cohesion, and economic and environmental sustainability. This evidence can inform investors, organizations, and designers, and support them in the implementation of strategies to improve urban resilience.

#### 1. Introduction

The global city is home to economic and cultural production, major world events, the origin of fashion trends and tourist flows; at the same time, it faces dramatic problems such as immigration, security, social hardship, etc. [1]. The main international institutions and agencies (e.g. the European Union - EU, the Organisation for Economic Cooperation and Development - OECD, and the United Nations - UN) indicate cities as the privileged places of public intervention to achieve objectives of social cohesion and environmental sustainability [2]. In a scenario that sees a growing competition between cities, geographic areas and territorial systems, public institutions are engaged in urban redevelopment. Indeed, the competition between urban areas will reward the most dynamic "systems" that are able to combine the protection of their territory with their development and growth [3]. With the establishment

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of "metropolitan cities", approved by the Italian Government in 2014 (L. 7 April 2014, n. 56 about "Dispositions on Metropolitan cities, Provinces, unions and merges of Municipalities"), we witnessed a positive transition. Metropolitan cities have been entitled to become drivers of change and innovation, privileged centers of knowledge production, powerful competitors in international markets, and enablers to overcome crises [4]. Metropolitan cities are expected to demonstrate "the capacity to recover quickly from difficulties" [5], hence to tow territories toward resilience, as for the Oxford dictionary's definition.

In 2008, the economic crisis involved all of Europe. In Italy, the stagnation of the market continued for several years, impacting severely the real estate sector. A considerable volume of real estate vacancy and unsold was accumulated, especially in the office sector [6, p. 70]. In this context, the metropolitan city of Milan has emerged among the first European cities that rapidly recovered and successfully overcame the economic crisis without losing their leadership role. This paper analyzes the Milanese experience as an example of urban resilience, by exploring the real estate strategies that supported the recovery from the crisis.

## 2. Research questions and methodology of investigation

Our research aims at outlining the main strategies that allowed Milan to recover from the last financial crisis and the features enabling urban resilience. In this scope, we focused on the real estate dynamics that characterized the city of Milan in the past decade. We described them by analyzing a large database, provided to Politecnico by "Il Quotidiano Immobiliare" — QI (https://www.ilqi.it/post/quotidiano-immobiliare), the first Italian online magazine and search engine about real estate issues. This database collects all the real estate investments in Italy from 2012 to 2017. Subsequently, in order to explain the key events that supported the recent evolution of Milan, we investigated the commercial real estate dynamics. First, we performed a desktop search to locate the major realizations between 2012 and 2017. Then, we analyzed in more detail eight case studies. The results of these multiple-method examination will be presented in the following sections of this paper.

# 3. Real estate investments in Italy

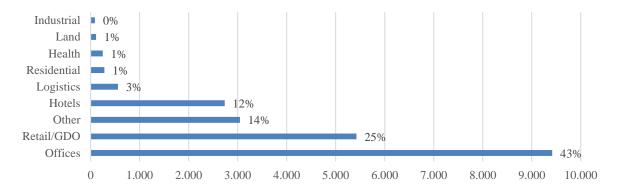
We surveyed all the real estate transactions (deals) recorded in Italy by QI with a minimum amount of 5 million euros, from 2012 to 2017. These account for over 500 records. From the analysis of this database we can formulate a few considerations regarding the building types and the most active cities in the Italian real estate market, in relation with the general investments.

# 3.1. Value of the transactions by building type

Real estate operations concentrate mainly in the tertiary sector (figure 1). Most of the transactions in terms of value concern the purchase of buildings intended for office use, which takes up to about 43% of the total investment volume (with over 9 billion invested). The retail sector follows with 25% (over 5 billions) and hospitality with 12% (almost 3 billions). These three types alone represent more than 80% of the total volume of real estate investments. Only marginal investments are directed to other building types. Especially surprising is the limited amount of money devoted to housing. The census showed that investment in the residential sector represents only 1% of the total volume of investments in the Italian real estate sector.

More recent reports provided by important operators, confirm these already explicit trends. Recent data from the Bank of Italy show that the market of non-residential real estate investments in 2018 reached a record value with about 11.1 billion Euro and a growth rate of about 25% compared to 2016 [7]. The average value of single asset transactions closed in 2017 in all sectors was 37 million Euro, in line with long-term data.

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**Figure 1.** Large real estate investments in Italy from 2012 to 2017 by building type (value in mln €) – Elaboration on data from QI.

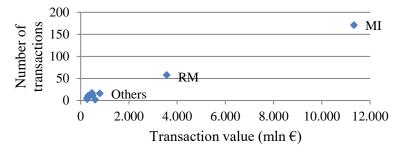
#### 3.2. Capitals and investments

Foreign investors show strong interest in the Italian real estate market [8]. Colliers registers that almost 70% of the capital invested in 2017 came from international players, compared to 30% of Italian capitals. More in detail, the United States and France were the main foreign players in our country with about 2 billion euros of investments each last year, followed by Great Britain and Germany with about one billion Euros each.

It is interesting to note that in 2017 US capital in Italy reached 200 million Euros for the first time after consistently remaining above one million Euros a year over the previous five years. The growth of capital from the United States has been constant over the years and, in particular, it registers a peak of +37% between 2016 and 2017.

#### 3.3. Real estate transactions by city

By analyzing the location of investments (figure 2), the metropolitan city preferred by investors is Milan (with over 11 billion euros in the period 2012-2017). The metropolitan city of Rome attracts only one third of the volume produced by Milan. Milan sees more than 150 transactions above 5 million each. Rome reaches barely one third of the Milan's number and value of transactions. All other Italian metropolitan cities run far behind these records. Other provinces with relatively high performance are: Sassari (thanks to the 600 million Euros spent by a Holding of Quatar in the hotel sector), Bologna (with around 500 million invested in the commercial/retail and logistics sectors), and Turin with almost 500 million Euros distributed mainly in the tertiary and commercial/retail sectors.



**Figure 2.** Number and value of real estate deals in Italy. – Elaboration on data from QI. Milan is confirmed as the most active city in the Italian real estate market, based on both the number of real estate transactions and their value between 2012 and 2017.

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#### 4. Commercial real estate dynamics in the Milan metropolitan area

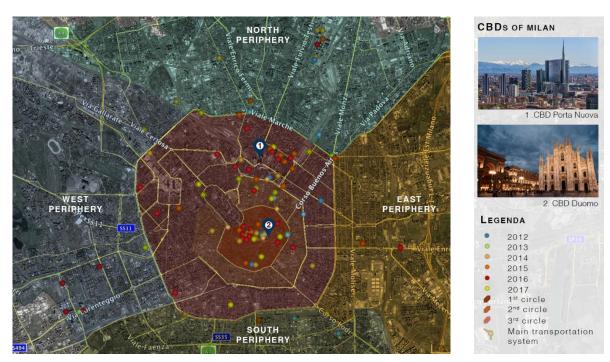
As commercial real estate is the leading sector, and Milan is the most active city, our analysis focused on Milan office segment.

According to our elaborations on data from QI, the real estate deals in Milan distribute among the following building types: 62% offices; 9% retail; 2% hotels; and 27% all the others.

In 2016, the office building market in the metropolitan city of Milan recorded an overall growth in the volume of transactions of 67% [6]. Surprisingly, these transactions are mainly concentrated within the Milan municipality. Deals do not concern much all the surrounding territories that compose the administrative borders of the metropolitan area. The office market of the Milan municipality registered a conspicuous increase in the area exchanged, which equals to 320,000 square meters in 2017, compared to 280,000 in 2016 [9]. Not less important is the absorption rate, which rose from 55% in 2016 to 64% in 2017 [9], indicating a gradual reduction in the gap between supply and demand.

## 4.1. Localization of the transactions within the Milan municipality

Grey literature e.g. [10], [11] suggests that major national and international corporations have chosen to locate or relocate their headquarters in urban areas that have been involved in massive renewal programs over the past years. New areas are emerging as alternative "centers" of the city, besides the traditional "Duomo". Above all, Porta Nuova District is emerging as one of the most vital urban and business hubs of the city [12]. Our analyses confirm this trend. By looking more thoroughly at how the transactions gathered from QI are distributed within the Milan municipality (figure 3), it is easy to notice that they are mostly located around a couple of poles, which correspond exactly to Duomo and Porta Nuova.



**Figure 3.** Localization of commercial real estate deals from 2012 to 2017. –Elaboration on data from QI.

By a simple Google search typing "headquarters Milan", we have listed 27 companies that have built or refurbished their headquarters (HQs), in the decade 2009-2019 (table 1). We have focused our in-depth analysis on this sample of buildings.

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**Table 1.** Companies that have built or refurbished their HQs, in the decade 2009-2019.

Туре	Company	Year	Area	N.	Addess
				Workstations	
Service	Zurich Mac 9	2009	36.000,00	1.560	Via Benigno Crespi, 23, 20159 Milano MI
Service	Sky Italia	2011	65.000,00	n.a.	Via Luigi Russolo, 4, 20138 Milano MI
Service	Vodafone Village	2012	67.000,00	3000	Via Lorenteggio, 240, 20147 Milano MI
Service	Google Italia	2014	5.500,00	n.a.	Via Federico Confalonieri, 4, 20124 Milano MI
Service	Nestlé Campus	2014	22.000,00	1.300	Via Fermi, 20, 20090 Assago MI
Service	Unicredit Tower	2014	31.000,00	4.000	Piazza Gae Aulenti, 3, 20154 Milano MI
Service	Allianz Tower	2015	81.615,00	n.a.	Torre Allianz, 20145 Milano MI
Service	Samsung District	2015	12.500,00	700	Via Mike Bongiorno, 9, 20124 Milano MI
Service	BNP Paribas	2016	28.000,00	2.000	Piazza Lina Bo Bardi, 3, 20124 Milano MI
Service	Generali Tower	2017	66.785,00	n.a.	Piazza Tre Torri, 20145 Milano MI
Service	Microsoft House	2017	7.500,00	n.a.	Viale Pasubio, 21, 20154 Milano MI
Service	Amazon Italia	2017	17.500,00	400	Viale Monte Grappa, 3, 20124
				(up to 1.100)	Milano MI
Service	Whirlpool Emea	2017	12.000,00	500	Via Pisacane, 1, 20016 Pero MI
Service	Siemens	2018	32.000,00	n.a.	Viale Piero e Alberto Pirelli, 10, 20126 Milano MI
Service	Engie Italia	2018	15.000,00	700	Via Chiese, 72, 20126 Milano MI
Service	Fastweb	2019	19.000,00	n.a.	Via Adamello, 11, 20139 Milano MI
Fashion	ENI	2019	60.000,00	4600	Piazza Ezio Vanoni, 1, 20097 San Donato Milanese MI
Fashion	Ermenegildo Zegna	2008	16.200,00	n.a.	Via Savona, 56/A, 20144 Milano MI
Fashion	Ferragamo	2011	2.000,00	n.a.	Corso Matteotti, 12, 20121 Milano MI
Fashion	Sergio Tacchini	2013	500,00	15	Via Savona, 97, 20144 Milano MI
Fashion	Fendi	2014	3.600,00	130	Via Andrea Solari, 35, 20144 Milano MI
Fashion	Fondazione Prada	2015	19.000,00	n.a.	Largo Isarco, 2, 20139 Milano MI
Fashion	Rolex	2016	5.680,00	n.a.	Viale Filippetti Angelo 9, 20122 Milano MI
Fashion	Gucci Hub	2016	30.000,00	250	Via Mecenate, 79, 20138 Milano MI
Fashion	Neil Barrett + Dsquared2	2017	50.000,00	80	Via Ceresio, 7, 20154 Milano MI
Fashion	N°21	2017	1.500,00	n.a.	Via Archimede, 26, 20129 Milano MI
Fashion	Versace "The corner"	2019	19.140,00	500	Viale della Liberazione, 20124 Milano MI

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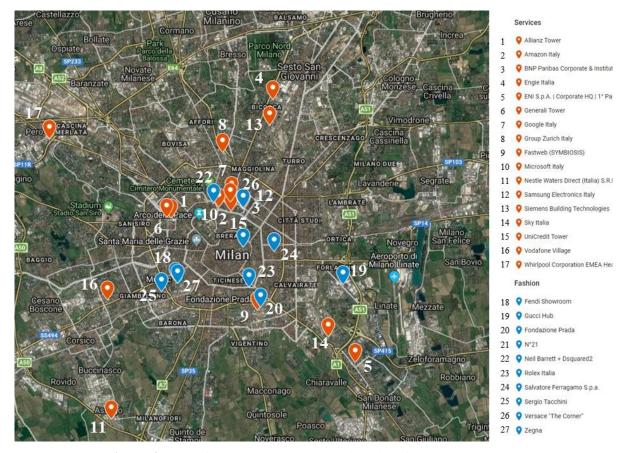
#### 4.2. Localization trends by aggregations

By observing their localization within the Milan municipality, an interesting clusterization emerges (figure 4). We considered "cluster" a group of 2 or more companies located in the same or adjacent district.

The tertiary sector is typically concentrated around a few main clusters:

- Porta Nuova hosts eight HQs, namely: Microsoft, Google, Samsung, BNP, Unicredit, Amazon, Neil Barrett+Dsquared2, and Versace;
- Porta Genova with 2 HQs: Tacchini, Fendi, and Zegna;
- City Life counts 2 HQs: Allianz and Generali;
- Bicocca hosts 2 HQs, as well: Engie and Siemens;
- Porta Romana railway yard, with 2 HQs: Fastweb and Prada.

Some additional clusters appear as outliers as they are placed in the outskirts of Milan, namely in the West side of the City and on the South-end. Milanofiori (Nestlé), San Cristoforo-Lorenteggio (Vodafone), and Rho-Pero (Whirlpool Corporation Emea) belong to the western cluster. However, Nestlé and Vodafone have been built respectively in 2012 and 2014, when the concentration trend was still in its infancy. Rho-Pero, where Whirlpool located its new HQ in 2017, is going to be enhanced soon thanks to the redevelopment of the Expo site. This area will host the new campus of the Milan State University and become a science and technology park. Thus, this is candidate to become a cluster by itself in the years to come. Lastly, the cluster located in the southern part of Milan, comes together around Rogoredo-San Donato with Sky Italia and Eni.



**Figure 4.** Map of corporate headquarters in Milan from 2009 to 2019.

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#### 4.3. Localization trends by industry

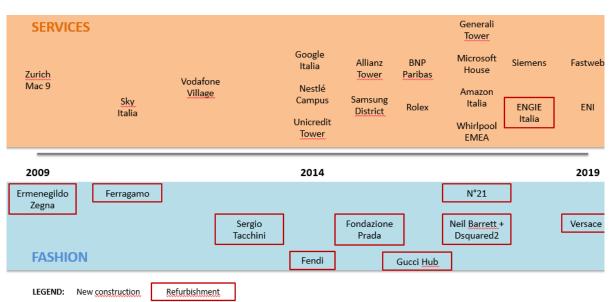
When looking more specifically at the behavior of different industries, it emerges how these new-born "centers" attract companies, independently from the type of business and industry. For instance, Porta Nuova hosts banks (Unicredit and BNP), along with tech companies (Microsoft, Google and Samsung), e-commerce (Amazon), and fashion (Neil Barrett+Dsquared2, and Versace). However, one exception must be acknowledged for the latter. The localization logics followed by fashion brands seem different from the average tendencies in the rest of the tertiary sector, a part from Porta Nuova. Fashion HQs appear to be much more dispersed.

The only recognizable aggregation of fashion buildings can be found in the area surrounding Porta Genova station, with Fendi, Ermenegildo Zegna and Sergio Tacchini. This area seems less interesting for all the other industries, none of which is represented here. The remaining five fashion headquarters (N°21, Salvatore Ferragamo, Gucci, Prada and Rolex) are dispersed in various areas of Milan, from the center toward east, and do not seem to share the same localization interests as the service sector. The only exception is that of Fondazione Prada that inaugurated the redevelopment of the Porta Romana railway yard, which is going to host several headquarters in the next 5 years and is eligible to become the next Milan business district.

## 5. Comparison between the service and fashion sectors

Figure 5 represents the 27 commercial real estate initiatives that arose between 2009 and 2019. The figure shows the industry, their distribution over time, and if they involved new or refurbished buildings. Ten have been initiated by fashion brands, which means that more than one third belongs to the fashion sector. Thus, the real estate strategies and investment decisions of this specific sector are going to have a strong impact on the development of the city. In total, these 27 premises sum up to about 750.000 sqm, where more than 200.000 (27%) are occupied by fashion brands, and the remaining 550.000 smq (73%) are allocated to all the other industries. The average size of the headquarters is about 26.000 sqm, but it varies a lot with respect to the industry. The service sector reaches on average 30.500 smq. This almost doubles the size of fashion headquarters that normally are below 20.000 sqm.

Regarding the distribution over time of these realizations, most of them concentrate in the five years between 2014 and 2019, with 21 operations initiated after 2014 (figure 5).



**Figure 5.** Timeline of the 27 headquarters realized in Milan between 2009 and 2019.

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The slower pace of developments at the beginning of the decade might be ascribed to the reverberation of 2008 economic crises. The downturn slowed down the entire real estate market. From 2014, the increase in the number of commercial real estate initiatives confirms the market recovery and re-stabilization.

We also looked at the architectural features of the buildings, to understand whether they have been newly built or refurbished. It is significant to register that among 17 HQs for the service sector, only one is the result of a building renewal (Engie), while all the others have been newly erected. Conversely, among 10 HQs for the fashion sector, all of them are the result of some sort of regeneration process. These can be more or less conservative. Gucci, for instance, chose a very respectful approach toward the preexisting aeronautical factory dated back to 1915 where they have established themselves in 2016. Versace, instead, opted for an asset that has been radically transformed, even though it maintained the original shape of the former building realized in the 1970s.

In order to explain the reasons of these trends, we selected eight companies to conduct an in-depth case study analysis.

#### 6. Case study analysis

With a case study analysis we set the trifold goal to understand: a) the reason of the HQ's specific location within the city of Milan; b) the required sustainability criteria driving the choice of the building/project; c) the work philosophy adopted by the companies, which affected the choice of the new workplace features, along with the expectations for value added to the business.

The selected cases were chosen among the 27 initiatives that had been previously examined (table 2). The choice was based on information availability, making sure that they would represent both new construction and refurbishment in the two sectors and that they would be homogenously distributed over time.

Case studies service Date of completion Case studies fashion Date of completion Unicredit Tower 2014 Ermenegildo Zegna 2009 Samsung District 2015 Fendi 2014 **BNP** Paribas 2016 Gucci Hub 2016 2018 Versace 2019 Engie Italia

Table 2. Case studies.

First we conducted an extensive search of gray literature, mainly collected from online sources, documenting these eight projects. Subsequently we performed semi-structured interviews with the respective real estate managers to confirm and complete the information that we found online. The results of these investigations are explained in the following sections.

# 6.1. Choice of location

The move to a new premise is mostly motivated by the need for consolidating dispersed business units and departments under one roof (table 3). This reason is common to both the service and the fashion industries. For sure, the global economic downturn induced companies to progressively rationalize their properties, often oversized and dispersed around the cities, in order to optimize the capitals invested real estate assets.

The service industry seems interested in areas that can guarantee maximum visibility to the company. Conversely, the fashion industry looks for proximity with companies that can complement their business, and especially seems to be fascinated by the charm of ex-industrial sites.

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**Table 3.** Location and reason of the move by company.

	Location	Reason of the move
Service		
Unicredit	New site	Consolidation of business units and
	Porta Nuova	proximity between departments
	One of the most vital urban and	Iconic and premium location
	business hubs of the city	Real Estate savings
Samsung	New site	Consolidation of business units and
	Porta Nuova	proximity between departments
	One of the most vital urban and	Visibility in the city
	business hubs of the city	Connection to the business district
BNP	New site	Consolidation of business units and
	Porta Nuova	proximity between departments
	One of the most vital urban and	Visibility in the city
	business hubs of the city	
Engie	Site already occupied by the company	Possibility to increase environmental
	Bicocca	sustainability
	Productive, industrial and business area	Green area
Fashion		
Ermenegildo Zegna	Ex-industrial area	Consolidation of business units
	Porta Genova	Proximity with other fashion and
	Business district dedicated to the	design businesses
	design and fashion sector	
Fendi	Ex-industrial area	Consolidation of business units
	Porta Genova	
	Business district dedicated to the	
	design and fashion sector	
Gucci	Ex-industrial area	Consolidation of business units
	Forlanini, green eastern outskirts	
	of Milan, near the Linate Airport	
Versace	Existing	Consolidation of business units
	Porta Nuova	
	One of the most vital urban and	
	business hubs of the city	

#### 6.2. Sustainability criteria

The sustainability criteria that the companies chose to embrace in their new buildings seem slightly different in the two sectors (table 4). The service sector is looking for the best architectural characteristics that can be guaranteed by newly constructed buildings. Only Engie opted for a refurbished building. However, this happened because they did not relocate the company, but they renovated the same building that had hosted them previously. Service companies demonstrated also to invest in certification processes (most of the time, LEED) in order to assure the highest performance in terms of environmental sustainability. In addition, they seem to encourage their employees to sustainable mobility, especially via public transports, which is facilitated by their strategic and well connected location.

The fashion sector is exclusively focusing on urban regeneration by looking for buildings that have been readapted from previous industrial function. Only Versace makes an exception, by moving to an ex office building. Also for the fashion sector, LEED certification is important. However, this sector prioritizes the availability of natural light, rather than green mobility. Light emerges to be a key driver in the choice of a new premises, which probably relates to the kind of work and tasks that employees typically undertake in this industry.

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**Table 4.** Architectural features and environmentally-friendly solutions by company.

	Architectural features	Environment-friendly solutions
Service		
Unicredit	New construction	LEED Gold
Samsung	New construction	LEED Gold
		Encourage the use of public
		transportation
		No reserved parking spaces
BNP	New construction	Reduced company parking spaces
		Support to the employees who
		subscribe to the public transportation
		Paperless policy
Engie	Renovation of the company's building	LEED Platinum
	from the 1980s	
Fashion		
Ermenegildo Zegna	Ex industrial site Riva Calzoni (dating	Enhancement of the built heritage
	back to 1897)	Availability of natural light
	Substitution of the existing shed,	
	impossible to preserve, with a new	
	structure that takes up the previous	
	volumes	
Fendi	Ex industrial site Riva Calzoni (dating	Availability of natural light
	back to 1897)	
Gucci	Ex warehouses of the Caproni	LEED Gold
	aeronautical factory (built in 1915)	Energy + water management
	Restoration of the original shed and	Availability of natural light
	hangar + new 6-story building	Green forest
Versace	Ex office building from the 1970s	LEED Gold Shell & Core

# 6.3. Work philosophy and added value

Both the service sector and the fashion sector are mostly implementing open-plan layouts and flexible working polices (table 5)

Service companies are all implementing a smart working approach, which includes desk sharing and few enclosed offices. Conversely, the fashion industry prioritizes teamwork, with the related need for flexible layout. However, the fashion industry seeks large spaces to host warehouses, showrooms, fashion shows, photo shootings, and so on.

**Table 5.** Work philosophy and added value by company.

Service	Work philosophy	Added value
Unicredit	Smart working	Symbol of Milan skyline
	Desk sharing	
Samsung	Smart working	Citizenship involvement
		Representativeness and enhanced
		contacts B2B and B2C
		Visual power of a flag-building
BNP	Smart working	Visual power of a flag-building
	Desk sharing	
	Few enclosed offices, mostly open-plan	
	Layout by department	
Engie	Smart working	Regeneration of an outdated building
· ·	Few enclosed offices	
	Flexibility of the interiors' arrangement	
Fashion		

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Ermenegildo Zegna	Teamwork and open-plan layout	Citizenship involvement	
	Office space + showroom, theater (presentation space)		
Fendi	Flexibility of the interiors' arrangement	Citizenship involvement	
	Few enclosed offices	Bond with the art, architecture, and	
	Office space + warehouse, showroom,	design firms in the district	
	fashion shows		
Gucci	Teamwork and open-plan layout	Campus-like organization for cultural	
	Office space + showroom, fashion	exchange	
	shows, graphic activities, shooting		
	studio, restaurant and canteen		
Versace	Teamwork and open-plan layout	Connection to the business, tech and	
		international district	

It is evident that fashion companies have specific spatial necessities that reflect the various activities they organize, beside office and administrative work. This is also a reason why the added value that companies are expecting to obtain from their new headquarters slightly varies for the two sectors. On one hand, the service sector is focusing on visibility within the city, which is allowed by the choice of symbolic buildings. On the other hand, the fashion sector gives priority to the opportunity of contact with close businesses and of openness towards the city.

#### 7. Discussion and conclusions

Milan has demonstrated the ability to recover from the 2008 economic-financial crisis relatively fast and to turn the difficulties into chances for redevelopment. In the last five years, the commercial real estate market has become increasingly active. Many companies have invested in a number of initiatives, directed both to building development and enhancement, which have concurred to reactivate the local market and economy. Our paper examined the most recent commercial real estate initiatives from 2009 to 2019, in order to explain how they helped the Milan metropolitan area to develop a resilient attitude.

We found out that these operations tend to concentrate in a few poles, as they have been encouraged by public initiatives that were directed to regenerate entire areas of the city, such as the Porta Nuova District. The service sector seems mostly interested in moving to these new areas, in first-hand premises, suitable to boost the company's image by being aesthetically impactful and environmentally sustainable.

The fashion sector shows a tendency to settle in older districts, while looking at the possibility to set up vibrant interactions with the citizenship. Here they take the opportunity to regenerate old buildings, previously occupied by different functions. With their brightness and openness, these assets can perfectly host a variety of spaces and activities in line with the brands' needs.

Both these operations, even if different in nature, can be identified as good practices to increase urban resilience. They both develop new activities by taking advantage of empty urban areas or constructions. In this way they mend urban areas that were previously separated and create a fertile ground for social cohesion. Also, they both bolster environmental sustainability, on the one hand, by building new real estate assets with high energy performances, and on the other hand, by regenerating existing buildings rather than building new.

Real estate initiatives can regenerate urban areas while boosting economic, environmental and social activities. Our research endorses that urban resilience goes hand-in-hand with this kind of initiatives. The case of Milan confirms the attractiveness of metropolitan cities that become the privileged contexts for multiple businesses to settle. Companies produce knowledge, compete in international markets, and contribute to overcoming the crises. Public authorities should prioritize the attraction of investors and organizations that are interested in real estate initiatives, as they can increase urban resilience.

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"Il Quotidiano Immobiliare" – QI (https://www.ilqi.it/post/quotidiano-immobiliare), the first Italian online magazine and search engine about real estate issues, collaborated to this project by providing us with a database of all the real estate transactions (deals) occurring in Italy from 2012 to 2017. The analysis proposed in this paper are largely based on this information.

# References

- [1] Sassen S. 1994, Cities in a world economy (Michigan: The University of Michigan)
- [2] OECD 2017 OECD Economic Surveys: Italy 2017 (Paris)
- [3] Baiardi L 2009 La globalizzazione e i cambiamenti delle aree urbane *Marketing territoriale* eds Baiardi L and Morena M (Milano: Il Sole 24 Ore)
- [4] Zilli S 2017 Città metropolitane e resilienza territoriale *Commercio, consumo e città: Quaderno di lavoro. Pratiche, pianificazione e governance per l'inclusione, la resilienza e la sostenibilità urbane* ed. Viganoni L (Milano: Franco Angeli) pp. 99–108.
- [5] Oxford Dictionaries 2019 Resilience *Oxford Dictionaries* [Online]. Available: https://en.oxforddictionaries.com/definition/resilience. [Accessed: 28-Feb-2019].
- [6] Scenari Immobiliari 2017 Milano Challenger sul Podio d'Europa. Rapporto 2017 Mercato Immobiliare di Milano e Area Metropolitana
- [7] BNP Paribas Real Estate 2018 At a glance-Q1 2018. Investimenti in Italia (Milano)
- [8] Colliers International Italia 2018 Italia | INVESTIMENTI. Market report 2017
- [9] Pwc 2018 Real Estate Market Overview Italy 2017
- [10] Mancini G 2017 Da Microsoft a Generali, ecco la mappa dei nuovi headquarter a Milano Il Sole 24 ORE *Il Sole 24 Ore* [Online]. Available: https://www.ilsole24ore.com/art/impresa-e-territori/2017-02-15/da-microsoft-generali-ecco-mappa-nuovi-headquarter-milano-105555.shtml?uuid=AEaplRW. [Accessed: 30-Nov-2018].
- [11] Papa E 2017 Microsoft, Amazon, Google, i «big» traslocano: ecco gli uffici più belli di Milano Corriere it *Corriere della Sera Corriere Innovazione/News* [Online]. Available: http://corriereinnovazione.corriere.it/cards/multinazionali-citta-ecco-mappa-big-headquarter-milano/microsoft-house.shtml. [Accessed: 30-Nov-2018].
- [12] Generali Real Estate Spa Sgr 2018 The Corner