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Final Dissertation

**Feasibility study for the development of multifamily in Florence:
composition and application of a reference model in the city center.**

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Acknowledgement

The best part of growing older
Is getting to know who you are
And celebrate it

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Abstract

While increasing urban population and living trends of 15-Minute towns are urging cities to welcome ever more people worldwide, today's generations have been experiencing new housing needs because of their work life requiring unseen flexibility. Moreover, since the upheaval of Covid-19 on workplace reality resulted in the diversification of real estate funds, global investors have been looking to develop multifamily housing even in uncertain markets. Within this framework, a study is conducted to investigate the feasibility of the development of multifamily in Florence. Following a brief introduction to the city, its urban history, heritage value and quality rank are presented to demonstrate, alongside the analysis of its labor market, residential stock, and population trend, the attractiveness towards real estate residential investments. Afterwards, the residential solution of multifamily is explored and its history, structure and success are underlined. The feasibility study concludes that Florence is a potential target for real estate residential investments: illustrated by a list of guidelines, a reference model of multifamily housing is composed to lead future residential investments in the city. Finally, once identified several unused properties allowing residential use and chosen the one matching the most the characteristics of multifamily, its renovation project practically demonstrate the positive outcome of this research.

Estratto in Italiano

In un mondo dove l'aumento della popolazione urbana e la tendenza a cercare di vivere in città da 15 minuti stanno spingendo i grandi centri ad accogliere sempre più persone, i giovani di oggi stanno cercando nuove soluzioni dell'abitare per soddisfare una vita lavorativa che richiede grande flessibilità. Inoltre, poiché la pandemia da Covid-19 ha ribaltato il modo di lavorare, gli investitori immobiliari hanno optato per diversificare i fondi immobiliari, sviluppando il multifamily anche in mercati incerti. In questo contesto viene allora condotto uno studio per indagare la fattibilità dello sviluppo del multifamily a Firenze. Dopo una breve introduzione della città, vengono presentati il suo sviluppo urbano, il suo patrimonio culturale e il suo grado di qualità della vita. Seguono le analisi del mercato lavorativo, dello stock residenziale e dell'andamento demografico: il tutto per dimostrare l'attrattiva di Firenze nei confronti di investimenti residenziali. In parallelo, si esplora, anche tramite esempi, la soluzione residenziale del multifamily e ne si sottolinea la storia, la struttura e il successo. Lo studio di fattibilità conclude che Firenze è un potenziale sito di investimenti residenziali: illustrato da un elenco di linee guida, si compone dunque un modello di riferimento di multifamily per guidare futuri investimenti simili in città. Infine, una volta individuati alcuni immobili in disuso e scelto quello che più incontra i requisiti dal modello di multifamily, se ne propone il progetto di recupero a dimostrazione dell'esito positivo di questa ricerca.

1. Framework

The following chapter explores the context of this research. The increasing urban population and the desire of living in 15-Minute cities are urging urban centers to welcome more people than the houses available on their territory can host. Especially in the past few years, new generations have been experiencing a change of mindset when it comes to housing because of their work life requiring increasingly flexibility. Since the upheaval of Covid-19 on workplace reality resulted in the need of diversification of real estate funds, global investors have been looking to develop multifamily housing, whereas the fact that people have different needs in different ages is driving the renting sector to put on the market houses that are ever more suited to make daily life easier.

1.1 Urbanism

The following section introduces city-related topics that are now under full attention worldwide. The rapid urbanization of the world and the 15-minute city strategy are important to discuss and frame what this study is meant to demonstrate.

1.1.1 The Rapid Urbanization of the World

Urbanization is the process by which large numbers of people concentrate in relatively small areas, forming cities (Britannica, 2021). Today, cities are inhabited by around half of the world population. As shown in chart 1 (Florczyk, A. et al., 2019; Jones, B. et al., 2020), this statement can be done by considering a degree of urbanization which identifies three categories of territories and classifies the world’s population by 48% living in cities, 28% living in in towns & semi-dense areas, and 24% living in rural areas. Then, when accounting for metropolitan areas, that are formed by cities and surrounding commuting zones, it is possible to state that 54% of the world’s population lives in urban areas. Over the last forty years, city population has grown because of the doubling of the number of cities with more than 50.000 inhabitants, because of the doubling of the spatial extension of existing cities and mostly because of the densification within current city areas (OECD/European Commission, 2020).

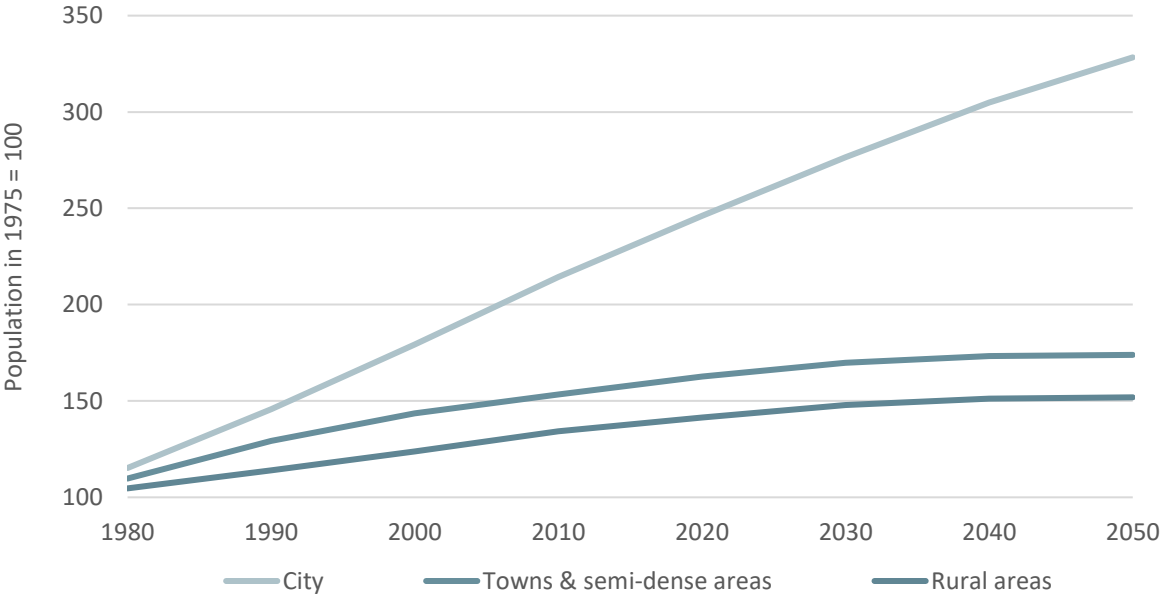


Chart 1 - Changes in global population by Degree of Urbanization, 1975-2050 (Florczyk, A. et al., 2019; Jones, B. et al., 2020)

In urban areas, clusters of people, productive supplies and social connections represent not only the impulse behind the economic development of the city, but also its result (Tannerfeldt & Ljung, 2006). The economic force that urban areas have been for more than two centuries have made the world reach its current level of technical and social development: urbanization plays a structural social factor of health that questions the aspirations of the people involved in (Vlahov et al., 2006). Ever since, the three factors influencing urbanization have generally been natural growth of cities, rural-to-urban migration of people, and transformation of territory from rural to urban (Homer-Dixon, 1999). In fact, urbanization is nothing new to modern age as it has strongly increased incomes and driven shifts in economic power for centuries. In the XVIII and XIX centuries, the trend of moving to cities asserted industrial revolutions in Europe and in the United States. Nowadays, urbanization is shaping the developing world and what differs from the past is the size and scale by which this phenomenon is growing (McKinsey Global Institute, 2012)

The situation is not expected to change, and the trend is very likely to grow. Cities are where more than 80% of the global GDP is generated and urbanization has all the power to contribute to a sustainable growth if well managed. Yet, the speed and scale of this phenomenon has been bringing challenges under several aspects, notably housing (World Bank, 2020).

Finally, the spatial shape and land use of cities that have been built centuries ago can easily lead to unsustainable sprawl if not regulated (World Bank, 2020). Urban sprawl is the uncontrolled expansion of urban land consumption which is constantly adding new urban built up area to the world (Rafferty, 2021). This consumption puts pressure on land and natural resources and often results in negative consequences for cities, which have the largest responsibility of producing greenhouse gas emissions. The role of cities is increasingly important in regulating climate change because their influence on climate and disaster risk increases as they enlarge (World Bank, 2020).

1.1.2 The 15-Minute City Strategy

By the end of the XX century, the disposal of industrial areas and large infrastructure that represent the city of that time, which have now become outdated, opened the age of

conversion, reminding institutions and investors to establish enhancement approaches (Ladu & Bernardini, 2020). Nowadays not only state but also private institutions put in place the “public city” through different types of functions and services (Calamia & Mastrofini, 2004). This implementation should then be carried out through the adaptive reuse of abandoned buildings, especially of those owned by public bodies (Corsico, 2006). In addition, the emerging call to apply sustainable urban strategies have highlighted a strong direction towards the compact city model (Musco, 2009), through the regeneration of abandoned areas to answer to the demand of the contemporary urban life (Balletto et al., 2021).

Over the past few years, Covid-19 has tested the performance of cities to respond to extreme emergencies. After all, the pandemic has been at the same time a health, social and economic crisis that mainly took place in urban areas (World Bank, 2020). Within this context, cities have played a crucial scenario where the idea of downtowns have transformed a lot. The strong test that the pandemic has put on urban areas underlined many problems that were never seen before and exposed the importance of the built environment as a tool to overcome them. Cities should then improve the deployment of innovative approaches to conserve and regenerate abandoned buildings, transforming them into new centralities (Balletto et al., 2021).

Such strategies include the 15-Minute City (Meng, 2017), where disused real estate assets could make the difference in its accomplishment (Balletto et al., 2021). The 15-Minute model comes from the idea of the “neighborhood unit”, first implemented in 1929 by Clarence Perry as the main unit for city planning. An accurate system of urban amenities is set at the core of each neighborhood unit, that are then meant to extend to larger areas and, by joining, to finally form the city (Perry, 1929). The 15-Minute City concept, per se, has been imagined by Carlos Moreno in 2016 (Moreno, 2016) but it only became famous worldwide after the Mayor of Paris Anne Hidalgo made it a key point of her re-election campaign in 2020 (Reid, 2020).

As shown in figure 1 (Ville de Paris, 2020), the 15-Minute City relies on the idea of “chrono-urbanism” to enhance the quality of life in urban areas by reducing the amount of time spent in transportation, advocating then for better proximity and density. Inhabitants of a 15-Minute City access all of their essentials within a 15-minute ride by foot or by bicycle (Moreno et al., 2021).



Figure 1 - The quarter-hour city and social functions covered (rearranged from Ville de Paris, 2020)

Walkability and cycling represent the new mobility supply, supported by the general consensus of many international cities (Yin et al., 2020). The promotion of such mobility is particularly required to address cities towards a better future (UNECE, 2020). Indeed, the “living city” imagined by Carlos Moreno highlights the need to adjust existing urban and social contexts in order to assure all its resident a higher quality of life. To enjoy a reasonable urban life each residents of a 15-Minute City is able to meet the following urban social functions such living, working, commerce, healthcare, education and entertainment. These essentials include a restructuration of the urban built environment to assure that it is compliant with proximity,

diversity, density and ubiquity. The concept of “chrono-urbanism” is not strict per se and it is meant to be customized to singular cities, depending on their specifications (Moreno *et al.*, 2021).

“We express the need to radically change the temporalities of life and the use of the existing, to change the rhythms of life, to be able to work differently, to recover essential social functions that are more accessible, for a quality life, to recover the intensity of social links, the affects lost by the weight of anonymity and solitude, to reclaim the love of place, to give otherness a place of choice in our lives, to recreate and relocate employment and activities, to reclaim public space for citizens, to encourage citizen participation in local life.” - Moreno, 2021

Together with the 15-Minute City approach adopted by Paris, other models have been studied around the world such the Superblocks of Barcelona, the 20-Minute Neighborhoods of Portland and Melbourne, the walkable places of Houston, the 20-Minute Town of Shanghai, and the 45-Minute City of Singapore. The common goal of all these neighborhood centered models is to become places where people can reconnect to local areas and to localize urban life. Most of the properties of such strategies have been largely used by urban designers in the past, however, their novel peculiarity is that they advocate for the approaching of proximity to resources, instead of accessibility to resources (Pozoukidou & Chatziyiannaki, 2021).

1.2 Mindset

The following sections explore how people live their homes. Highlighted is the point of view of young adults, whose lifestyle and housing decisions influence the housing market of tomorrow. Particular attention is given to the moment when they leave their parents' home, so the Buying vs. Renting debate is discussed as a consequence of their entrance to the market.

1.2.1 Young Adults Leaving Their Parents' Home

The trends in living arrangement in the young adult part of the population are extremely important to study when talking about real estate residential economics. The joint decisions of young adults shape the long-term trends in the housing market, as they transit from being part of households to form their own's one. Then, since household formation powers the need for new housing stock, preferences in the living arrangements of young adults have large influence on demand in the residential market (Roache, 2015).

Young adults are increasingly feeling excluded from home independence as they often live at their parent's place (McKee, 2012). When studying living arrangements of young adults, statistics usually report numbers from ownership versus renting, because most of the population think these are the only option to consider. Nevertheless, seen the increasing number of young adults still leaving at their parents' home, a third choice should be considered for this group (Roache, 2015). European young adults do not leave their parents' place at the same time. Whereas in Nordic European countries young adults leave at the youngest ages, in Southern countries it is the opposite. European extremes in this topic can be represented by Norway and Italy, since they are different in labour market and demographic status and cultural influence on family themes (Adabbo & Kjeldstad, 2013). While adulthood status and household formation generally come with marriage and parenthood for Southern European young adults (Giuliano, 2007; Karamessini 2008), in Nordic European countries there are many reasons for them to leave their parents' home and form a household before any partnership perspective (Oinonen, 2003, Sandlie 2011). Struggling to find their own place, young adults move back to their parents' home in hopes of future home ownership (Roache, 2015).

New households are formed by young adults leaving their parents' home and defining their own. Despite being generally associated with marriage, household comes under many

forms and evermore fewer of them include being married. Young adults leave their parent’s home by themselves or they “double up” with a roommate within the same household (Roache, 2015), or they get married and form a family as a consequence of having a well consolidated job (Adabbo & Kjeldstad, 2013).

Another aspect impacting the delay of young adults in leaving their parents’ place in Southern European countries is the presence of university institutions all over the country, while in Nordic countries such as Norway universities are centralized, making young adults leave their nest earlier (Adabbo & Kjeldstad, 2013). Living at their parent’s place, while studying and searching for better jobs, often constitutes a strategy for young adults to achieve greater quality of life later in time (Saraceno, 2000; Giannelli & Monfardini 2003). In terms of education, the number of young adults graduating from university is higher than ever and it has consequences on the housing market because of the delay of young adults in achieving their purchasing power. Due to expensive university fees in many countries, young adults cannot make financially free decisions in living arrangements by the time they graduate, but they will be able to decide whether option they prefer once they have a stable and well-paid job (Roache, 2015). As shown in chart 2 (Cribb et al., 2018), despite the higher number of graduates if compared to Gen Xers and Baby Boomers, Millennials are far from homeownership as their predecessor were not (Natalie, 2018).

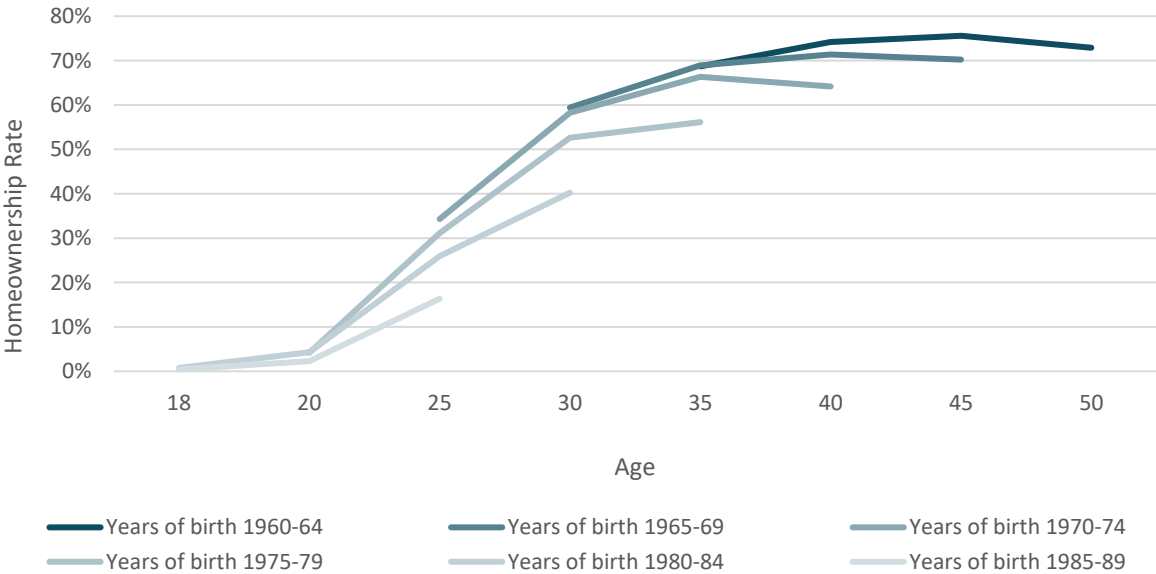


Chart 2 - Homeownership by age, for people born in different years (Cribb et al., 2018)

Young adults count on the financial support of their parents, making their socio-economic background crucial in taking housing decisions (Filandri & Bertolini, 2016). The most relevant limitation for young adults to establish their own household is represented by the increasingly expensive housing costs (Giannelli & Monfardini 2003; Modena & Rondinelli, 2011). In this regard, the common parents' aid for the first house of Italian young adults is important (Mencarini & Tantirru, 2006). Faced with rising housing costs, young adults struggle leaving their parents' home and purchasing their own one. Anyway, parents are usually wealthier than their children when they are looking for their first home, so they provide them of financial help in order to achieve the milestone (Udagawa & Sanderson, 2017). Yet, there is not much difference between the levels of homeownership of young adults coming from various financial backgrounds (Cribb et al., 2018).

Nowadays, the number of young adults owning a home at a given age is way lower than those born five to ten years earlier: in the United Kingdom, 25% of young adults born in the late 1990s own today a home, compare to the 33% of those born in the early 1980s and to the 43% of those born in the late 1970s (Cribb et al., 2018). Young adults are the most dynamic consumers of a given population, and their housing decisions shape the future of the housing market (Bryx, 2021).

1.2.2 The Debate about Buying vs. Renting

The uncertain housing situation of young adults sits within a context where the cost of renting and the cost of buying are almost equal (Natalie, 2018). Indeed, the most important aspect argued by researchers is the "different between monthly mortgage payment and rent" (Franke et al., 1990). Because of the short variance between these two charges, studies investigate the characteristics that drive young adults in the housing market (Jacobsen & Monteiro, 2019).

Jacobsen & Monteiro (2019) conducted a survey to understand what characteristic drive current trends in living arrangements of young adults. They discovered that the choice of buying vs. renting is mainly influenced by economic factors, followed by important social factors as relocation plans, family status and flexibility requirements. Society expectations and cultural background ranked close to zero and lower all other factors. Jacobsen & Monteiro (2019) also

discovered that renting represented the favorite option for younger participants of the survey but by increasing age and grade level, the favorite option became buying. It seems that there is a relation between age and the preference to homeownership: young adults associate more with renting whereas older population associate more with owning.

Countries are different in homeownership rates because of their systematic approach, that is influenced by institutional supports, demographic factors, cultural values and housing policies (Malmendier & Steiny, 2017). Homeownership is more frequent in countries traditionally related to family values (Mulder & Billari, 2010) and social security, because of historical and cultural reasons (Filandri & Bertolini, 2016). In many countries, homeownership makes people believe they are good citizens (Dipasqual & Glaeser, 1999) and “winners” on the housing market (Vassenden, 2014).

Nowadays, it is common thought that young adults are less likely to own a home than their past generations. Distancing from homeownership in their mindset has many reasons, but studies inform that a large part of today’s young adults still think about owning a home someday (Lachman, 2015). From an individual point of view, the benefits of homeownership are providing shelter to one’s own household and to carry on an investment for the owner-occupier (Reed & Mills, 2007). Buying a home is the largest investment a family can generally make but it will cost less over the long run, while renting will cost less over the short one (Shelton, 1968). Young adults do the most to stay away from financial burdens, as they could expose them to risks and uncertainties that they will carry on over a lifetime (Houle & Berger, 2015).

When purchasing their first own house, young adults struggle in coming up with the down payment of at least 10–20% of the property value usually requested by the bank that is providing the mortgage. It can take a long time for young adults to accumulate the amount of money required and considering the case the buyer is a renter at the moment, it is even more challenging for them to save a portion of their income for the down payment while saving for the rent as well (Sitek, 2021). First buyers should then save up money to pay for the deposit and even a small increase in housing prices can affect the saving (Engelhardt, 1994; Li & Yao, 2007). Getting a mortgage to buy a home is very difficult (Sobieraj, 2020) as many young adults can afford it only after aging 35 (Sitek, 2021).

The sudden success of private renting is due to the insecurity of stable income because of the current labor market and to the erosion of previously dominant family model which is now surmounted by the single-person household (Hargreaves, 2002). Most young adults rent their home and they do it mainly because of the appealing characteristics of renting as the lack of maintenance and the flexibility consideration to move out in any time. Indeed, the increasing number of young adults renting represents a growing desire for flexibility and a decreased desire to care about the maintenance of their place (Roache, 2015). Advantages of renting involve limited financial obligations, continuous liquidity, and more mobility (Siegel & Yacht, 2012). The idea of debt itself has an impact on people so that they will always feel more secure renting. In any case, when considering moving from renting to buying, the household status must have achieved a stable conditions (Dieleman & Everaers, 1994).

In most cases renting is more expensive than buying, that is why buying is more economically speaking useful for people who plan to stay in the same place for a long time (Hargreaves, 2002). Timing is crucial when deciding whether to buy or to rent a house. When the homeowner plans to stay in the same place for several years, it might be enough time to see a gain on the investment they made buying the house. Hence, if a significant gain arises, homeownership can be defined as smarter than renting (Jacobsen & Monteiro, 2019). Living arrangements of young adults are often not a consequence of their choices, especially when it comes to rent, but they are rather due to life circumstances and financial constraints (Bryx, 2021). Contrary to buying, renting is successful because of the flexibility that comes with it. In this terms, flexibility means opportunity to change dwelling very quickly, moving to a different neighborhood or even a different city. With flexibility comes no need to be in charge of massive maintenance activity and no need to stay updated with currency fluctuations (Gollapudi & Panigrahi, 2019).

Formerly, affordability favored owning over renting (Öst, 2012). For fifty years or so most developed countries have been characterized by the growing dominance of homeownership (Atterhog, 2006). European countries – Germany excluded - counted about two-thirds of households owning their places in 2003, leading to the definition of Europe as a *Union of Homeowners* (Doling & Ford, 2007). The homeownership trend was not limited to Europe as it became a strong characteristic also in the U.S.A., Australia, Canada and East Asia (Doling, 2013). Yet, over the past few years the situation has started to change as

homeownership rates have declined. Those who in the past would have got into homeownership soon are now young adults looking for alternative housing solutions and they are called *generation rent*, *boomerang kids*, and *paradise children* (Arundel & Doling, 2017).

The Great Financial Crisis (GFC) has slowed down the homeownership trend in many countries, favoring the choice for private renting. This tenure shift is not only caused by the GFC, but it is also a consequence of changes in the labor market. The GFC has impacted the stable and well-paid jobs that were crucial to take housing loans. Even if the GFC had a crucial role in putting an end to the homeownership era, changes in the dynamics of living arrangements were visible already before 2007 (Arundel & Doling, 2017). Because of the radical changes in the labor market that lowered the number of people with stable well-paid jobs, especially between young adults, nowadays people who in the past could have achieved homeownership soon are now pushed towards alternative housing solutions. (Ronald, 2008). As shown in figure 2 (Fuster et al., 2019), following the GFC, homeownership abandoned the idea of stability and security becoming the symbol of dispossession and financial risk (Fuster et al., 2019).

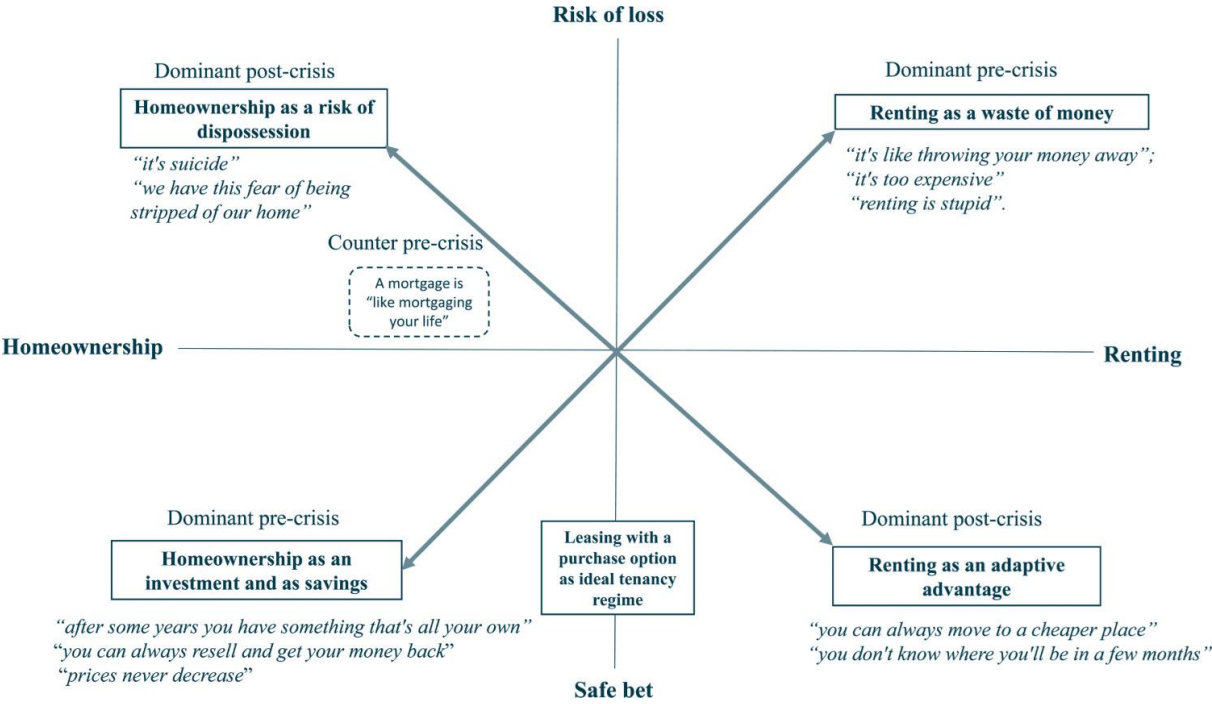


Figure 2 - Dominant discourses on tenure and risk perception (rearranged from Fuster et al., 2019)

Studies underline that a future of mass homeownership in Europe is far from being considered. After the GFC of 2007, homeownership has become unreachable for large part of the population in many countries. Changes in labor market impact any chance of “return to normal” of mass homeownership, because, despite who entered homeownership already will remain so for many years to come, young adults are more and more excluded from this status and that will affect trends in the residential real estate market (Arundel & Doling, 2017). Despite homeownership still being associated with family life, it has not disappeared from people’s mindset, and among young adults it is taken in consideration for a future transition (Fuster *et al.*, 2019). Changing trends in living arrangements can manifest themselves not only across social space, but also urban planning. Residential mobility may increase as a consequence of rental, which is strictly linked to temporality, making urban center attract new housing market dynamics (Fuster *et al.*, 2019).

1.3 Real Estate

Next section investigates the real estate market in Italy, where residential investments are increasing ever more if compared to other real estate assets. Deeper understanding of the multifamily sector is explored to open further explanation later in this research.

1.3.1 The Market Outlook for 2022

Investments in commercial real estate in Italy in 2021 grew by 14% in respect to 2020. The economic growth and the political stability have pushed investors to do business in Italy. In fact, in 2021 they mainly supported stable assets such as logistic, residential and alternative. Chart 3 (CBRE, 2022) shows how the logistic sector reached +80% in respect to 2020, becoming the first asset class by investment volume, whereas the residential sector grew by 24% (which 79% is represented by multifamily). Tech and health assets of the alternative sector have doubled the investment volumes. On the other hand, offices and retail assets have been weakened, respectively by 43% and 5% in respect to 2020. In particular, the investment decrease in office asset can be explained by the uncertainty regarding the future of workplace, by the funding difficulties for the products, by timing extension for transitions, and by limited availability of the product (CBRE, 2022).

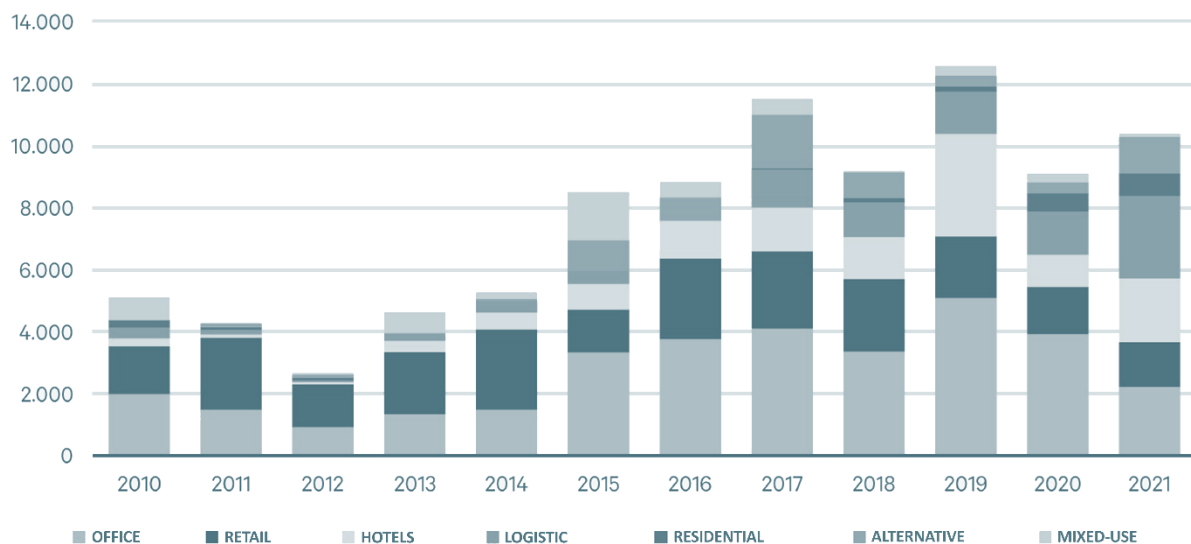


Chart 3 - Investments in Italy by asset class, €M (rearranged from CBRE, 2022)

In Europe as well, within all asset classes of commercial real estate, residential is one of the most dynamic (CBRE, n.d.). In fact, 2021 has been a gold year for the housing investment market. Investment grew by 60% with respect to 2020 and by 47% with respect to the five-years-before average. This record is the effect of a crucial moment in the market, given by the fact that residential asset is more defensive than other real estate classes as the sector has been showing an attractive risk-return profile. In addition, the resilience of the sector gives the most to the fact that housing is a primary need, so that the market does not suffer of economic downturns related to business cycles as other asset classes do (BNP Paribas, 2022).

The *CBRE Italy Investor Intentions Survey 2022* reveals that logistic and multifamily sectors will be the leading for many years to come. While the logistic sector will keep growing because of the increasingly distribution of e-commerce, the multifamily sector will benefit from the increasing demand of housing for rent (CBRE, 2022). With this regard, in the past few years short-term rent made the grown of the residential market possible: renting for short periods is a market model driven by the recent economic crisis and the new dynamics of society which keywords are nowadays mobility and flexibility. The development of this mindset is driving investors to recover interesting buildings by location and layout, mainly within the most dynamic urban centers of the Country and especially by exploiting the potential of Italian cities (Bassi & Moscatelli, 2020). Overall, the investment volume in the residential sector has grown in 2021. The 24% increase with respect to the precedent year is due to the intense activity of the multifamily sector, which count for 79% of the total residential investment volume. The product shortage of the multifamily sectors pushes investors towards development activities that include land purchases and general contractors' involvements (CBRE, 2022). Yet, despite the increasing housing demand in main urban centers, the national market does not present much available product, because of the excessive fragmentation of properties and the lack of independent buildings to be transformed for this purpose, as well as legal and fiscal difficulties (CBRE, n.d.).

Across Italy, Milano is where the multifamily sector is better established, especially close or within large urban regeneration areas, but small conversions of existing buildings in the urban fabric are ongoing as well. By 2024, Milan will put on the market more than six thousands new apartments as many development projects are ongoing. These interventions will contribute to improve the Italian residential stock and will propose modern housing solutions,

suited to the needs of their tenants. To characterize and highlight this new product on the housing market, increasing focus is given to construction quality, amenities offer and community creation between tenants (CBRE, 2022).

1.3.2 Multifamily leading Residential Investments

Since international real estate players are ever more focusing on the residential market, the goal in Italy is to make Multifamily a product of institutional investment and to make it competitive with respect to foreign commercial realities (BNP Paribas, 2022). As Cushman & Wakefield (2020) reports, “turning the Multifamily sector into an asset class for institutional investors in Italy is the big challenge facing the industry for the future”. This is because the Italian market is dominated at the moment by private owners (BNP Paribas, 2022). After all, the three main reasons for which investors are interested in Multifamily concern stable incomes coming from low risk of vacancy and tenancy because of high demand, opportunity of diversification compared to traditional sectors, and support of the housing demand as a primary good with low impact of economic cycles (CBRE, 2022).

Investors are evermore focused on ESG, which stands for “Environmental, Social, and (Corporate) Governance”, the three broad areas of interest for what is termed “socially responsible investors.” These investors believe that is important to include their values and concerns into their choice of investments, instead of just seeing the profitability and/or risk related to an investment opportunity (CFI, 2022). As the residential sector is one of the largest consumers of energy, the ESG factor will have an impact on residential investments in the upcoming years. Hence, it will be important to include the ESG factor in new investments and to control the cost of improving the energy efficiency of the existing housing stock to get higher returns (BNP Paribas, 2022). As never before in the market, international investors in Europe are interested in matching the ESG targets that actually drive their investment decisions. ESG standards represent an opportunity, coming from both investors and occupiers, to redevelop and regenerate the existing building stock that is still far from meeting these requirements (Savills, 2022).

The Italian residential stock is old, as 81% of housing built after the II World War date before 1990 and construction permits have reduced by 70% in the first two decades of the XIX

century. This has consequences in the crucial impropriety of buildings to meet today's standards in terms of environmental and social sustainability. Government incentives to sustain energy upgrading in the residential sector are very important to support the regeneration of the Italian heritage, while providing opportunities to investment activities (CBRE, 2022). In addition, from a deeper point of view, multifamily represent a crucial opportunity to invest in the Italian building stock and reach the goals of the Agenda 2030 signed by the United Nations for sustainable development across the world (BNP Paribas, 2022). According to ISTAT (2011), in Italy 93,30% of the dwellings (inhabited by resident persons) are owned by individuals. Chart 4 (ISTAT, 2011) shows in detail the type of ownership for the rest of the dwellings: when not owned by individuals, dwellings are mostly owned by business, public institutions and IACP (Istituto Autonomo Case Popolari).

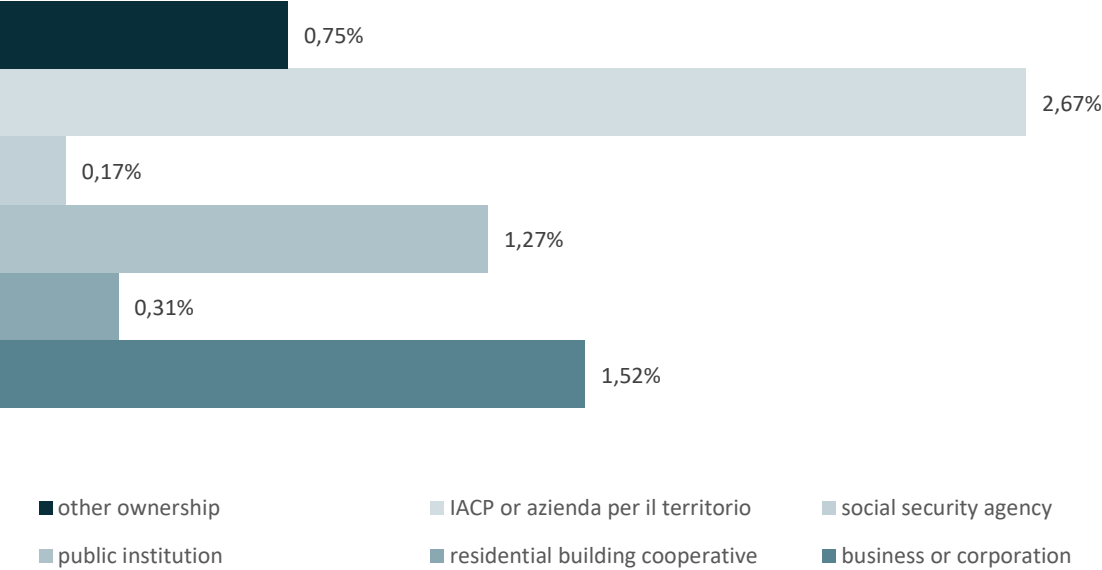


Chart 4 - Percentage distribution of dwellings by type of ownership, individual excluded (ISTAT, 2011)

1.4 Renting

Following section explores how the Covid-19 pandemic affected renting solutions in cities, especially with regard to the diffusion of remote working in most developed countries. Then, built-to-rent solutions are introduced to conclude the notions that frame my study.

1.4.1 The Impact of Covid-19 on Renting in Cities

Covid-19 had a limited impact on rent, as the increasing trend of people renting is not going to stop, especially between young adults: in Italy, 30% of young adults aged under 35 was renting in 2009, 40% in 2019 (ISTAT). The Covid-19 outbreak followed an increase in housing demand. Not only urban centers, but also outskirts and medium cities saw this shift (BNP Paribas, 2022).

Reallocation of real estate demand away from largest cities in favor to lower density suburbs has been identified as “donut effect”, imaging city centers to hollow and surrounding areas to rise. In the United States, 15% of population and businesses moved out from main city centers in 2020, having prices in the suburbs to rise by almost 15% as well. The economic activity of largest US cities experienced the sharpest movement, especially in the within-city reallocation (thus donut effect) instead of between-city reallocation from denser to less dense cities (Ramani & Bloom, 2021).

Home working is having a crucial role in this sense, as people are able to leave city centers for more natural contexts (BNP Paribas, 2022). It is, in fact, ever more a solution adopted by most, as it allows people to leave city centers and look for more space in suburban and natural areas. With this regard, during the pandemic some have speculated the “death of the city” that did not actually take place (Savills, 2022). In the post pandemic era, hybrid work will be the norm, allowing workers to reach city centers just a couple of days per week. This will make suburbs more popular, but the need to live the city will still be crucial (Ramani & Bloom, 2021). In fact, what Covid-19 has highlighted, is that cities need to evolve to better the quality of life of their inhabitants. This change would directly impact real estate, as cities are required to involve different functions in the same neighborhoods, giving opportunity to the residential sector to onset within the consolidated urban fabric of city centers (Savills, 2022).

1.4.2 The Advantages of Built-To-Rent Solutions

Carryovers from pre-pandemic trends to post-pandemic decade are technology advances processes that will spread home working to new hybrid life/work communities, flex domestic spaces that are ever more required as time spent at home has been significantly increasing, outdoor recreation spaces being favored instead of indoor amenities (PwC, 2022). In addition, household are looking for modern housing solutions that include a small garden or terrace. Target houses are located close to public transport and enjoy a pleasant and natural environment (BNP Paribas, 2022). CBRE VAS Advisory Hub (n.d.) identified the main factors influencing the Built-To-Rent solutions in the most established markets as follows.

1. Location, accessibility, and proximity to public transportation and presence of large number of services nearby are crucial factors for occupiers.
2. Socio-demographic changes and trends have a large impact on residential asset class, as growing population in EMEA region is fueling housing demand in the cities that investors are gazing at. The market is also influenced by the need for contractual flexibility, services and housing dimensions that vary depending on the age range of the occupiers.
3. Socio-economic aspects as occupiers who want to live in urban centers are driven by the flexibility that renting can provide. While it was considered a precarious housing solution in the past, nowadays renting satisfy new life needs as young adults would rather opt for shared housing solutions with services included.
4. Design quality, architecture finishing and optimized layout because occupiers look for new housing solutions that can spare them high maintenance costs. House dimension is no more the core factor that they take into consideration. This is because in the multifamily sector, houses are built not to be sold but to be rented. Here comes their crucial requirement to be functional in terms of maintenance and management by their operator and investor.
5. In Italy, the multifamily asset is showing good investment returns as risks are lower if compared to other asset classes. This market offers several opportunities for different types of investors, either institutional or private.

2. Study

The object of this study is to investigate the feasibility of the development of residential investments in Florence. Following a brief introduction to Florence, its urban history, heritage value and quality rank are shown to demonstrate alongside the analysis of its labor market, residential stock, and population trend, the attractiveness of the city towards residential investments. Afterwards, multifamily is explored through some reference projects that put in evidence its history, structure and success.

2.1 Florence

Florence is where this study is set. The following section analyzes several aspects of the city, which will be later considered for the feasibility of the development of multifamily. On the one hand, information and data will be provided neutrally, on the other hand, a territorial marketing approach will uncover the attractiveness of Florence for residential investments.

2.1.1 Overview and Pictures

Florence is located in the Centre North of the Italian peninsula, almost halfway between Rome and Milan, and it is the capital of the homonymous province and region. As shown in figure 3 (Google Earth, 2022), the city is surrounded to the south by the Chianti hills and to the north by the Apennines mountains and it is crossed East-West by the Arno River. Florence was founded in the 1st century BC as a Roman military colony, which typical castrum layout can still be seen in the rectilinear grid of the many narrow streets that compose the city center. Today is still visible what was then the intersection between roman cardus and decumanus. Florence did not stop being just a military camp, as during its long history it has been a republic, a seat of the duchy of Tuscany and a capital of the Kingdom of Italy.



Figure 3 – Florence and its surroundings (Google Earth, 2022)

The strategic location of Florence made the city really vulnerable to attack: between the XIII and XIV century the city erected massive walls that were erased during the urban expansion of the late XIX century. Former presence of such walls is still visible in the southern part of the city center, that could not be expanded due to the close dominance of the hills. In the XX century, the city expanded again in respond to immigration waves. Large housing project were developed in the immediate surroundings of the city center. Housing increased together with industrialization, that has seen great development in several district around the city (Britannica, 2021). Following figures 4 shows the most famous sites in the city.



Overview



Duomo



Palazzo Vecchio



Ponte Vecchio



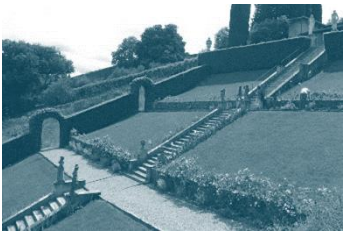
Palazzo Pitti



Boboli Gardens



Forte Belvedere



Bardini Gardens



Lungarni



Santa Maria Novella



Uffizi Gallery



Santo Spirito

Figure 4 – Sites in Florence

2.1.2 History and Planning

Information on the history and planning of the city of Florence have been taken by the online resource of DeAgostini encyclopedia. The following paragraphs offer an overview of the changes that the urban fabric of the city has experienced since its foundation.

The Roman castrum of Florentia arose on the Arno riverbanks, near the ancient confluence of the Mugnone stream, next to a first Italic settlement, in the I century a.C., on a cardo-decumanic structure with a polar orientation and walls already in place from imperial age. In 1974, the excavations carried out in Piazza della Signoria led to the identification of a thermal building in operation from the II to the IV-V century. During the excavation, various materials ascribable to the Bronze Age and the Neolithic have also come to light. A Villanovan burial ground was also found in the urban area and some archaic Fiesolan funerary stones are visible too because they had been reused in the façade of some city palaces.

After the early medieval regression, the city developed with municipal autonomy and in the XI and XII centuries it extended all around, reaching the other bank of the Arno, beyond which the first villages arose, so that a second set of walls was erected. Inside the first enclosure, the space was densely filled with the defensive tower-houses of the feudal aristocracy who moved to the city, while the Roman road layout was divided into winding alleys with small irregular open spaces. Between the first and second walls, in the villages inhabited by traders and artisans, a more sparse and regular building prevailed, with houses side by side with small facades on the street. Yet, the maximum urban expansion happened in the XIII and XIV centuries both around the original nucleus, with a radial road layout with respect to the Roman castrum, and beyond the Arno. So, the third wall was built, which contained any further urban expansion up to the XIX century.

At the same time, with the construction of the new cathedral and the Palazzo della Signoria, the religious and political centers were defined. Between the second and third circle of walls, the great churches of the religious orders founded in the XIII century became the driving force of the formation of some villages, interspersed, up to the whole XVIII century, by large green spaces. In the XV-XVI centuries, in this medieval urban fabric, aristocratic palaces and Renaissance churches were built and regular squares were opened. Only in the XIX century Florence began a new phase of urban expansion and a building concentration in the old center occurred due to the filling of orchards and internal gardens and the building of new

neighborhoods in the areas that had stayed free so far. In the late XIX century the main train station was built in the historic center. Figure 5 shows development of the historic center.

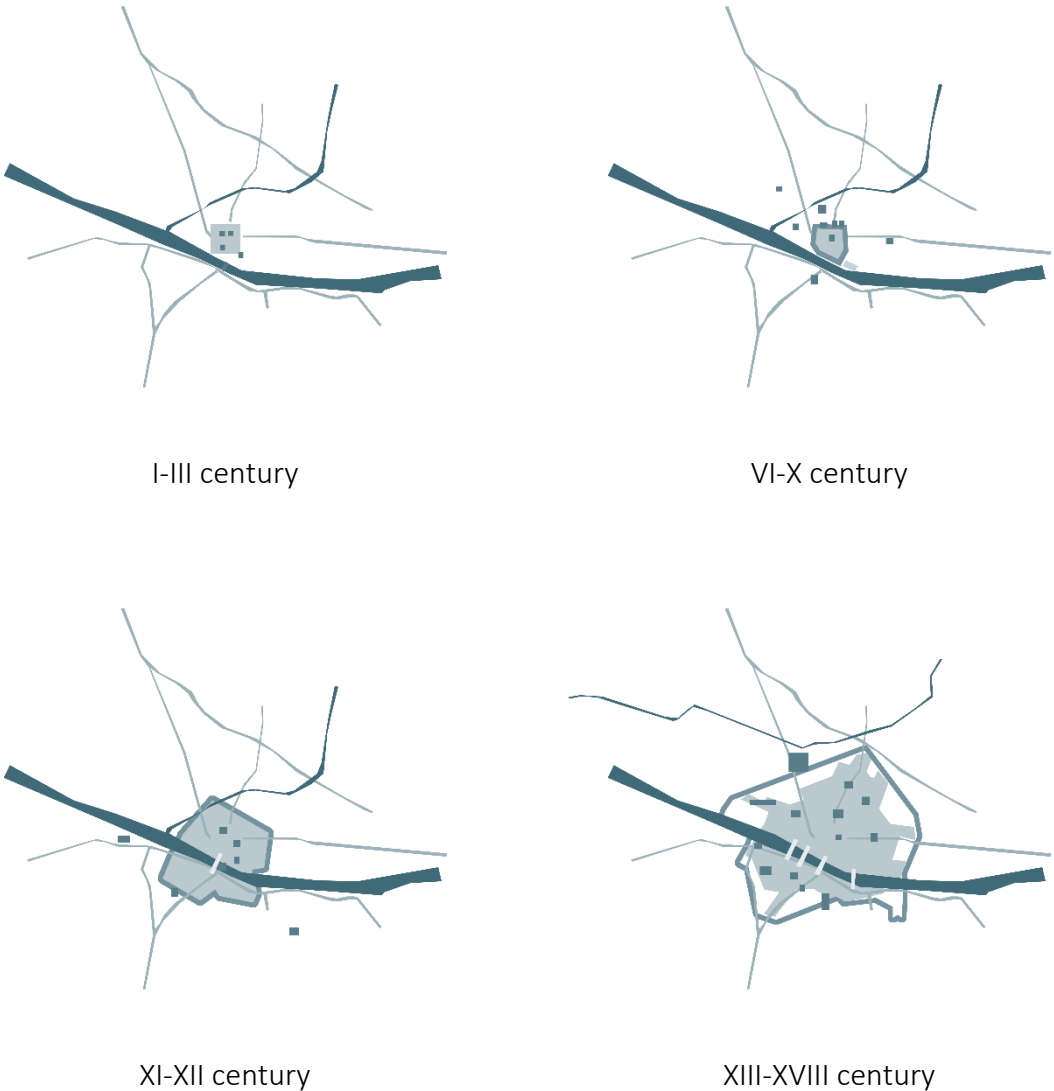


Figure 5 - Urban develop of the historic center and main buildings of each time

In 1865-71 Florence was the capital of the Kingdom of Italy, and it was enlarged following the plans of Giuseppe Poggi: walls were mostly demolished, replaced by large avenues in imitation of the Parisian ones, and large residential areas with orthogonal meshes were created all around the city. Poggi was also responsible for the construction of Viale dei Colli, a panoramic avenue overlooking the city center by its southside hills. In 1885-95 the restructuring of the center (also known as “Risanamento di Firenze”) was carried out, with the demolition of many medieval houses, the opening of Piazza Vittorio Emanuele, now Piazza della

Repubblica, where the old market of the city was, and the construction of regular blocks of office and residential buildings. The subsequent urban expansion, which took place outwards like wildfire, did not follow rational criteria but purely speculative purposes, while the destruction of World War II accentuated the deterioration of the historic center. In 1949-52 a plan was drawn up to combat for the first time the continuous and concentric expansion of the city. Another one followed in 1962, which tried to compose a balanced scenario between the center, the hills and the outskirts. Despite this, the 1970s saw the development of suburbs and satellite towns, especially along the Florence-Prato-Pistoia urban line. In 1985 Giovanni Astengo and Giuseppe Campos Venuti proposed a masterplan project which beheld an intervention for urban parts, with moderate residential expansion, readiness for recovery, social and environmental protection of the historic center, declared a World Heritage Site by UNESCO in 1982, as well as it indicates places and ways for future expansion and reuse.

2.1.3 World Heritage Site

As anticipated in the chapter above, the Historic Center of Florence has been registered in the list of World Heritage Sites since 1982 by UNESCO (United Nations Educational, Scientific and Cultural Organization). Figures 6 and 7 report the meeting minute of the sixth session of the World Heritage Committee that took place in Paris on December 13th-17th 1982, highlighting the point where the Historic Center of Florence was declared World Heritage site.

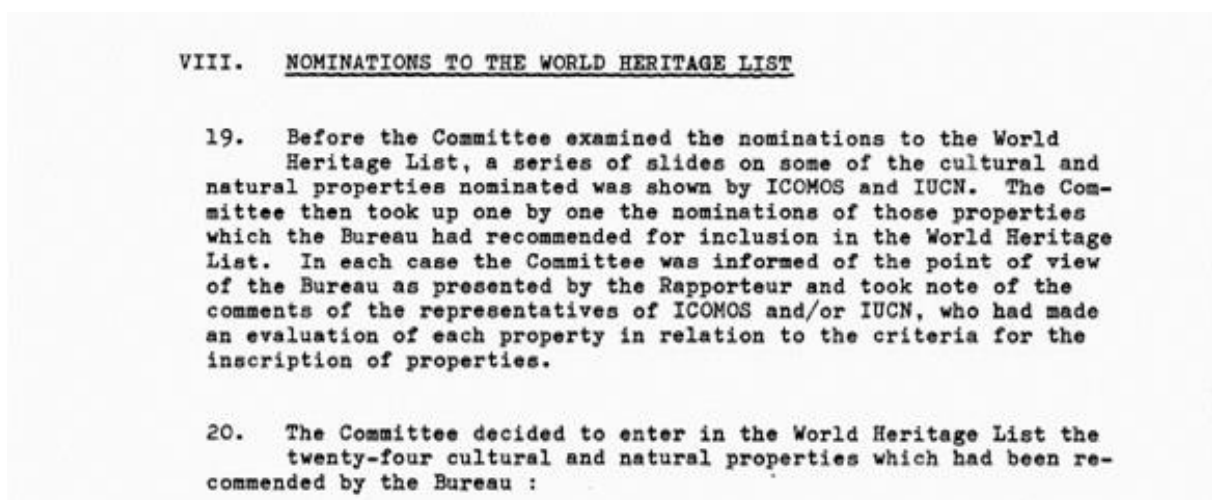


Figure 6 - World Heritage Committee Sixth Session Paris 13-17 December 1982, extract p.5

Figure 7 - World Heritage Committee Sixth Session Paris 13-17 December 1982, extract p.7

The following citation comes from the official text of the “brief synthesis” of the Retrospective Statement of Outstanding Universal Value qualities (UNESCO World Heritage Committee, 2014), by which the Historic Center of Florence has been registered in the World Heritage list. It gives a short description on the history of the site and illustrates the main reasons for its recognition.

Florence was built on the site of an Etruscan settlement and the later ancient Roman colony of Florentia (founded in 59 BC). This Tuscan city became a symbol of the Renaissance during the early Medici period (between the 15th and the 16th centuries), reaching extraordinary levels of economic and cultural development. The present historic center covers 505 ha and is bounded by the remains of the city’s 14th-century walls. These walls are represented by surviving gates, towers, and the two Medici strongholds: that of Saint John the Baptist in the north, popularly known as “da Basso”, and the Fort of San Giorgio del Belvedere located amongst the hills of the south side. The Arno River runs east and west through the city and a series of bridges connects its two banks including Ponte Vecchio and Ponte Santa Trinita. Seven hundred years of cultural and artistic blooming are tangible today in the 14th-century Cathedral of Santa Maria del Fiore, the Church of Santa Croce, the Palazzo Vecchio, the Uffizi gallery, and the Palazzo Pitti. The city’s history is further evident in the artistic works of great masters such as Giotto, Brunelleschi, Botticelli and Michelangelo. The Historic Centre of Florence can be perceived as a unique social and urban achievement, the result of persistent and long-lasting creativity, which includes museums, churches, buildings and artworks of immeasurable worth. Florence had an overwhelming influence on the development of architecture and the fine arts, first in Italy, and then in Europe. It is within the context of Florence that the concept of the Renaissance came to be. This heritage bestows upon Florence unique historical and aesthetic. - UNESCO World Heritage Committee, 2014

Since 1982, the territorial area registered in the World Heritage List is the Historic Center of Florence, traditionally identified with the area included within the circuit of avenues corresponding to the ancient circle of XIV century walls, largely demolished in the second half of XIX century. In 2021, the extension of the perimeter towards the hilly area south-east of the historic center of Florence was approved, so as to include the San Miniato al Monte complex

and the surrounding area until it rejoins the original perimeter, bringing the extension of the site to 532 hectare, as shown in figure 8 (Comune di Firenze, 2022).



Figure 8 - Area of the World Heritage Property (rearranged from Comune di Firenze, 2022)

Since 2006, the Municipality of Florence has put in practice “The Management Plan of the Historic Center of Florence” a document that allows the city to protect its heritage site. Despite the area being under various types of ownership, from private to public that are all linked together by the need for protection, it is the State of Italy that actually takes care of the protection and preservation of cultural heritage on its territory, through the D.lgs 42/2004, which discipline on behalf of the “Ministero dei Beni e delle Attività Culturali e del Turismo” all actions that may have an impact on the cultural heritage of each site. With the Management Plan, yet, the Municipality of Florence has been named as the party responsible for the World Heritage property. The city has then set a tool for urban planning which identifies the historic center as a place of cultural and environmental concern, where only conservation and

restoration activities are allowed. Strategies and innovations are identified for the future, such as quality in living conditions for residents, improvements to tourism, and awareness of the historic center as a World Heritage site. With this regard, the plan provides a building policy which controls activities in the historic center. Finally, the Municipality, as the party responsible for the site, has nominated an office to be responsible for the Management Plan and to carry out duties for the conservation and development of the site. The Management Plan promote the safeguard and conservation of the urban structure and the maintenance and increase of the relationship between the traditional social-economic activities and the cultural heritage of the city (UNESCO World Heritage Committee, 2014).

The management plan provides a SWOT analysis of the site, between which emerges the housing problem in the historic center: the need to implement projects of urban regeneration favoring residence, in order to preserve the vitality of this aspect is seen as an opportunity to bring people back to the city (Comune di Firenze, 2022).

2.1.3 Quality of Life

The research carried out by Lab 24, the research lab of the Italian economic newspaper Il Sole 24 Ore, ranked Italian cities and their provinces by quality of life. Such rank aims at leading investments and projects of the PNRR (Piano Nazionale di Ripresa e Resilienza) promoted by the Italian Ministry for Economic Development.

The research lab elaborates the quality of life ranking for Italian cities since 1990 and its latest methodology can be sum up with ninety indicators categorized in six macro thematic groups (which are divided in 15 indicators each): wealth and consumption, business and work, environment and services, demographic and health, justice and safety, culture and leisure. All indicators are certified, provided to Il Sole 24 Ore by official sources, institutions and research institutes. For each of the ninety indicators, one thousand points are given to the province with the best value and zero points to the one with the worst. The score for the other provinces is distributed according to the distance from the extremes, that are 1000 and 0. Then, for each of the six macro-categories of the sector, a ranking is identified determined by the average score reported in the 15 indicators, each weighted equally to the other (1/90). Finally, the final

ranking is built on the basis of the simple arithmetic mean of the six sector rankings (Finizio, 2021).

In the Quality-of-Life 2021 research, Florence is ranked 11 over 107 provinces in Italy, as it has gained +16 positions over the 2020 rank. As shown in figure 5 below (Lab 24, 2021), the province of Florence can boast a good position in the national rank for most of the macro groups. Yet, justice and safety shows that many problems have occurred in the city compared to the past.

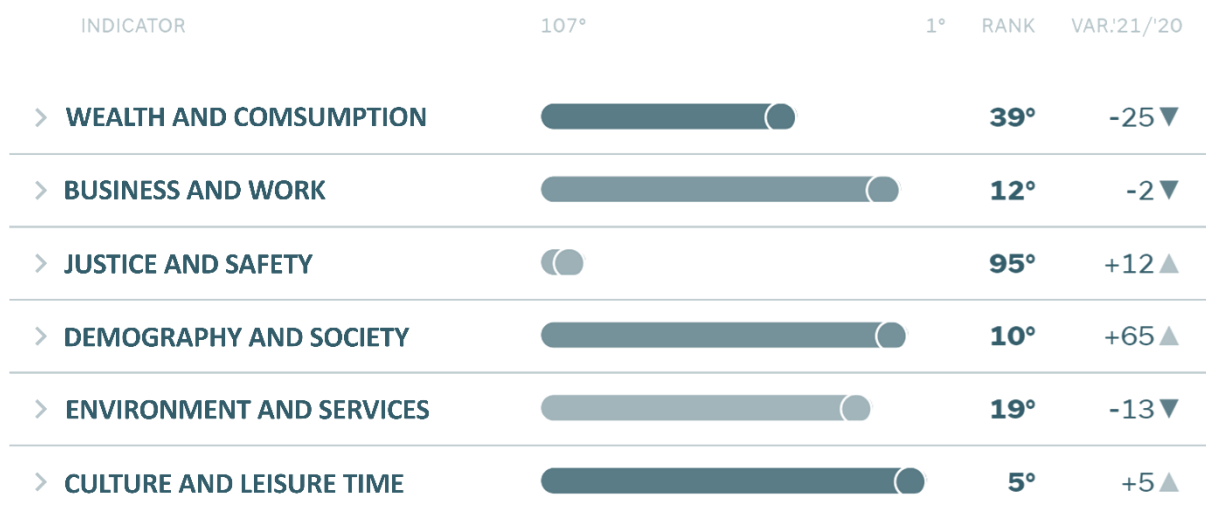


Chart 5 - Quality of Life Final Rank 2021 (rearranged from Lab 24, 2021)

When focusing on the single 15 indicators of each category, some relevant results related to real estate emerge. In wealth and consumption, despite overall ranking is 39, Florence ranks 3 for average selling price of houses and 8 for added value per inhabitant. In business and work, the province ranks 5 for employment rate, 4 for foreign companies and 5 again for quality of life for women. In environment and services, Florence ranks 1 for *CityRank*, which is an indicator on smart cities that consider online services, public wi-fi, open data, and net technology. Finally, in culture and leisure, as overall ranking is 5, the province ranks within the top ten for museum heritage, historic green, cultural offer and expenditure of municipalities for culture (Lab 24, 2021).

2.1.4 Labor Market

Industry and tourism thrive the economy of Florence (Britannica, 2021). In the economic activity of Florence, industry has never played a central role, despite some of its sectors have lead Italy and Europe in the past. After a significant development from World War II to the years of the economic boom, the manufacturing sector suffered a sharp contraction, both because of the effects of deindustrialization, and because of the relocation of industrial plants outside the administrative boundaries of the city (Amerighi, 1961; Guaita, 1962, Bargellini, 1968). Most of the industrial activity is located in the suburbs and the most profitable markets are furniture, rubber goods, chemicals, and food (Britannica, 2021). Indeed, nowadays the leading sectors of the industry of the city are mechanics, footwear, tanning, lighting, fashion and clothing. The craftsmanship is in embroidery and in the processing of precious metals and semi-precious stones, leather and hides, wood, wrought iron and glass. The tertiary sector has developed not only in commercial activities (mostly related to tourism), but also in financial, insurance and IT activities. An important role in promoting commercial activities is played by the trade fairs held in the city on a regular basis, in particular those of prêt-à-porter fashion (Amerighi, 1961; Guaita, 1962, Bargellini, 1968). The city hosts many events during the year, such as antiques fairs, fashion shows and artisans' exhibits. Despite Milan leading the fashion sector in Italy, Florence is still able to set its influence since World War II. Yet, tourism is the main source from which Florence lives (Britannica, 2021).

Among the world cultural capitals because of its inestimable heritage, Florence counts on efficient organizational and information structures and on excellent accommodation (not only quality hotels and luxury hotels, but also bed and breakfasts and agritourism structures). The city is, with Rome, the European historical center of conservation due to the prevalence of initiatives for the study and restoration of works of art. In the territory of Florence, almost entirely urbanized, agriculture plays a marginal role. However, the cultivation of vines, olives and vegetables is important (Amerighi, 1961; Guaita, 1962, Bargellini, 1968). Chart 6 (UO Studi & Statistica della Camera di Commercio di Firenze, 2022) shows the percentage distribution of employees in the Metropolitan Area of Florence by economic sector, demonstrating that most of the labor market is focused on trade and industry, which are most of the time related to tourism as well.

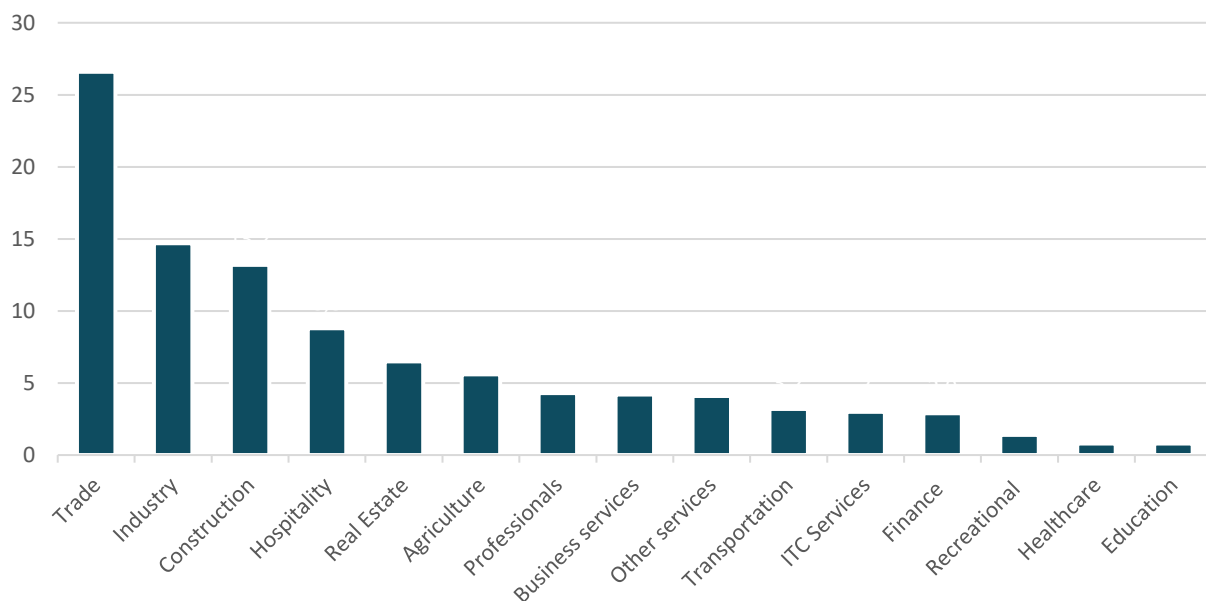


Chart 6 - Location of active enterprises: percentage share of employees by sector (UO Studi & Statistica della Camera di Commercio di Firenze, 2022)

2.1.5 Residential Stock

The number of dwellings in Florence is neither increasing or decreasing at all, while elsewhere experiences a rapid increase: on the one hand the density of the built environment in Florence is very high in most of its neighborhoods, on the other hand the city has a strict legislation addressed to protect more natural areas such as the hill sides next to the historic center where no new construction (residential and more) is permitted.

To analyze the residential stock in the city of Florence, statistic data has been taken from the 15th Population and Housing Census carried out in 2011 by ISTAT, the Italian national institute of statistics. This census identifies the totality of people habitually residing in each municipality and it is useful to know the demographic and social structure of Italy and its territories. The reference date of the census is October 9, 2011.

To focus on the numbers emerging from the Municipality of Florence, the information about the whole territory of Italy, Tuscany and of the Metropolitan City of Florence (identified in charts as “Florence +”) have also been considered. The comparison of these four areas allows to read the data and to give them a value based on the dimensions of the territory taken in consideration.



Italy
 301,230 km²
 ppl 59,433,744
 d 197.3/km²



Tuscany
 22,985 km²
 ppl 3,672,202
 d 159,7/km²



Florence +
 3,514 km²
 ppl 973,145
 d 276,9/km²



Florence
 102.41 km²
 ppl 358,079
 d 3.496/km²

Glossary (source: Manual of the Survey for the 15th Population and Housing Census):

- **Resident:** a person who is registered as habitually resident in the territory of the Municipality and who is part of the legal population.
- **Household:** a family, a group of people linked by ties of marriage, kinship, affinity, adoption, protection or emotional ties, cohabitants and habitual residence in the same municipality. A family can also consist of only one person.
- **Dwelling:** a conventional house (shack, caravan, camper, etc. are excluded) which is:
 - permanently intended for residential use,
 - separate (e.g., surrounded by walls and covered by a roof)
 - independent (e.g., equipped with at least one independent access from the outside or from common hallway spaces - street, courtyard, stairs, landings, balconies, terraces, etc. - or an access that does not involve passing through other houses),
 - inserted in a building (or which itself constitutes a building).
- **Surface:** the useful floor space, the internal surface of the house or the floor surface of all rooms in the house, including bathrooms, kitchens, accessory rooms and excluding terraces, balconies and appliances (such as, for example, cellars, attics, garage and garage).
- **Room:** an enclosed space that receives direct air and light from the outside and which has dimensions such as to allow the placement of a bed, leaving enough space to move. Bathrooms, kitchens, accessory rooms and appliances such as cellars, attics, garages, garage, etc. are excluded.

- **Kitchen:** enclosed space designed and equipped for the preparation of meals that has the characteristics of a room.
- **Small kitchen:** enclosed space designed and equipped for the preparation of meals that does not have the characteristics of a room.
- **Kitchenette:** space designed and equipped for the preparation of meals inserted in a space with the characteristics of a room with various functions (living room, sitting room, etc.).
- **Residential building:**
 - building designed, built and used only for residential purposes: single-family houses, villas, cottages, houses, terraced houses, buildings in residential complexes, etc.
 - building designed, constructed and used mainly for residential purposes: condominiums or apartment buildings with shops (or business locations in general) at street level, etc.
 - building which, even if designed and built not for residential purposes, has undergone one over time variation of use by becoming it.
 - building which, designed and built for residential purposes, has undergone a change over time in use and currently no longer, for example a residential building that has become an office building of freelancers.

Chart 7 shows the percentage distribution of dwellings by occupancy status in all type of building (residential and non-residential). Florence presents the highest percentage of dwellings occupied by at least one resident, while Italy shows the highest percentage of unoccupied dwellings. It is interesting to see how the percentage of unoccupied dwellings decreases as the territory taken in consideration reduces to Florence. Cities are generally more attractive to other parts of the national territory due to the presence of more working opportunities and Florence is one of the largest cities in Italy where the demand for housing is constantly high. Unoccupied dwellings in Italy are probably clustered in isolated location of the territory, where there is no interest of making dwellings available to someone to live in.

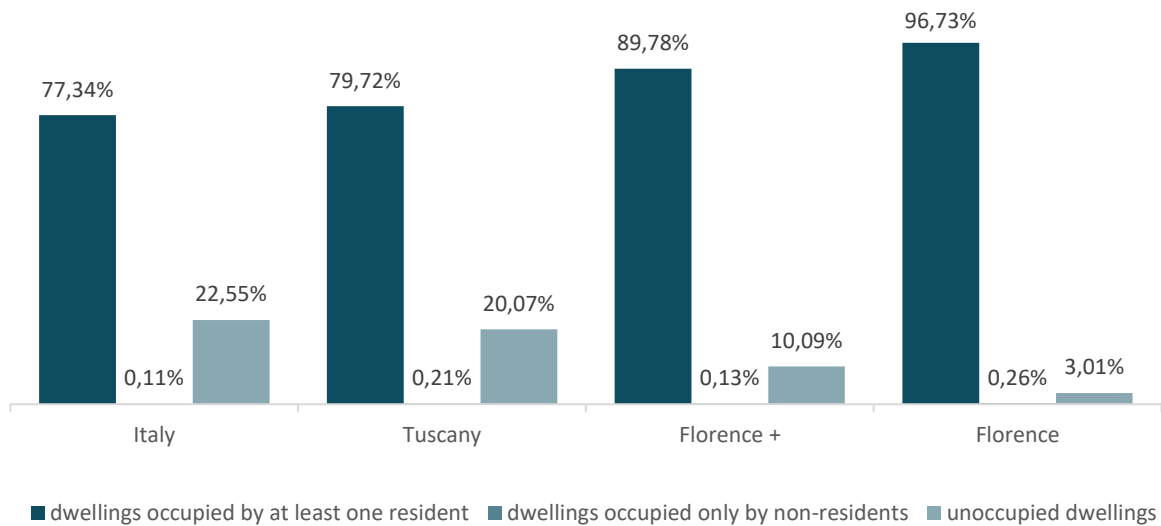


Chart 7 - Percentage distribution of dwellings by occupancy status (ISTAT, 2011)

Chart 8 and chart 9 show the distribution of dwellings over time by occupancy status. Chart 5 join dwellings occupied only by non-residents and unoccupied dwellings. In forty years, Florence has seen the percentage of dwellings occupied by residents decreasing from 87% to 77% of the dwellings, while over the same years in Italy the dwellings occupied by residents have increased from 3% to 97%. Consequently, Florence goes in the opposite direction to the ones of the other territories also for the percentage distribution of dwellings not occupied by residents, as shown in chart 9.

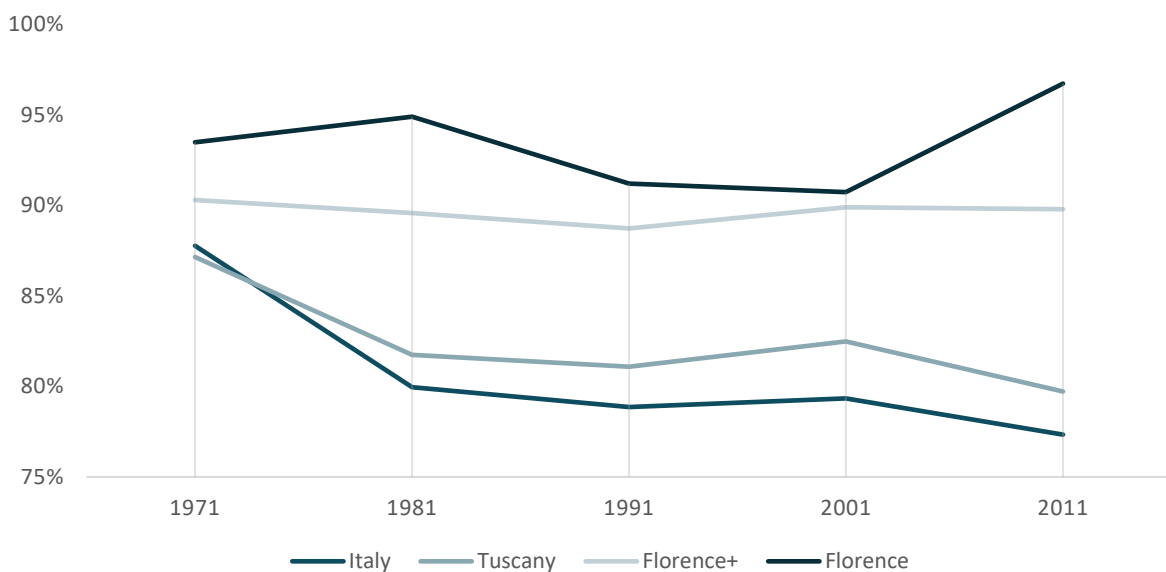


Chart 8 - Percentage of dwellings occupied by residents by census year (ISTAT, 2011)

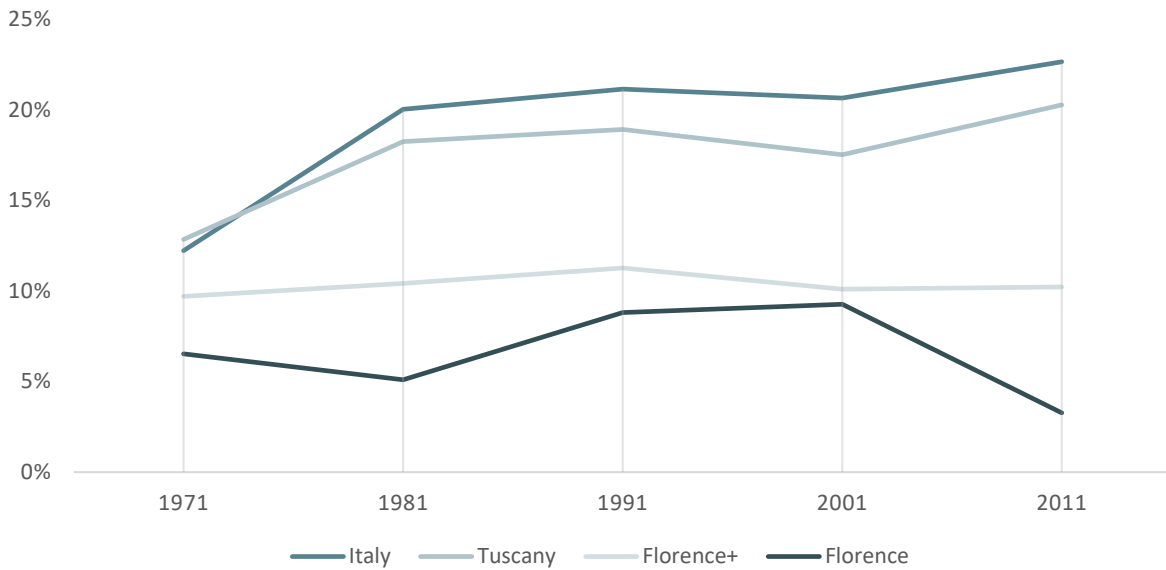


Chart 9 - Percentage of dwellings not occupied by residents by census year (ISTAT, 2011)

In Italy 93,30% of the dwellings are owned by individuals. Similar situations are present in Tuscany, Florence + and Florence, where the percentage of the dwellings owned by individuals is respectively 94,35%, 93,94% and 92,79%. Following chart 10 shows in detail the type of ownership for the rest of the dwellings: when not owned by individuals, dwellings are mostly owned by business, public institutions and IACP. In Florence, the dwellings not owned by individuals are mostly owned by public institutions. In all territories, very few dwellings are generally owned by residential building cooperatives and social security agencies.

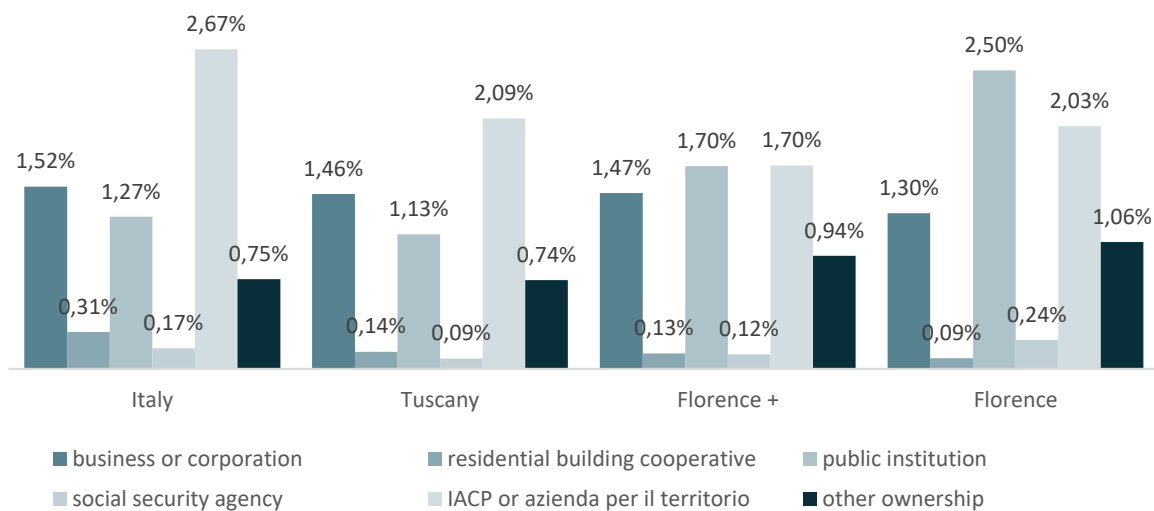


Chart 10 - Percentage distribution of dwellings by type of ownership, individual excluded (ISTAT, 2011)

Chart 11 shows the percentage distribution of dwellings by group of surface. The distribution is very similar in all territories up to the 50-59 m² group, because larger dwellings are differently distributed depending on the territory. Florence is site to an equivalent presence of 60-79 m² and 89-99 m² dwellings that are by far the most common in the city. Yet, larger dwellings are less in Florence than in the other territories.

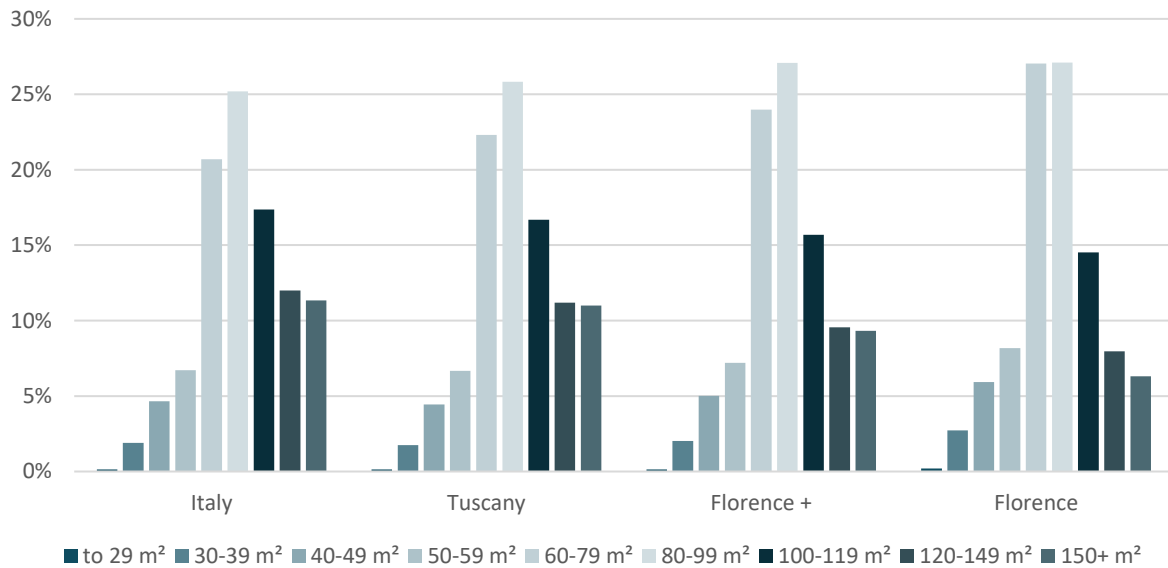


Chart 11 - Percentage distribution of dwellings by group of surface (ISTAT, 2011)

Chart 12 shows the percentage distribution of dwellings by number of rooms and makes evidence of the fact that Italy and Florence have almost the same distribution, while Tuscany and the Metropolitan City have higher number of dwellings with five, six or more rooms. Everywhere, four-rooms dwellings are the majority and single-room dwellings the minority. The four-rooms dwelling is the most common house solution because of the typical layout that most families need: one living room and several bedrooms. Single-room bedrooms are most common in cities, where prices usually are higher than elsewhere because of a strong demand, especially from young adults: for this reasons, Florence has a bit higher percentage of studios.

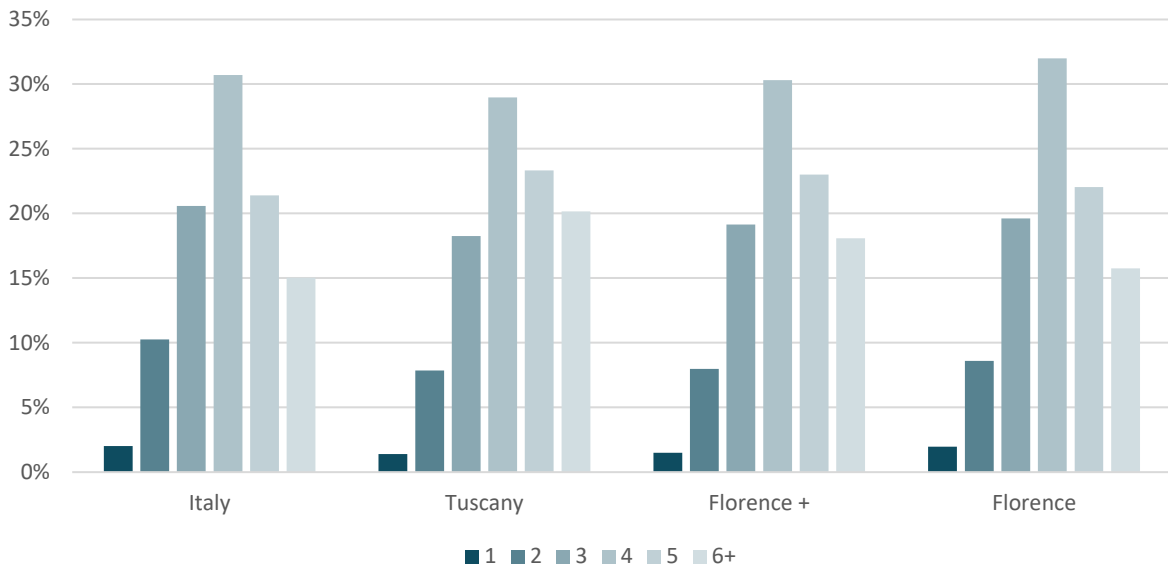


Chart 12 - Percentage distribution of dwellings by number of rooms (ISTAT, 2011)

Chart 13 shows the percentage distribution of dwellings by availability of kitchen. The kitchen with the characteristics of a room is the most common in every territory. Two kitchens are very rare to find in Florence, which presents the highest percentage of single-kitchen dwellings, probably due to the historical typology of houses. The kitchenette is a modern solution to save space and it is more visible in the Metropolitan City.

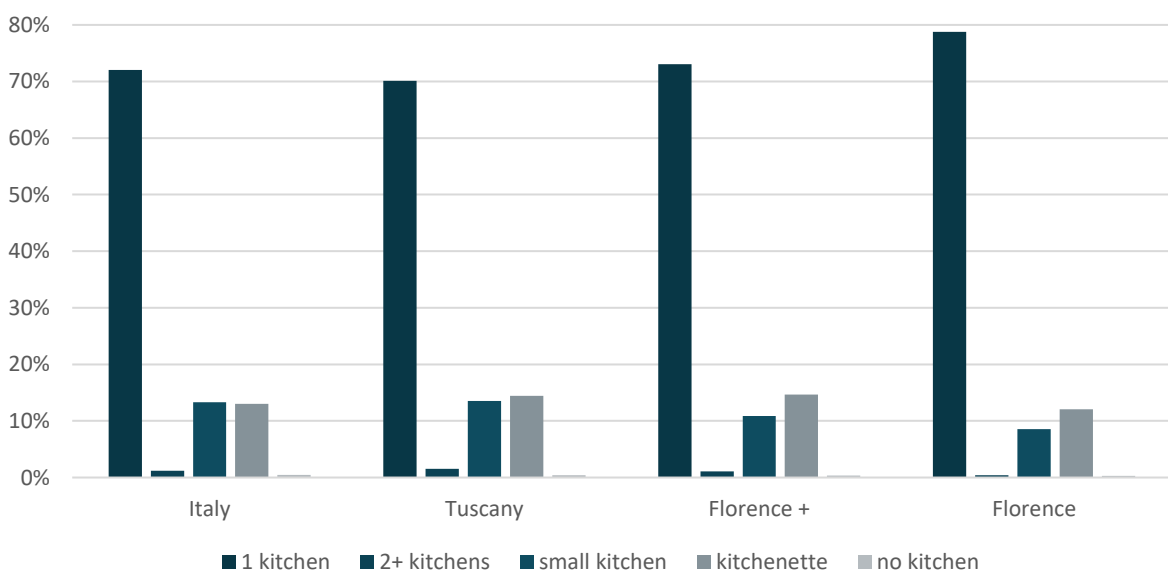


Chart 13 - Percentage distribution of dwellings by availability of kitchens (ISTAT, 2011)

Chart 14 and chart 15 show respectively the percentage distribution of dwellings by availability of toilets and by availability of showers. The two distributions are similar to each other: reading the data from the lowest density of the national territory to the highest density of Florence, the presence of 1 toilet and 1 shower is more frequent than the presence of 2+ toilets and showers.

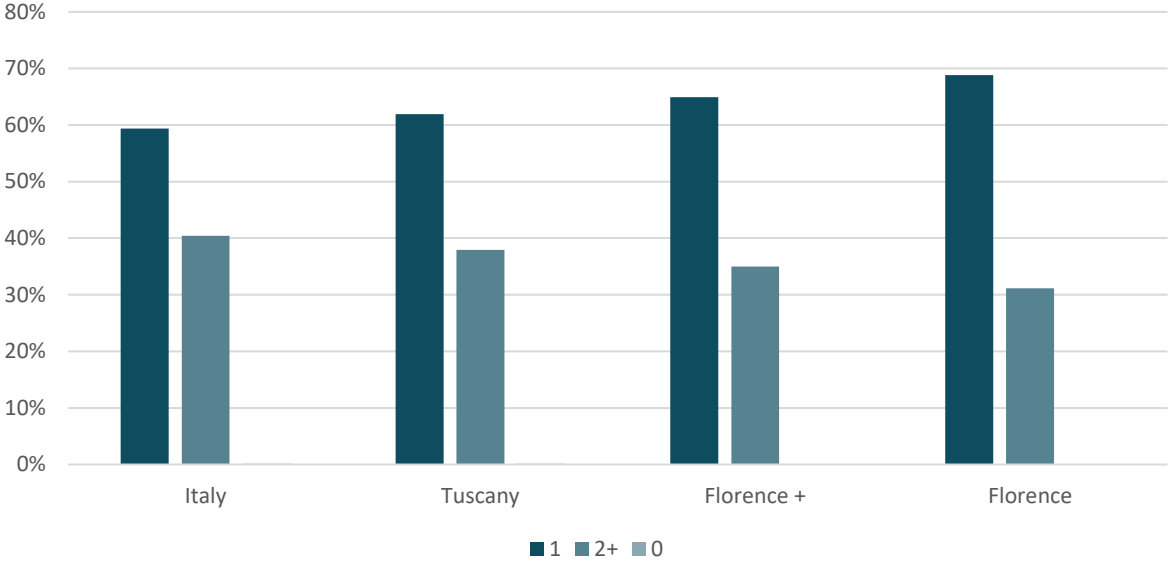


Chart 14 - Percentage distribution of dwellings by availability of toilets (ISTAT, 2011)

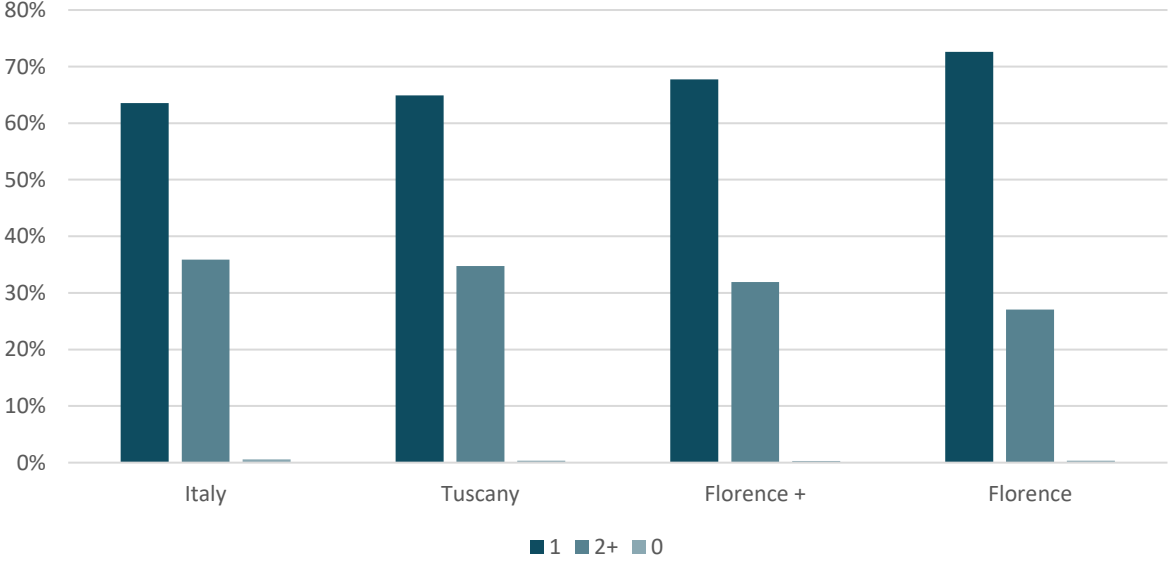


Chart 15 - Percentage distribution of dwellings by availability of shower (ISTAT, 2011)

Chart 16 shows that almost 75% of the building in Florence were built before 1970, and very few of them were built after 2000, different situation than in Italy and Tuscany where the building construction is distributed on each period.

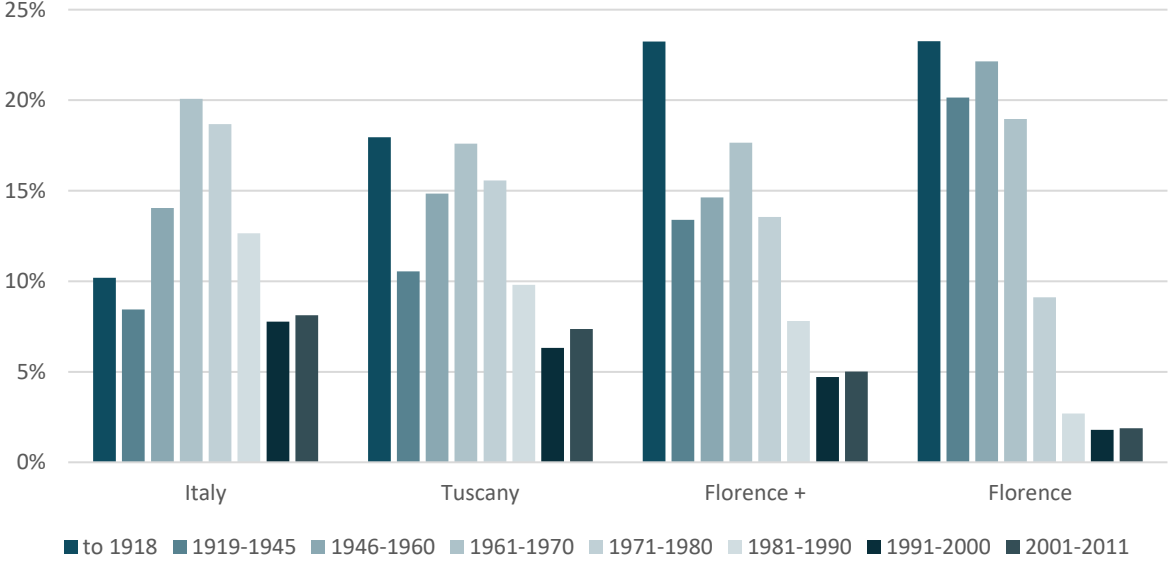


Chart 16 - Percentage distribution of dwellings by period of construction (ISTAT, 2011)

In chart 17 Florence has the most differentiated distribution with a very large number of dwellings located in buildings hosting more than 16 dwellings. Single-dwelling buildings in Florence are rare. Yet, the rest of the territories have a very averaged distribution.

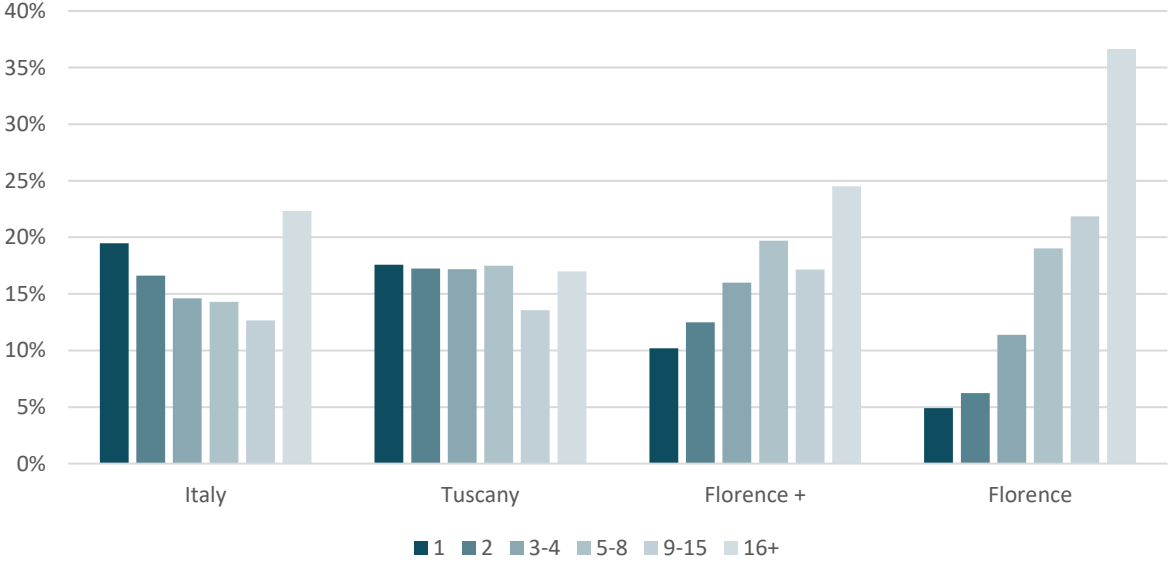


Chart 17 - Percentage distribution of dwellings by number of dwellings in the building (ISTAT, 2011)

Following charts 18 and 19 show the percentage distribution of dwellings by number of dwellings in the building and by period of construction. The most noticeable fact is the rapid trend of 16+ dwellings building since 1960 and the near disappearance of single dwelling buildings in Florence. Italy and Tuscany still have an averaged distribution compared to the Metropolitan City of Florence and Florence (municipality).

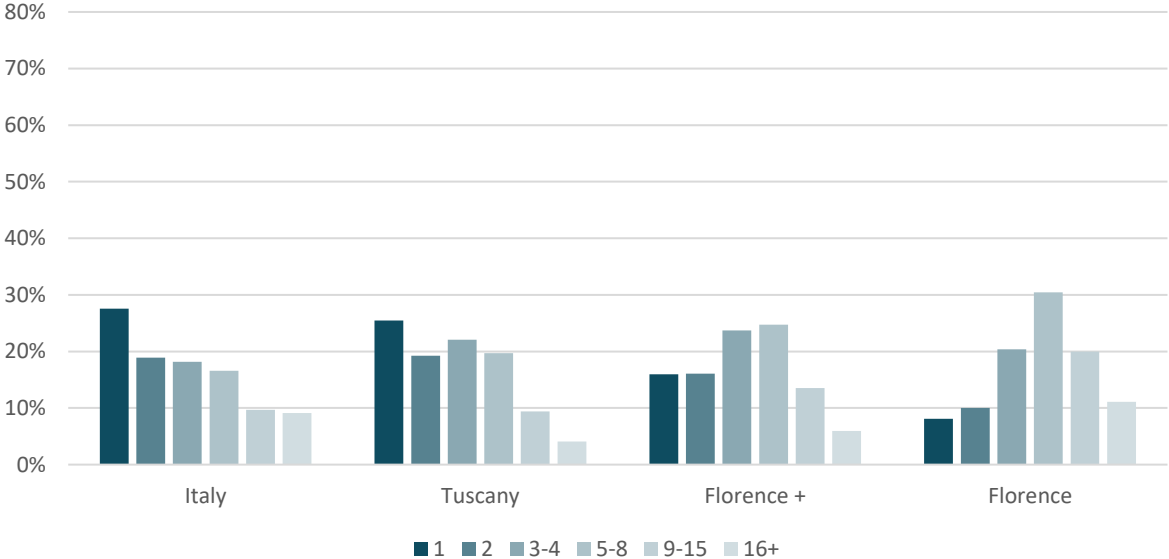


Chart 18 - Percentage distribution of dwellings by number of dwellings in the building built before 1918 (ISTAT, 2011)

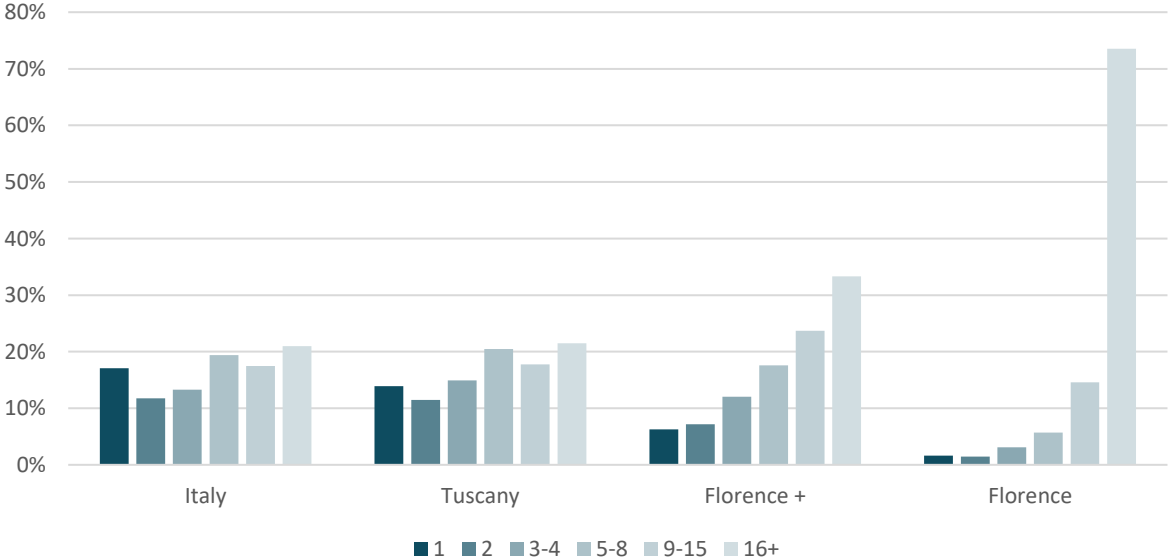


Chart 19 - Percentage distribution of dwellings by number of dwellings in building built between 2001-2011 (ISTAT, 2011)

Chart 20 shows the percentage distribution of buildings by use status: in Florence most of the buildings are used, compared to the situation in Italy where more than 5% of the buildings are not used. Chart 21 deepens the subject and shows the percentage distribution of buildings by type of use and makes clear that Florence hosts less residential buildings than the other three territories and consequently hosts more buildings used differently than residentially. This can be explained by the fact that cities host more uses than just residential one, as they are poles of economics, hospitality and services.

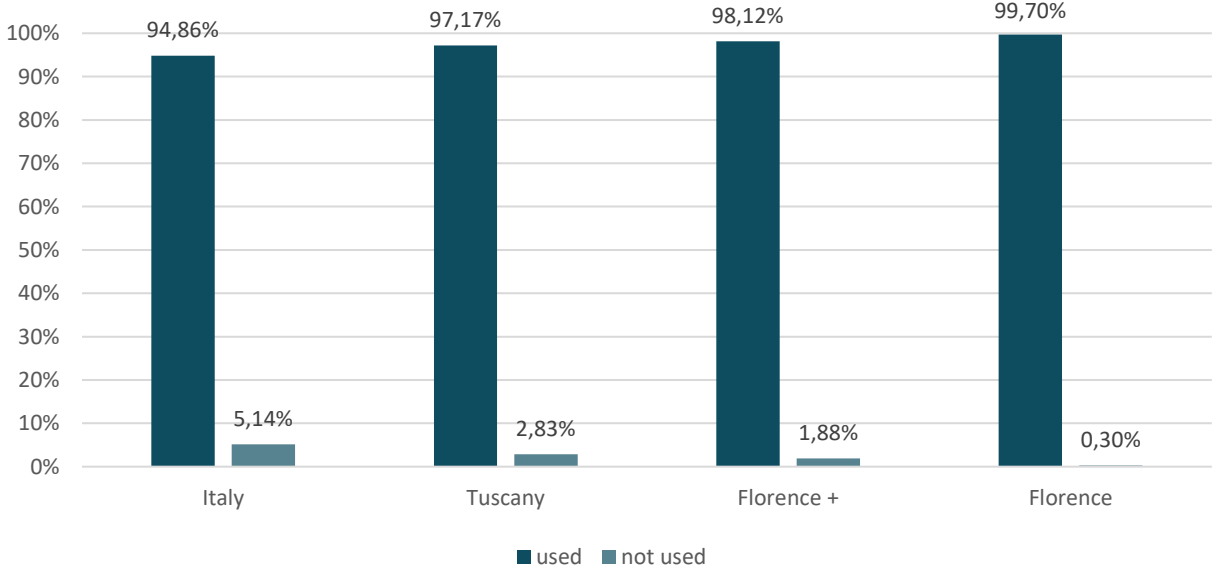


Chart 20 - Percentage distribution of buildings by use status (ISTAT, 2011)

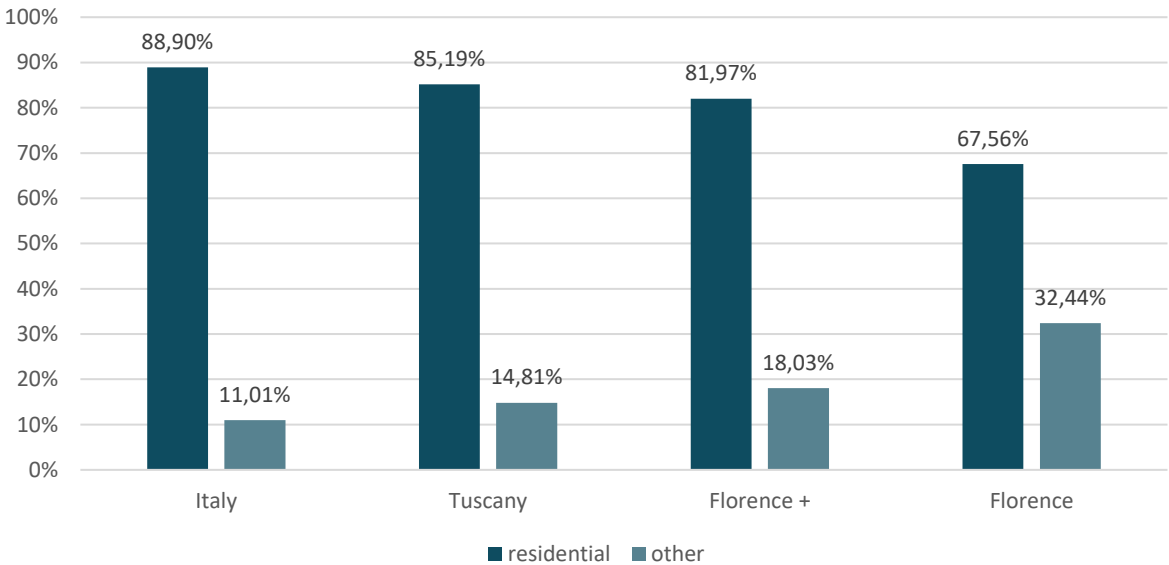


Chart 21 - Percentage distribution of buildings by type of use (ISTAT, 2011)

Chart 22 shows the percentage distribution of residential buildings by percentage class of occupied dwellings: Florence is the territory with more occupied buildings and almost all of them are fully occupied probably because of the high demand for housing in the city.

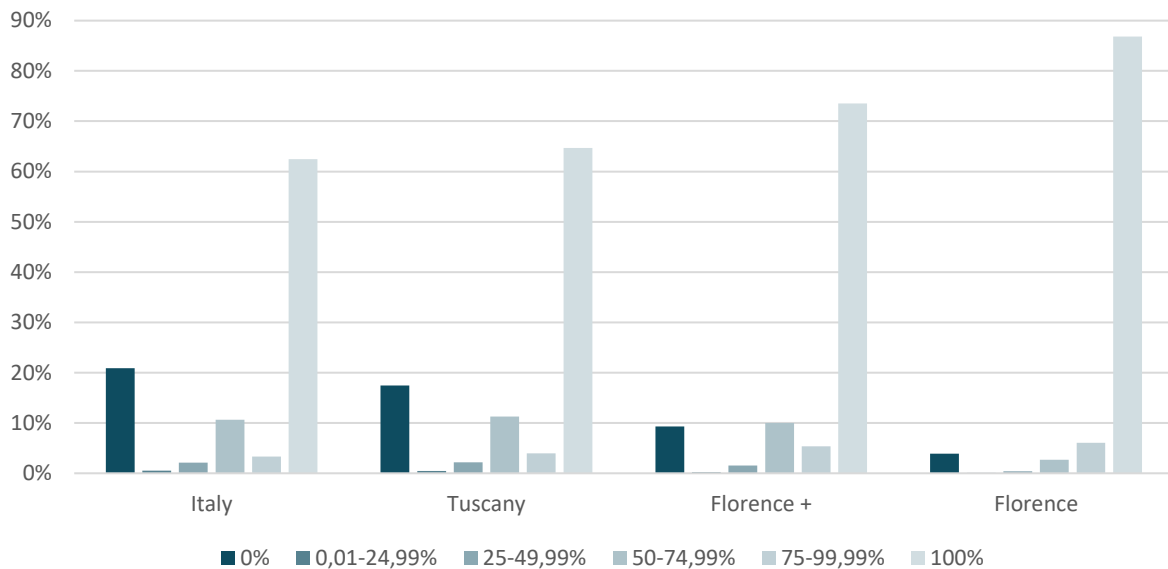


Chart 22 - Percentage distribution of residential buildings by percentage class of occupied dwellings (ISTAT, 2011)

What emerges from this analysis is that the average dwelling in Florence could be generally described by the following characteristics:

- Occupied by at least one resident
- Surface between 60 and 99 m²
- 4 rooms, 1 kitchen, 1 bathroom
- Period of construction before 1960
- Located in fully occupied building

2.1.6 Population Trend

In Florence resident population is increasing very slow compared to the trend in Italy or in the Metropolitan City. This phenomenon can be explained by the double condition of people coming to the city and people leaving it for several reasons. In this case, Florence would be the site of a strong turnover of residents.

With that being said, charts 23 and chart 24 (ISTAT) respectively show the resident population trend and the number of dwellings trend in the four territories considered. By placing them next to each other, it is possible to read how the two trends take different directions. Since 1971 the resident population in Italy has been growing constantly, while the resident population in Florence had a strong decrease from 1981 to 2001. On the contrary, the number of dwellings in all territories has been growing until 1991, when just in Florence it has come to a halt and has never gone up again. Both charts have been defined by basing on 100 the in-different-scale numbers of the four territories: starting in 1971, it is possible to read the percentage increase of the data. Facing a 20% resident population decrease, Florence has seen almost a 20% number of dwellings increase over forty years. Population numbers for 2021 have been taken from the 2021 ISTAT Population Census.

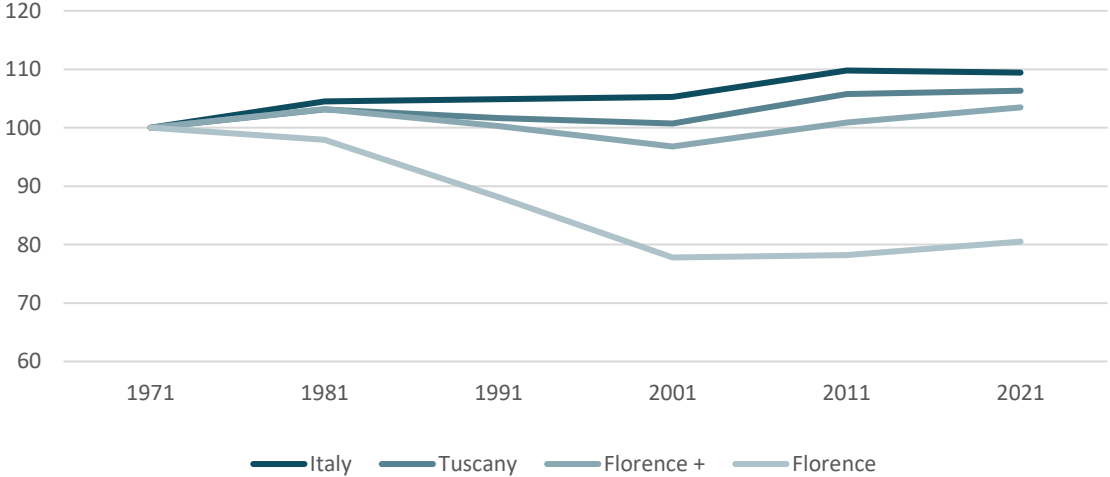


Chart 23 - Percentage variation of resident population over time (ISTAT, 2021)

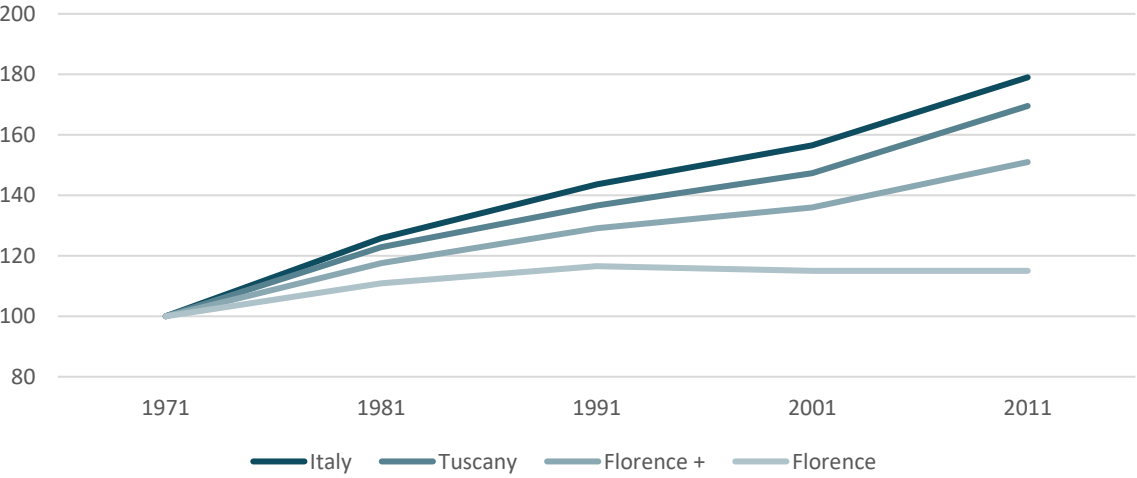


Chart 24 - Percentage variation of number of dwellings over time (ISTAT, 2011)

2.1.7 Territorial Marketing

The expression “territorial marketing” is meant as the set of strategies and activities aimed at defining the actions that will promote the territory with external entities. The stages that shape such actions are territory and socio-economic analysis, market analysis to identify existing destinations and functions, SWOT analysis, definition of intervention guidelines, identification of the potential districts and product areas, definition of multi-year intervention plan of public works, developing of a service that matches demand and supply of locations, promoting the product areas and developing a brand that can be sold to external entities (Morena & Truppi, 2021).

Florence is a city of opportunities and transformation, and this has been understood as the municipality intends to carry out a vision of redevelopment from a city of monuments to a city of sustainability. To promote opportunities for growth and investment, Florence has established the “Invest in Florence” project. Such promotion is a territorial marketing operation that the Municipality of Florence has designed to attract resources and encourage the conversion of abandoned areas and properties by giving maximum visibility to all the opportunities in the area, to be used for new and more functional purposes. Figures 9 and 10 (Città di Firenze, 2021) show the first pages of the portfolio of opportunities elaborated by the Municipality. The project is then structured in summary forms for the presentation of such areas and buildings that are no longer in use or are in the process of being divested, both from public and private property, with a useful surface area greater than 2.000 sqm. For each of these transformation areas, on the basis of the current Urban Planning Regulations, the designation of interest is indicated between residential, retail, office, tourism and industrial (Città di Firenze, 2021).

Following sections explores the territorial marketing operation carried out by the city of Florence to promote its attractiveness towards international real estate investments. All information has been taken from the “Invest in Florence” portfolio of opportunities conducted by the Municipality and available on its website.

INVEST IN FLORENCE



The information regarding the areas of Urban Transformation in the files are derived from the actual City Urban Plan dated 31.10.2021; some files provide, as an example, a few graphic works of project planning also previous to the approval of the Urban Plan.

Figure 9 – Cover of “Invest in Florence” portfolio of opportunities (rearranged from Città di Firenze, 2021)

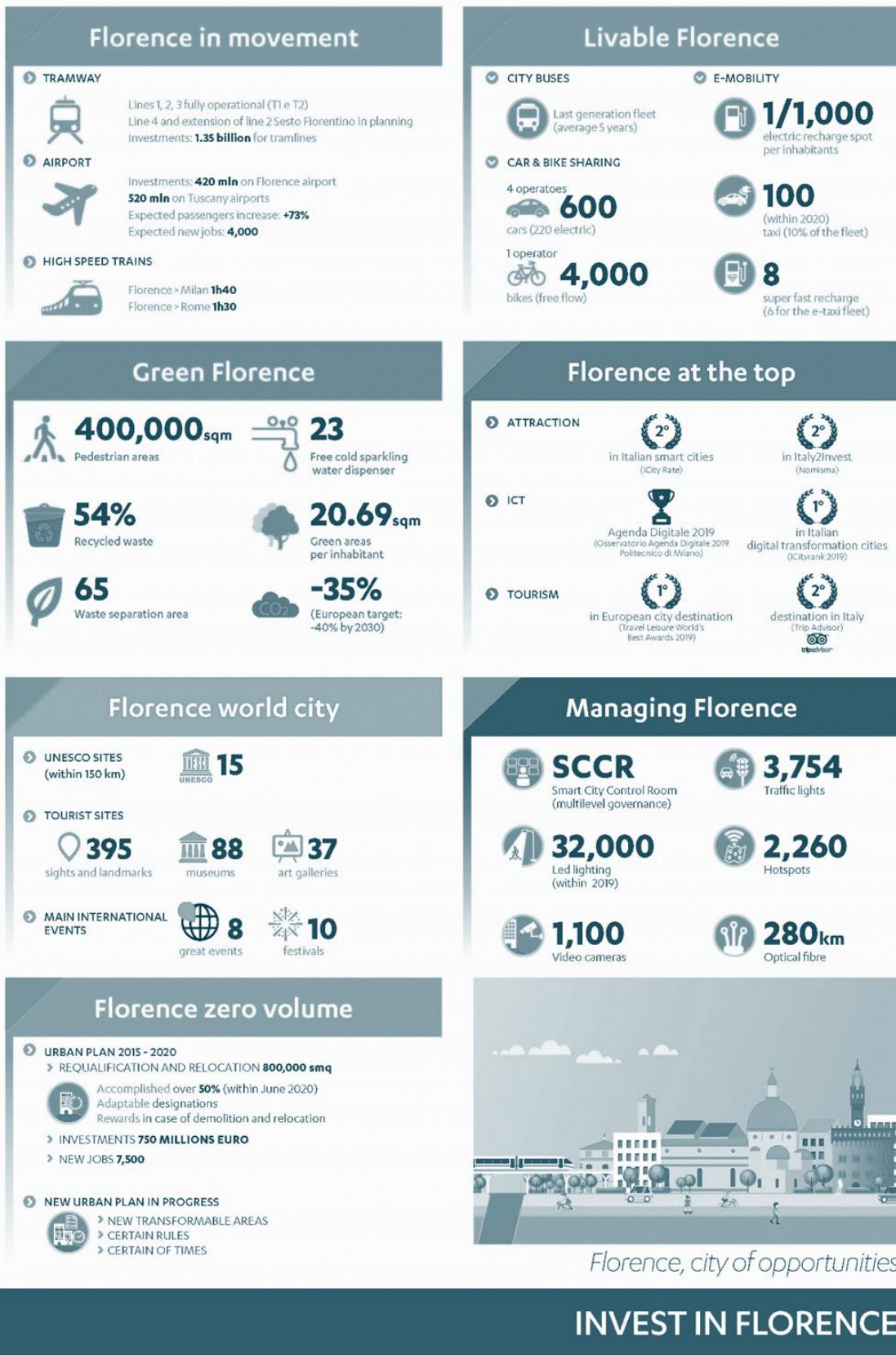
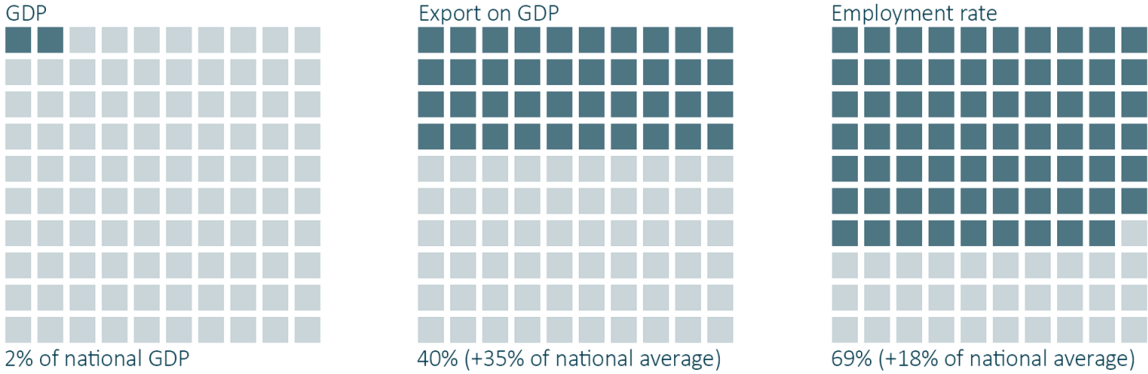
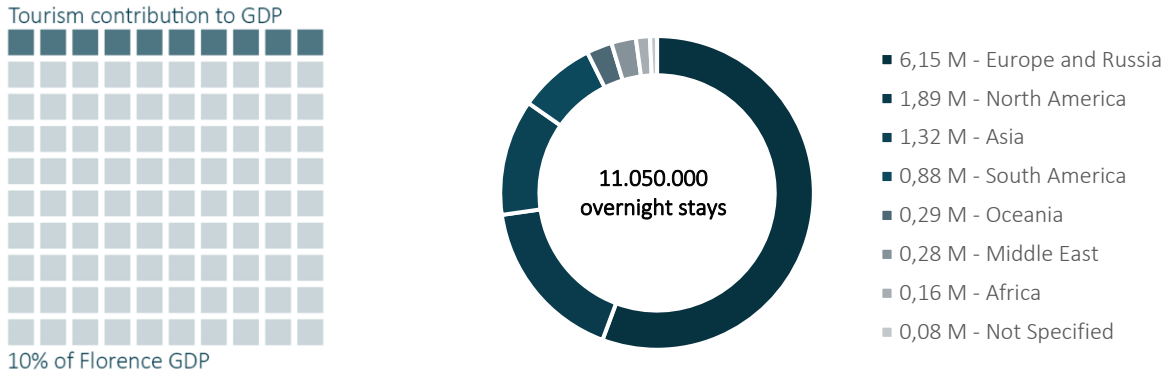


Figure 10 – Florence attractiveness recap in “Invest in Florence” (rearranged from Città di Firenze, 2021)

With regard to economy, the metropolitan city of Florence contributes by 2% to the national Gross Domestic Product and presents a GDP *per capita* of € 31.137, +12% of the national average. Export on GDP is higher than national average too. More than ninety thousands are the active enterprises and employment rate is also better than national average (Città di Firenze, 2021).

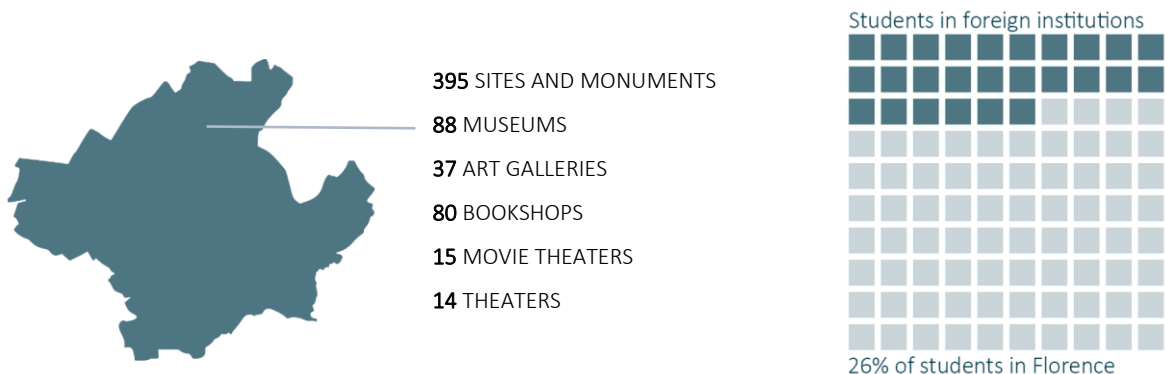


In 2018 tourism contributed the 10,4% to the GDP of the city. The same year, overnight stays have been 11,05 million with people coming from all around the world. Florence and Tuscany are respectively the first favorite city and region for wedding locations in Italy, and in the metropolitan area the average cost of weddings is almost € 60.000. American magazine “Travel+ Leisure” ranks Florence as favorite city destination for American travelers, while website “Trip Advisor” ranks it 2nd as favorite city destination in Italy. The city hosts 362 hotels, 15 hostels, 678 guesthouse, 80 historic homes and 199 nonprofessional guesthouses capable of welcoming a grand total of almost 50.000 beds (Città di Firenze, 2021).



The city center of Florence has been inscribed in the UNESCO world heritage site list since 1982 and had seen an expansion of the core zone towards the hill of San Miniato in 2021. British travel magazine “TimeOut” ranks the Uffizi Gallery as the best museum in the world

2021, while Lab24 from Italian newspaper “Il sole 24 ore” ranks the city in the top 4 of the quality of leisure & cultural offer in Italy 2021 (Città di Firenze, 2021).



The University of Florence (UniFi) hosts 54.786 students over 137 degree courses, 1.171 professors from 21 departments and 493 researchers in 10 schools. 83 foreign institutes and university are present in Florence, where around 16.000 students study every day, as they count for the 26% of total students in the city (Città di Firenze, 2021).

Digital innovation is approaching more and more of the city services. In 2019, 892,659 digital payments have been made with the national system, +378% compared to 2020. 155 are the digital service in town and payment amount was +423% compared to 2020. 2.680 are the public wi-fi hotspot around the city, which is now home to 224 innovative start up (Città di Firenze, 2021).

Infrastructure represents an important development project for the city, that has been developing in with a special focus on green mobility. Many tramway lines projects are still ongoing with other types of mobility has been increased over the past few years as shown in table below (Città di Firenze, 2021).

Tramway	E-Mobility	Soft Mobilty	Sharing	E-Sharing
16.8 km tram lines	200 e-charging stations	104 km bike paths	160 cars	60 cars
37.2 mlm total passengers	8 fast charging station	420.000 km2 pedestrian area (1,14 sqm/inhabitant)	2.000 free flow bikes	900 scooters
14.3 t/yr CO2 emission reduction	10% e-taxi of total fleet	19.000 bike places/racks		1.000 free flow bikes

2.2 Multifamily

The real estate asset class of multifamily involves residential complexes of houses for rent featured by common amenities. Following sections explore history and structure of such model to define the feasibility and success of investments in this asset class in Florence.

From a design point of view, multifamily housing refers to a building that house more than one dwelling unit. Such multiple units can then be placed one on top of the other within the same condo, or they are proposed one next to the other. In addition, all rental housing is not strictly multifamily housing, and multifamily housing is not always for rent (Schmitz, 2000). Yet, with the proper term of “multifamily asset class”, real estate professionals refer to residential houses that include multiple buildings within the same complex, whether they are single houses or aggregates of condos. The asset class also includes co-housing projects, multi-unit housing complexes with large common areas intended for collective use. Multifamily is a great solution for tenants that look for an economic and sustainable lifestyle because they are based on sharing spaces and services: the shared amenities of these properties, in addition to promote social contact and help between residents, favor greater savings than a traditional housing solution, allowing to reduce their environmental impact too (BNP Paribas Real Estate, 2022).

2.2.1 History in the Rental Market

Life as tenants of private houses is no big news in Europe, but what has been changing for the last few years is the way such houses are put on the market. Historically, houses for rent were provided by the government, by single landlords and by privately owned real estate companies. Nowadays more and more private and institutional investors are appearing on the market next to the traditional entities cited above. This is how the new asset class has emerged. The expansion of multifamily asset class has been supported by the increase of private rental sector. In Europe, 31% of households now live in private rented houses, a trend that has increased compared to 26% in the last decade, mainly because of several social and demographic trends and by the lower ability to purchase a home (Pescarmona, 2021). The idea of “built to rent” is nothing new either, as many small owners have done it for years and years, choosing to publish a notice on the net and then hire a property manager or use the most common rent contract in Italy “4+4” (Immobiliare, 2022).



Figure 11 - Casa Crescent in Turin (Chiorino, n.d.)

Figure 11 (Chiorino, n.d.) shows one of the recently renovated apartments of Casa Crescent, a building designed in 1908, which represents one of the best examples of the liberty style in Turin, Italy. Figure 12 (Google Maps, 2022) shows the building. Owned and managed by Reale Immobili, the real estate branch of the insurance company Reale Group, Casa Crescent hosts mixed residential and office spaces all for rent. Reale Immobili promotes all residential units highlighting their historical context, proximity to green areas and public transportation, and multiple housing services (Real Immobili, n.d.).

As for nowadays, the demand for rental housing is mainly driven by urbanization, mobility and affordability, at least for what concerns the European market. The increasing population in cities, together with low birth rates and marriages, have led to a reduction in the size of households and an increase in the number of families, with a consequent larger need for housing. In Italy, over the past decade, cities such as Milan, Rome, Bologna, Florence and Turin have seen a growth in population and number of households, with projections indicating continuous growth until at least another decade. Then, there are over 20,000,000 European citizens residing in a European country different from their own, of which 1,500,000 in Italy:

they represent then a massive group of people with more nomadic lifestyles, less inclined to buy and more interested in flexible solutions. Finally, on the one hand, rent fees have had a constant growth and mostly proportional to incomes. On the other hand, the current regulation of low interest rates, which has contributed to facilitating access to credit, has given a strong boost to the growth of purchase prices, increasing the gap between prices and rents and pushing a slice of the population towards renting (Cottone, 2021).



Figure 12 - Casa Crescent in Turin (Google Maps, 2022)

Figure 12 (Parco Vittoria, n.d.) shows the Flat Tower Parco Vittoria in Milan, a recent built-to-rent apartment complex in the western part of the city that offers several apartment sizes and community amenities. It is with this project that the “Easy Rent” revolution kicked off, through an innovative digital platform for online residential rental where future renters are able to manage the rental entirely online: choice of the dwelling, furnishings and services available (Morning Capital, 2021). Through the platform, in fact, the customer can choose how to furnish and customize their apartment, viewing live the choices made, from interior accessories to outdoor furniture. Morning Capital, manager of the property, through this

software applications by Tecma, will be able instead to organize the phases before the tenant's entry, but also access the maintenance services of the apartment and management of the common spaces of the building (Cavestri, 2021).

In conclusion, exponential growth of the rental sector is expected, as it will be due to two main factors: on the one hand the great unexpressed potential of Italian cities in terms of existing building stock, and on the other hand, the large demand for singles, young couples, students, immigrant workers, and tourists looking for a serviced dwelling for just short periods of time (Bassi & Moscatelli, 2020).



Figure 13 - Flat Tower Parco Vittoria in Milan (Parco Vittoria, n.d.)

2.2.2 Architectural and Social Structure

Multifamily lays on the idea of building smartly to rent easily. Within all the process of a real estate investment that then takes the form of a building, multifamily as well passes by feasibility studies, architectural design, bank transactions, etc. while including the requests of different stakeholders. The start and the end of a multifamily project are respectively represented by investors and tenants, and it is not easy thing to match the needs of both of

them at the same time when coming to design. Following paragraphs explore the importance of a good design in multifamily projects so to match the need of both investors and occupiers.



Figure 14 - House for rent in Copenhagen (Carlsberg City District, n.d)

Visual is ever more important while choosing a house for rent, as most of the time the decision is taken checking the options online and this is why tenants want that their house is aesthetically attractive. On the other hand, investors prefer a durable style that is not influenced by temporary trends, mainly because they are thinking already to the next tenant that the turnover will provide them. Tenants look to very large houses, but investors are focused on small sizes to contain prices and reach a majority of people. Tenants would like singular houses to personalize to the maximum, yet again investors plan to provide standard and modular solutions to welcome different types of households and to combine/divide the dwellings by changing the available surface when necessary. Finally, tenants desire checking in and have every accessory in place and ready to be lived, but investors might not care to put large amount of money on furniture, fixtures and equipment. When designing a multifamily project, an approach capable of interpreting the needs of the site and of the potential residents

identified for that specific development might be able to combine the needs of both tenants and investors. This will make constraints and opportunities presented by the location intertwine with the requirements of the target users, reducing the number of wishes and facilitating their satisfaction (Galbiati, 2021).

Figure 14 (Carlsberg City District, n.d) shows the interior of an apartment for rent in one of the towers built in the Carlsberg City District in Copenhagen, Denmark, that represent a good case study to understand the approach of building places and focus on location, while not compromising requirements of both investors and tenants. Figure 15 (Solarlux, 2022) shows an overview of this large area in the outskirts of the city that has been undergoing a regeneration project that is currently heading to completion. Developers wanted this place to become the new city center of Copenhagen that people would have lived and visited. Focus on mixed functions has been carried out, where the residential parts offer both houses for rent and sale. There is no need to carry out an extra architectural composition, as the main point is to realize a destination, something that will bring value to the investor and to the tenant today and tomorrow (Galbiati, 2021).



Figure 15 – Overview of the Carlsberg City District (Solarlux, 2022)

Finally, with this regard, the starting point of a multifamily investment is targeting the correct portion of population to reach, by applying a distinction within the reference market with the use of qualitative and quantitative factors. Those who rent might be divided in three categories. In fact, there are those who rent by choice (good status, medium to high income, under 35 singles or with small children), those who do it out of necessity (medium-low status with medium-high education, focus on the family), those who rent because they are their first experience away from home (mostly students or young workers). In addition to these traditional renters, there is also a high standing niche that is able convert their current housing style into renting serviced apartments for their main residence and for their business trips, as well as the majority of young adults that they would consider living in a lease despite owning a home (Cottone, 2021).



Figure 16 - Combo Hostel in Venice (Combo, n.d.)

Figure 16 (Combo, n.d) shows the arcade of the Ex Convento dei Crociferi in Venice, that has been renovated in 2019 to host Combo, a hostel that brings together locals, students and travelers. This is not a multifamily building, but its architectural project demonstrates the

opportunities hidden behind the walls of old facilities in historic centers like Venice. The shape of the building, made of monks' cells aligned around a central cloister, was a great base to create a student house. The clear structure of the building allowed the designers to create great variety of rooms. The main cloister became a collective space where Venetians can also enter for art exhibitions and other activities organized to boost the sense of community. Combo Hostel is conceived in order to welcome both for students and tourists: this is a smart way to mitigate the low occupancy of the student house in Summer (Combo, n.d.).

2.2.3 Significance of Shared Amenities

When coming to what differentiate a multifamily asset from other residential assets, the keyword to consider is "Amenity", those personal services that play a crucial role in today's lifestyles. Also due to remote working, residents pass more time than before at their place, so that the service offer has to be provided to satisfy as many as possible of all tenants needs (Cottone, 2021).



Figure 17 - Rooftop Community Pool in Florence (The Student Hotel, n.d.)

In particular, it is possible to define amenities as the nonessential features or services provided to the residents of a building. The most common amenities for multifamily buildings are gyms, pools, parking garages, laundry rooms, playgrounds, and dog areas. Amenities are known to be the key factor for people deciding to sign or renew a lease in the building, and they also represent the aspect that characterize one building from another. Seen the variety of residents that a multifamily building can host, it is important to know that not all amenities are proposed equal and parts of them are more valuable to some renters than to others. When planning the type of amenities to include in a multifamily building, behaviors, preferences, and demographics of the renters in the target market must be understood. In fact, amenities that better the resident experience are crucial to finding and retaining renters. Finally, amenities use may be for residents may be included in rent, or the building may charge them an amenity fee. However, properties that don't charge an amenity fee may be able to charge slightly higher rents (Tamn, 2022).

Figure 17 (The Student Hotel, n.d.) shows the rooftop community pool of The Student Hotel in Florence. Despite not being a multifamily building, the project highlights the importance of shared amenities within a targeted community of people. The writing “the beach is boring” marks the panorama visible there, representing the strength of the new student hotel, part of the Dutch TSH chain, located in a XIX century building. This place is not only meant to accommodate students, as it also hosts workers and employees who are in the city for just a short stay. As for multifamily buildings, there are common spaces available to the renters, such as co-working areas and the lounge area where the pool offers a breathtaking view over the city. Here the design is minimal, so to not intrude with the skyline given by the centuries of architecture of Florence (Mascolo, 2019).

Ever more people are looking for harmony between their professional and their personal life, especially in cities. In everyday conversation it is common to hear them talking about work-life balance, work-life integration and work-life blend. With regard to amenities of a residential property, while a pool stays an attractive features that everyone would like in their backyard, a wider offer of wellness services is desired by the most (Morton, 2022).

Figure 18 (The Collective, 2022) shows the outdoor recreational space of Old Oak, a 16.000 sqm property co-living facility in London. The complex is made of 550 micro-unit with large amenity spaces on the ground level and additional amenity spaces on each residential

level. Figure 19 (The Collective, 2022) shows some of the housing solutions offered. Public amenity spaces include a coworking space, a gym, laundry space, communal kitchen (located on all levels). Old Oak has a team of community managers who are responsible for arranging at least three activities per week, geared to different tastes (The Collective, 2022).



Figure 18 - The Collective Old Oak in London (The Collective, 2022)

Since multifamily housing is opening its way towards people of all ages, innovative and stand-out amenities are emerging to differentiate and compose the success of individual assets. Evolving technology, resident interests and connected communities are promoting must have amenities that add value to the single multifamily asset. Amenities must be studied consciously to satisfy both tenants and investors. As new generation entering the market and increased telecommuting for new entrepreneurship, amenities have to be flexible to adapt to changing needs and interests (CBRE & Streetsense, 2019). In addition, because of the high number of tenants in a multifamily complex, services must be digitalized, having technology helping structuring processes and building communities (Cottone, 2021). The following list explores new trends in multifamily amenities by category of service (CBRE & Streetsense, 2019).

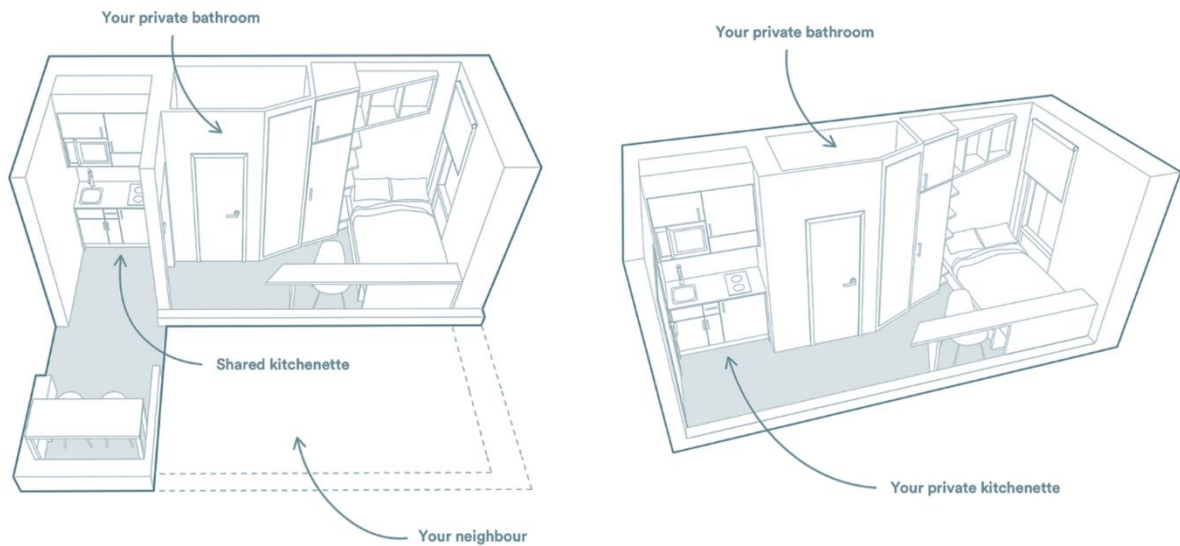


Figure 19 – Housing solutions: the Twodio and the Cosy Studio at The Collective Old Oak (The Collective, 2022)

1. **Community.** Social connections are rising in renters' priorities for amenities, as renters seem looking for where everyone knows them and that is why properties are offering concierge services that manage residents' relations and their foster connections. The constant present of someone in the buildings offer a sense of security and privacy, within the shared amenities of living in multifamily. This service overseeing renter's daily life would offer other basic amenities as shared laundry, package room and personal lockers.
2. **Outdoor.** With remote working impacting many workers' life, people are spending much more time home with a special need to enjoy fresh air and relax between duty. Patios, gardens/rooftops and shared kitchens are a must have for multifamily buildings that focus on promoting internal community growing. Outdoor activities can be performed all year long if the building offer the right design solution.
3. **Creativity.** Internal common areas are evolving to welcome ever more creative activities for residents, from live music to art workshops and makers experiences. The property would organize such spaces and events to have hosts over to perform plays, share watercolor and calligraphy technics, and talk about knitting, welding or gardening. In

addition, increasing popularity of e-sports and nostalgic resurgence of board games are pushing properties to invest in these activities and offer dedicated space for people to gather and be entertained by different gaming options.

4. **Co-Working.** As the workplace is still evolving, dedicated workspaces at home are evolving too. Communal workspaces offer residents to work remotely for the day, putting at their disposal outfitted areas with formal spaces, silent and meeting rooms with the nowadays indispensable conference technology. A desk-reservation system would be a plus, as well as the presence of basic paper material and a printer.
5. **Fitness.** Multifamily fitness centers are no more just about a room with some gym equipment, but they are studied to promote latest trends, having professionals from gyms nearby come and have classes in dedicated areas.
6. **Technology.** Everything digital is a must have in today's communities. Residents look for high-speed secure internet for streaming and video calls. Technology will be necessary for everyday life activities in the property, such as paying rent, booking rooms, ordering services, and requesting maintenance, by always increasing ease of use for residents.
7. **Greenery.** Buildings have incorporated trees and plants in their common areas to naturally purify the air and give the space a vibrant vibe. In order to satisfy this greenery, natural light, that is a must have for many residents, is already demanded.
8. **Mobility.** As people renting in city are not so likely to have a car, car-sharing services are maintaining their popularity. Multifamily services are then incorporating convenient transportation within their services, as well as bike-dedicated areas for residents to store, repair them and have some available in case of friends and family visiting.

What comes after community amenities are in-door amenities that include personal laundry, dishwasher, air conditioning system, personal outdoor space, alarm system, smart lock and smart thermostat. After all, amenities are promoted to let renters decide a building rather than another and make them happy to stay. Such amenities are thought to offer a more comfortable and attractive living space. Yet, the more in-unit amenities are included, the higher the value of the unit is, and the more the property can charge for it (Tamn, 2022).

3. Outcome

This work ends with the identification of a multifamily model to place in Florence and the design of a multifamily building as a practical example of such model. The model, supported by a critical summary of reasons encouraging residential investments in Florence, is illustrated through a list of guidelines deduced by the study conducted previously in this research. Once identified several unused buildings allowing residential use and chosen the one matching the most the characteristics of multifamily, its renovation project is carried out to demonstrate the feasibility of the development of multifamily in Florence.

3.1 Model

The purpose of the following section is the establishment of a reference model for the development of multifamily in Florence. The reasonings reported hereinafter take into consideration all topics discussed previously in this research.

3.1.1 Why Investing in Multifamily in Florence

Florence may not be the first city that comes to mind when thinking of real estate investments in Italy. Milan has been taking the scene for the past twenty years and it is becoming ever more competitive on the European real estate market. Milan is evolving showing up new skyscrapers and revolutionary urban projects that have been shaping a new image of the city: the contemporary one. The city might have become a playground for real estate projects that are very likely to success, and residential ones have their part in this challenging game.

Yet, Italy is not Milan. Italy is a thousands of cities scattered around the peninsula, some of them larger than the others, but all connected together by a massive presence of historic contexts. Florence is within this last part of Italy made of old buildings and conservative images of its skyline, and the city seems being reluctant towards big scale project that might change it. Here real estate is mostly about hospitality: hotels are developing lately, also thanks to the large recovery after the Pandemic. Yet, despite what might look like from outside, Florence is undertaking several projects that are not changing its profile but rather its attractiveness. In fact, the city is exploring urban scale projects that will facilitate connection between its main areas and promoting, alongside these mentioned ones, private real estate projects that will serve the city of tomorrow.

Multifamily could take part to this change. The asset class is establishing in Milan under the shape of brand new towers on the borders of the city, very well linked to downtown thanks to the diffuse presence of public transportation, which really has an impact when making housing decisions in urban centers. In Milan investors focus on acquiring suburban areas to develop multifamily from the ground. On the contrary, the city center of Florence is plenty of properties (unused or not efficient under current use) that could host such residential asset. The municipality itself is listing some of this properties in a portfolio of opportunities that

investor can directly consult to look for the destination use they would prefer to invest on. Looking through the properties, some of them are located within the old walls of the city and are able to host the residential function.

Multifamily is a relevant option for investors in Florence. Following list explores the main reasons to count on when choosing Florence for an investment in residential development.

1. **Missing housing.** Florence is experiencing a slight urban population increasement but very few housing projects are being developed in proportion. Not only its inhabitants, but also people coming from all around the world for a short period of time are in search of an accommodation. The investment will increase the housing offer.
2. **Existing proximity.** Investing in Florence means investing in a city that is 15-Min already. Inside the old walls, everywhere is reachable within a 15 minutes' walk or ride. The investment will benefit of a city that does not need to undergo urban changes as larger metropolis will do in the future.
3. **Historic center.** There is no need to expand suburbs when historic centers are emptying out of residents, leaving space for tourists. The management plan of the historic center of Florence promotes regeneration projects to implement residence and bring people back to the city. The investment will be supported by the municipality.

3.1.2 Guidelines for Multifamily Projects in Florence

The following guidelines have been identified to shape the best multifamily model to place in Florence. General indications are taken from reference projects around the world, then adapted to the context of the city, especially counting the research carried out so far.

1. **Location.** Multifamily should be established in the most connected areas of a city, close to public transportation and neighborhood services reachable within a short walk or ride. Accessibility to national and international infrastructure is important too, as occupier frequently travel in/out the city. As people may come from different parts of the world, multifamily has the opportunity to represent the idea of the city under a built environment perspective: the choice of the building will then be oriented towards some historical location, that still allow for a modern architectural operation on the inside, offering an authentical context outside the door.

2. **Target.** Young adults are the main target for a multifamily investment in Florence. The city is missing small housing solutions for them, so multifamily should provide a wider offer of small size apartments for them, as they usually live by themselves or with a partner/flatmate. Amenities should include large common areas where occupier can develop a sense of community and engagement between each other.
3. **Program.** As multifamily provides a wise distribution of spaces between amenities and dwellings, in Florence it should offer then a wide range of studios and two-bedrooms apartments to accommodate the average space need of the target occupier. Some three-bedroom apartments are suggested as well, as some of them may already have children or in case whole families look to move in. Larger apartment can be arranged by putting together two or more smaller units. In a dynamic mindset, flexibility in housing offer of multifamily should be the norm. Amenities, located towards a common area/passage, should include reception room, bike storage, co-working area, creative rooms, fitness area, outdoor space. Terraces and balconies in city centers are always a plus, but it is a garden that really attracts both investors and occupiers.
4. **Design.** An architectural project will follow the real estate investment. Attention should be placed on keeping the image of the city, not to make multifamily look like everywhere in the world. Authenticity of the place must be protected, even if it will be necessary to carry out intrusive works that will give a new shape to some of the existing elements. Multifamily should take possess of the building and exploit its opportunities, and this must be promoted to save from disuse and abandon existing properties that investors might be afraid to modify. Even if inside a historical building, it should still be look like entering a contemporary one and innovative architectural design should play its role here.
5. **Services.** Smart living should be taken for granted when offering housing solutions to young adults that are surrounded by technology every time. Operations should all be carried out on apps, but the receptionist will always be there in case of help, so not to erase any social contact within the housing supplier.
6. **Numbers.** All investments wait for their returns, and multifamily lays on the stability of housing demand which is typically good in terms of revenues. Rent prices should be competitive on the market, not so far from private renting, but higher to justify

amenities and services. Construction and management high costs will give their return in a short time, paying back the investment made.

7. **Notoriety.** Communication tools are fundamental to share the project and attract future occupiers. A website should be realized, both for advertising and for the management of occupiers' daily lives. People should talk about the project in a good way, making it attractive and trendy for young adults.

3.1.3 Opportunities for the Development of Multifamily

Here below are listed some of the properties that the Municipality of Florence is promoting through the territorial marketing campaign "Invest in Florence". Such properties are all located within the borders of the city, they come from both private and public property, and have a minimum surface of 2.000 sqm that can be used for residential function. They all represent an opportunity to develop multifamily in Florence, as they allow for residential end use. Following figure 20 shows the location of such property in the area of the Municipality.

Nr.	Address	Site Area	Usable Area	Construction Year	Type of Intervention
1	Via dei Massoni, 10	5.502 sqm	2.200 sqm	1550	Renovation
2	Via Incontri	36.714 sqm	7.200 sqm	1400	Renovation
3	Via Pieraccini, 30	7.592 sqm	2.484 sqm	1400/1930	Renovation or Demotion/Reconstruction
4	Lungarno Colombo, 54	636 sqm	3.200 sqm	1970	Renovation
5	Via di Monte Oliveto, 76	4.281 sqm	5.300 sqm	1600	Renovation
6	Via San Felice a Ema	5.814 sqm	3.200 sqm	1700	Renovation
7	Piazza di Bellosguardo, 11	13.982 sqm	2.900 sqm	1300	Restoration or Demolition/Reconstruction
8	Via delle Muricce	13.386 sqm	10.000 sqm	1870	Demolition/Reconstruction
9	Via delle Tre Pietre	5.255 sqm	4.700 sqm	1970	Renovation
10	Via Guelfa, 79	1.265 sqm	2.500 sqm	1500/1950	Renovation

Chart 25 - List of residential opportunities in Florence (Città di Firenze, 2021)

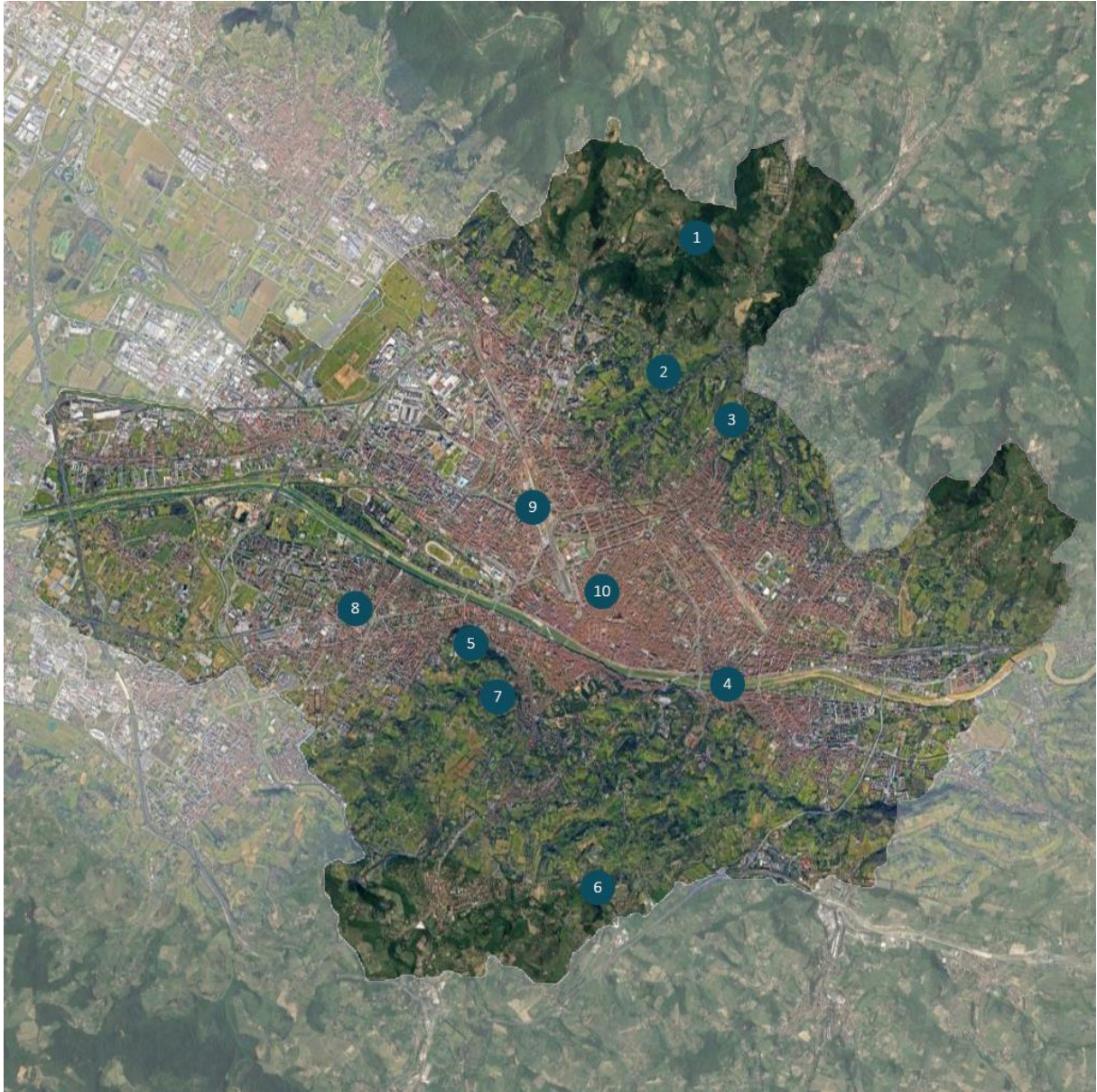


Figure 20 - Location of residential opportunities in Florence (Città di Firenze, 2021)

3.2 Project

From the study on the development of a multifamily in Italy and the following concept design of a multifamily reference model for the historic center of Florence, this work has come to the conclusion that the city has potential for real estate residential investments. From this statement it is intended to carry out a renovation project of an abandoned property in the historic center of Florence to practically prove the positive outcome of the feasibility study.

3.2.1 Site Selection

The selected address for the development of a multifamily project is Via Guelfa 79, Florence. The property offers 2.500 sqm of existing usable surface with residential end use being allowed. Access is a few minutes' walk from the train station of Santa Maria Novella and next to the Avenues of the Ring Road. On its card from the "Invest in Florence" portfolio of opportunities, the property is described as follows:

"The building, located in Via Guelfa, consisting of four buildings arranged as a quadrangle around a central exclusive garden, has been home to a structure of hospitalization for self-reliant older women. The original nucleus consists of a sixteenth century arcade, now walled up, present in the east wing, and the chapel, part of which probably is coeval with the arcade; the elevation and the construction of the other wings, as well as the installation of the central garden, date back to the Fifties and Sixties. Today the complex is no longer adequate to accommodate the reception business, it is therefore expected to be able to insert different uses, even as an alternative to one another: residence, offices, tourist accommodation activities in accordance with the characteristics of the original historical nucleus." – Città di Firenze

The City of Florence urges for a type of intervention on the property located in Via Guelfa 79 that consists in the restoration and conservative rehabilitation of the building within the limits of the area of belonging. Highlighted is the proximity to the train station and to the historical center, architectural features of merit, presence of a central courtyard with garden and direct building intervention with agreement. At the same time, some restrictions should be followed: finding of appurtenant parking spaces, preliminary verification assessing the compatibility of the new features with the architectural structure, building identified as "Cultural Asset" (Città di Firenze, 2021).

The project is subject to the following specific requirements / compensations: finding parking spaces to the extent established by Article 22, compensation for the impact generated by the change in the intended use in accordance with the provisions of Article 16, preliminary verification of possible works / elements of the ecological network to be carried out as an alternative to the payment of compensation, alternative settlement of the intended uses set out after verifying the compatibility between the permitted use destinations and the morphology of the building identified as an emergency of historical and architectural value (Città di Firenze, 2021).

End used allowed are residential, office and tourism. Yet, a note on the pickup from the sizing of the structural plan is also included as follows: this transformation intervention was included in the “2012 Sale and Valuation Plan”. In order to ensure maximum enhancement, it is possible to make an alternative choice between the three intended uses listed. Therefore, a theoretical sampling is made from the sizing of the Structural Plan of the quota referred to the three permitted destinations (Città di Firenze, 2021).

Among all properties available within the portfolio of opportunities of the City of Florence, the building located in Via Guelfa 79 is the best option to develop the multifamily in. The property is compliant with all the guidelines identified in the previous chapter because, with regard to guideline no. 1 (“Location”) the building is set within the historical wall of the city center of Florence, close to the main road, railway and tramway system that link the building to elsewhere in Italy and abroad (the airport is 20 minutes away by tram). The neighborhood is vibrant, well serviced by shops and nightlife. Cultural and business districts are within a 15 minute walk, as well as for natural areas (Cascine Park and Arno River). The building is inserted in the historical built environment of the city, and perfectly represent the common idea of Florence inside and outside its door: the arcade from the XVI century has been walled up but it is still visible. Finally, the property disposes of a green courtyard: outdoor space is nowadays one of the most wanted housing features. The municipality allows for an architectural renovation of the property, exploiting its historical characteristics by designing modern layout and volumetric solutions that promote its next use.

Following figures introduce the building in Via Guelfa 79, highlighting its location within the historic center of the city and its connection to the main transportation systems.



Figure 21 - Entrance to Via Guelfa 79 (personal shot, 2022)



Figure 22 – Courtyard of Via Guelfa 79 (Città di Firenze, 2021)



Figure 23 - Highway system around Florence (Google Earth, 2022)

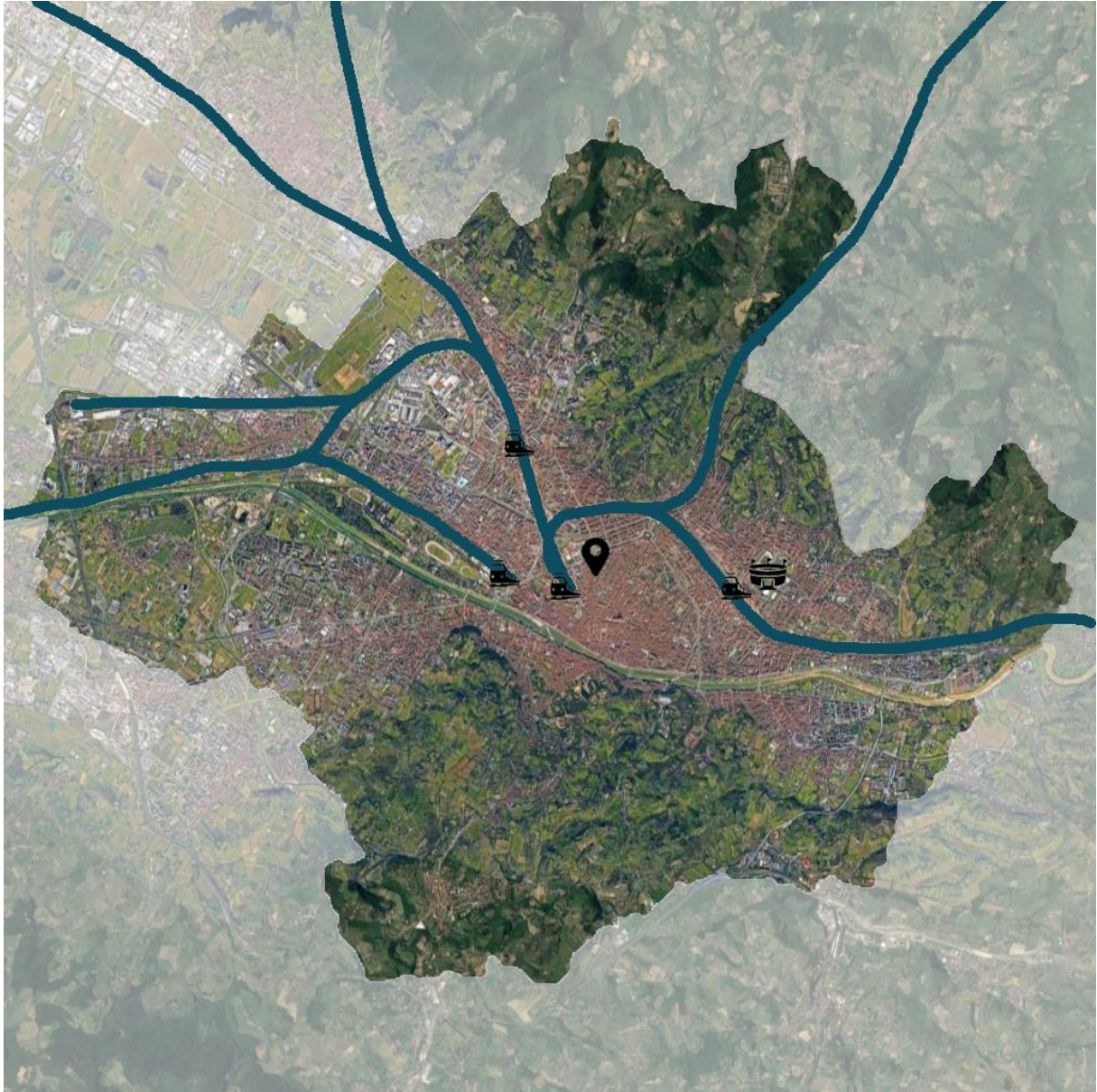


Figure 24 - Railway system of Florence (Google Earth, 2022)

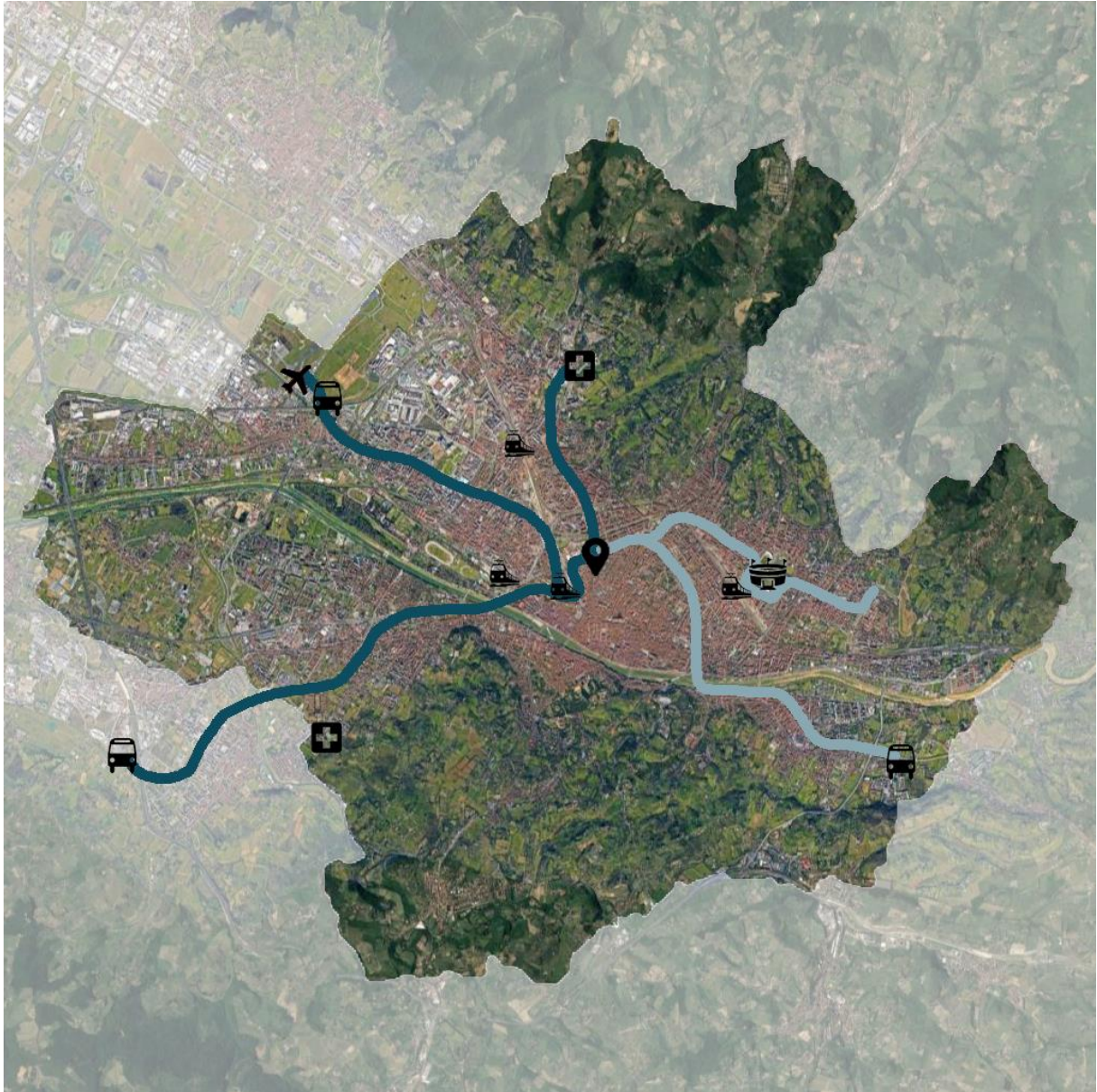


Figure 25 - Tramway system of Florence (Google Earth, 2022)

Future development of the line represented in light blue.



Figure 26 - Walking times from Guelfa 79 (Google Maps, 2022)



Figure 27 - Aerial view of Guelfa 79 (Google Maps, 2022)



Figure 28 - Aerial view of Guelfa 79 (Google Maps, 2022)

3.2.2 Design Strategies

The strategies highlighted in this section follow the multifamily guidelines previously identified. In particular, the application of target, program, design and services are explored to shape the basis for understanding the scope of the project.

As young adults are the main target for multifamily investments in Florence, Guelfa 79 will provide a wider offer of small size apartments, as they usually live by themselves or with a partner/flatmate: studios and two-bedrooms apartments will be the main housing solutions in Guelfa 79. Some three-bedroom apartments will be present in case of families or friends' groups move in, but larger apartment can be arranged anyway by putting together two or more smaller units. A variety of amenities that include large common areas where they can develop a sense of community will also be featured within the building's walls: located towards a common area/passage, they will include a reception area, a bike storage, a co-working area, some creative rooms, a fitness area, a laundry room and a guest bedroom. Outdoor space will be assured by the central green courtyard, by the large loggia and by a nearby new terrace. Together with the renovation of the interiors to accommodate the new residential function, Guelfa 79 will be subject to a volumetric intervention to free the old XVI century arcade and build a new porch to ensure protected circulation and outdoor space. Yet, the project will not affect the historical image and structure of the building: the idea of Florence will still be present. Finally, built in services are supported by technological systems that manage all operations of everyday life like bookings, payments and cleanings: smart living will be the norm at Guelfa 79, as such operations are carried out on apps. However, a receptionist will always be present in case of need.

With regard to the requirements and compensations instructed by the urbanistic plan of the city of Florence, and in particular, with regard to finding parking spaces, such requirement will not be satisfied as slow mobility is largely promoted and public transportation is close and well serves the building. In addition, target users for this project are young adults that most of the time do not own a car.

The following figure sums up all four main project strategies at Via Guelfa 79, Florence.

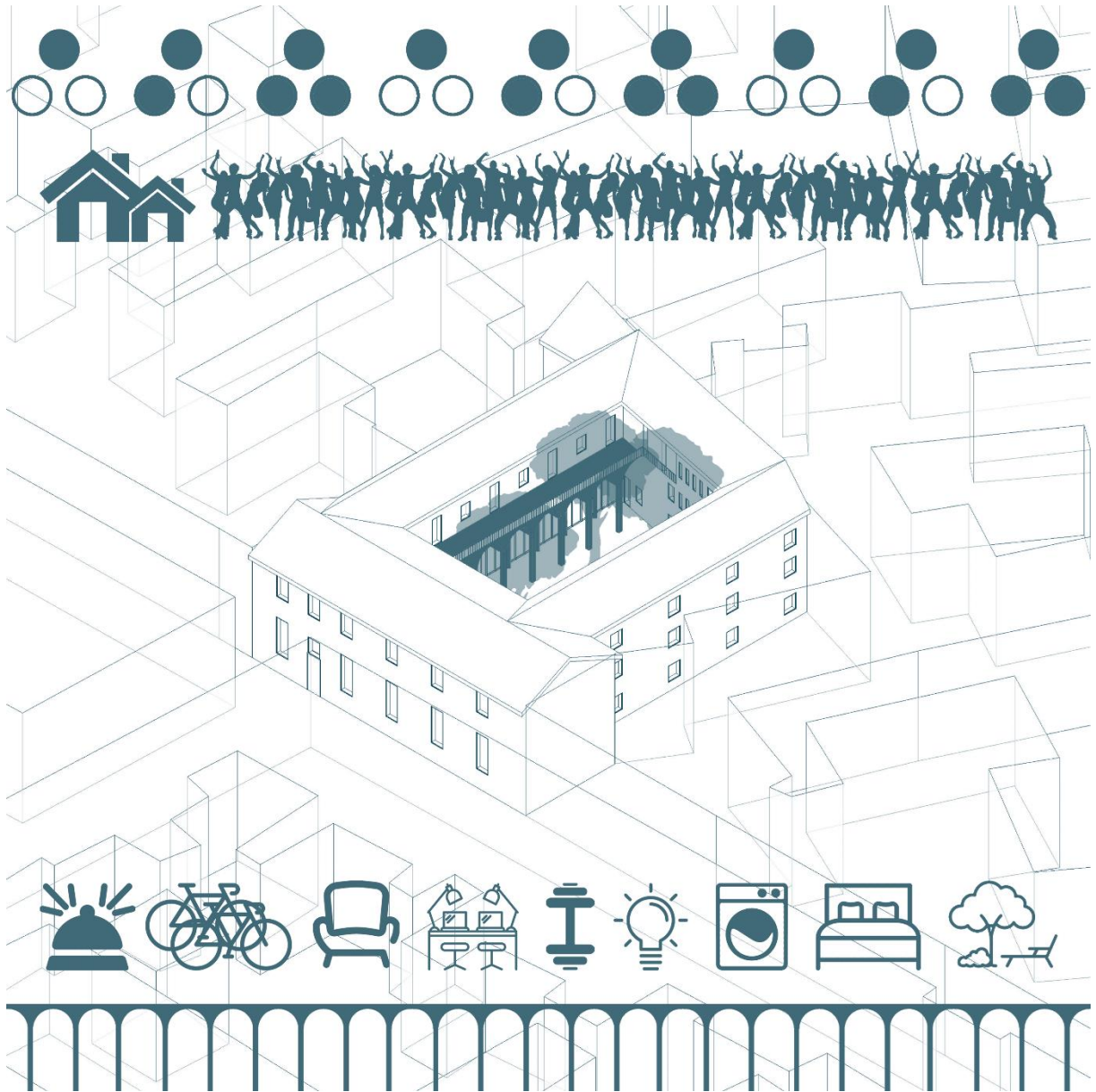


Figure 29 - Strategy Concept

3.2.3 Drawings and Views

This section collects the design drawings of the Guelfa 79. Following the strategies previously mentioned the project enhances the opportunities of the property and takes advantages of its large surface to host a variety of amenities and more than twenty apartments. The identified multifamily model is finally applied.

The as is plans are the drawings that have been provided by the Municipality of Florence when contacted for more information about the property of Via Guelfa 79. As anticipated in the description card of the portfolio of opportunities, the building is composed by four wings of three floors each distributed around a central courtyard. The larger and older wing is the north one, facing Via Guelfa. Here, some of the spaces at ground floor have been excluded from the project as they are not part of the property: such area is entirely occupied by a built-in chapel. The old use of the building, hospitalization center, is appreciable in the as is layout of each floor where a continuous corridor distributes all rooms mostly towards the inner green court. The south wing is articulated differently as common services were concentrated here. At ground floor, from the long entrance hall it is possible to reach the two staircases (featured with built-in elevator) that lead to the upper floors or walk around the large rooms that open on the courtyard, that also serves as circulation space. Immediately outside such areas of the complex, a canopy attached to the north wing offers covered outdoor space. The ground floor also hosts the kitchen area that opens to small courts where technical rooms are located. A loggia overlooks the courtyard in the southern wing at the second floor. The building offers almost 70 rooms with an average dimensions of around 15 sqm.

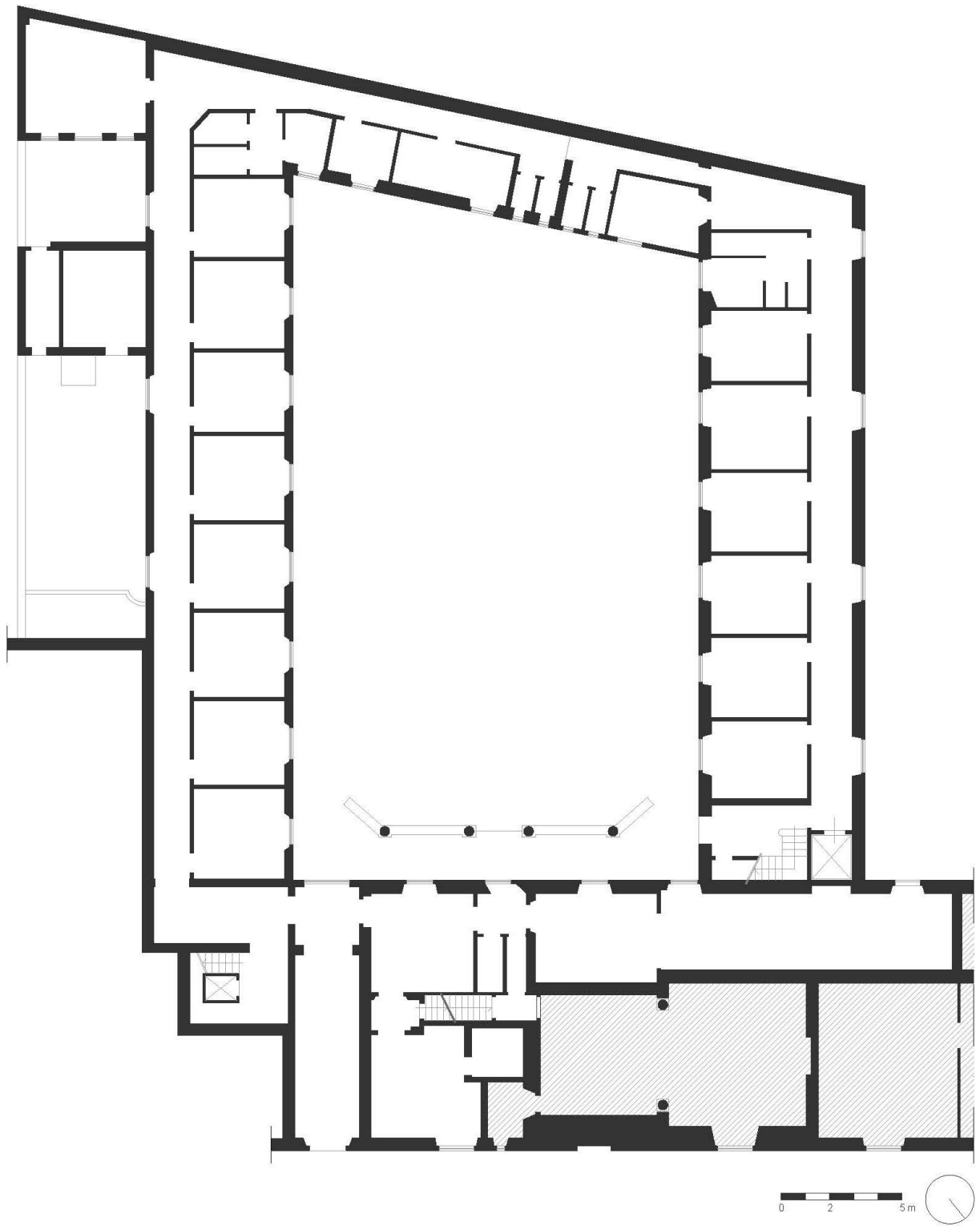
The operational drawings and sections show the demolition and construction activities that the building is subject to. Demolition activities are represented in yellow while construction activities are represented in red. The east wing of the complex is where most of the changes take place: here, the slab of the first floor and the wall up from the sixties are totally demolished to free the stone arcade from the XVI century. The high ceiling spaces are then enclosed by a glazed partition that opens towards new porches all along the wing. Such porch has the same dimensions and rhythm of the arcade, as if it was extruded to create a protected outdoor space. Underneath the porch are the entrances to three shared areas, while on top of it is a long terrace that serves some of the apartments of the second floor. The canopy along the north wing is demolished to light up the entrance spaces of the building where

reception, lounge and community room are located. Right next to the entrance, again, a guest bathroom serves the building. For fire safety reasons and circulation optimization, a third staircase (with built-in elevator) is built in the southern corner of the complex, reachable from the entrance through all the new porches. The south wing is subject to many demolition activities to give space to some of the largest apartment of the project. Finally, along all the three floor, the continuous corridor is closed room by room to create the service spaces of each apartment, such as kitchenette, en-suite bathroom or walk-in-closet. Circulation, in fact, is studied to be reduced to the shortest, but still serve all units and create small entrances to possible multi units' annexations.

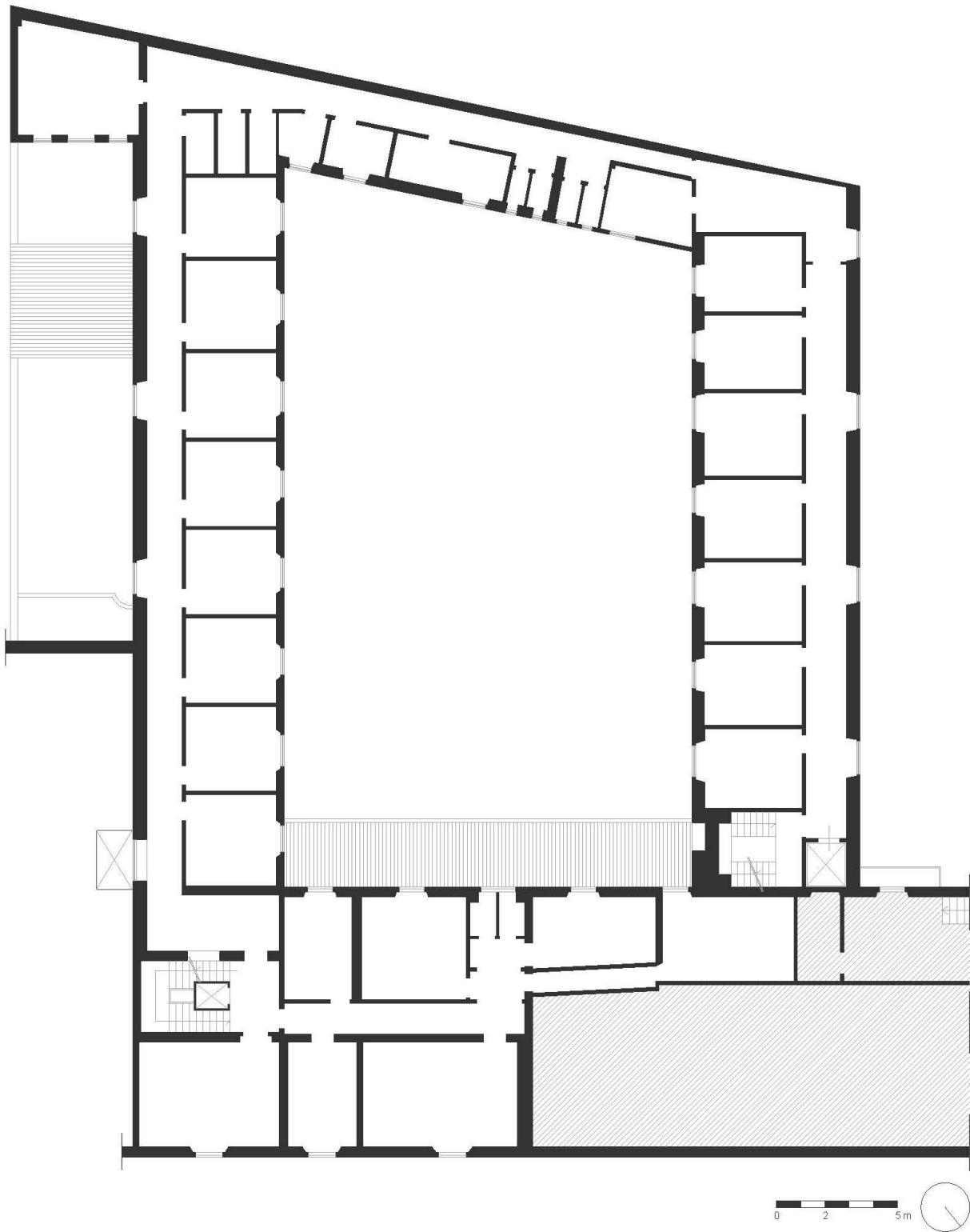
All project drawings follow the operational ones, showing the outcome of the demolition and construction activities. The multifamily program is the applied as follows: amenities on the ground floor of the northern and easter wings. Exception for laundry room and storage rooms at first floor and guest bedroom at second floor. Apartments, from studios to three-room units are located all around the building: some of them have direct access from the garden or from the terrace, while the rest are connected by the redesigned existing corridors. Figure below illustrates the project program on all floors.



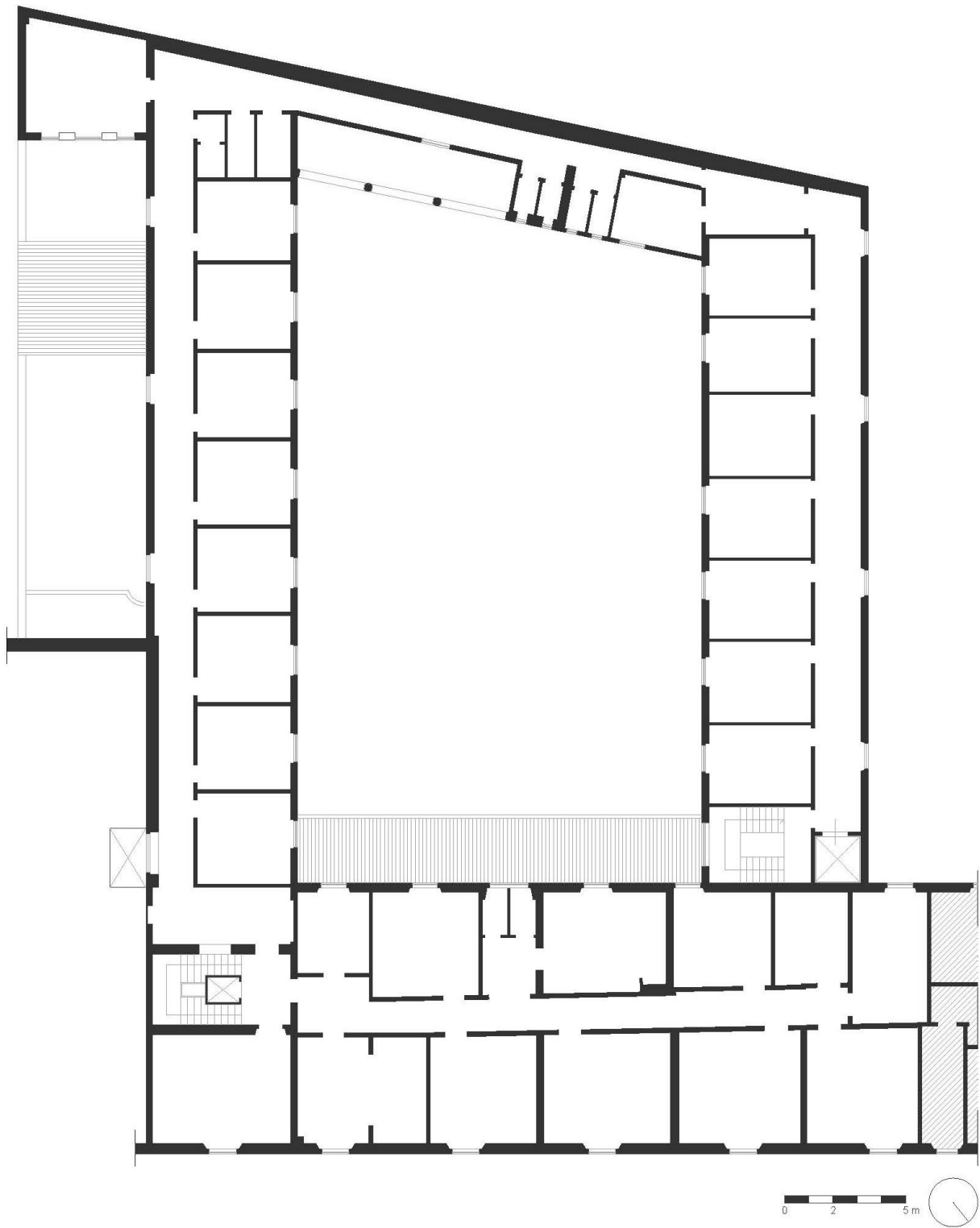
Figure 30 - Program of Guelfa 79



Drawing 1 – Ground floor (as is)



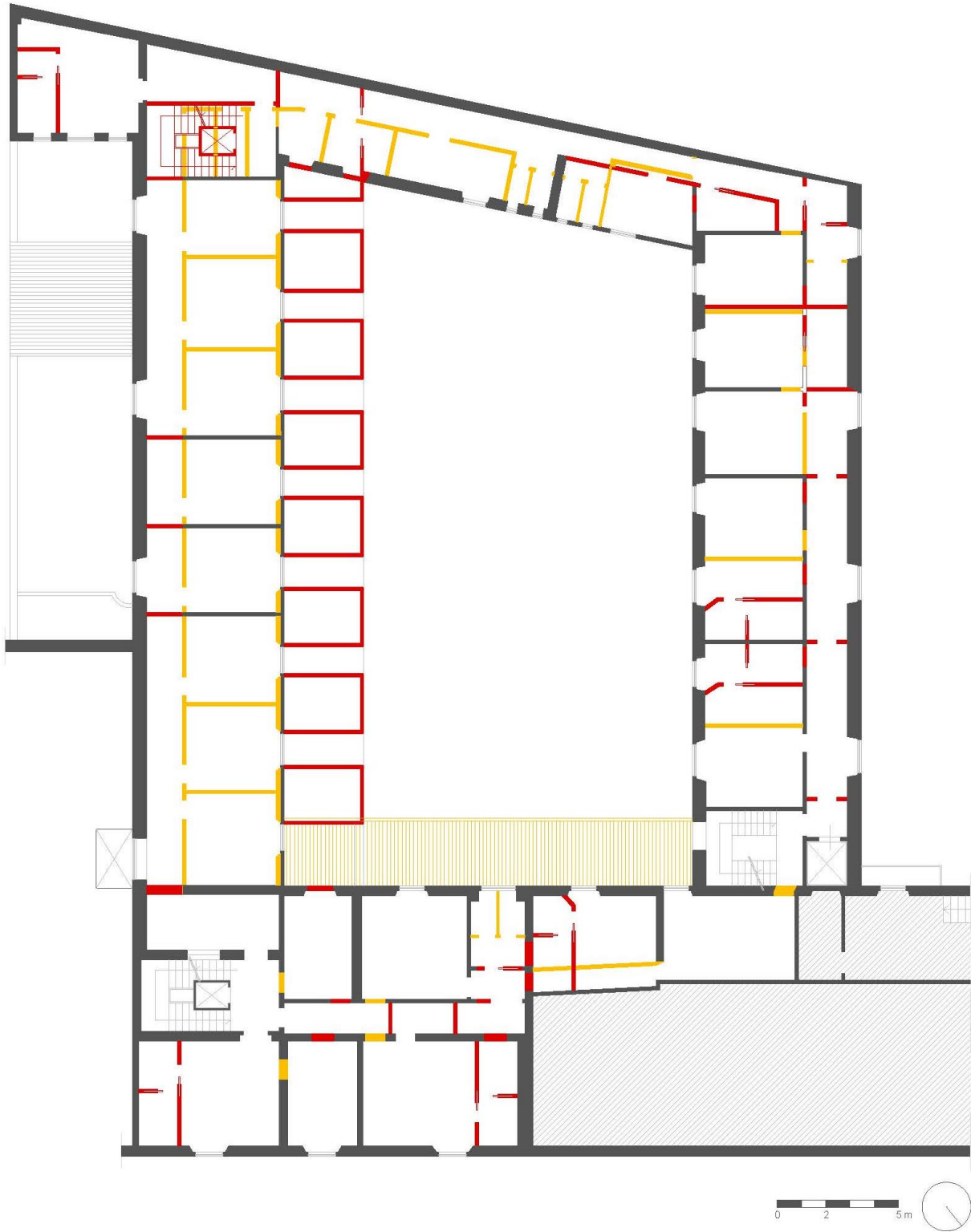
Drawing 2 – 1st floor (as is)



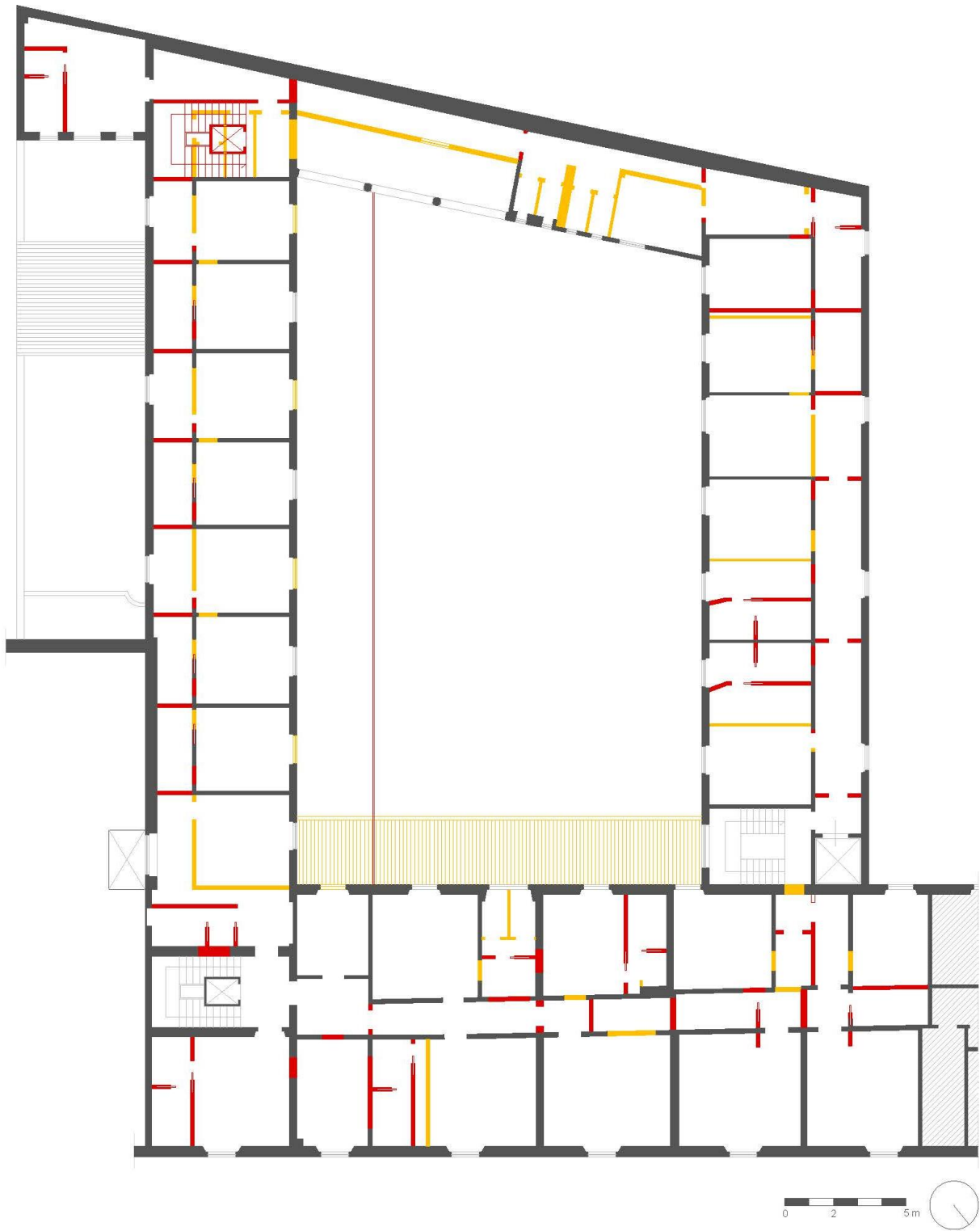
Drawing 3 - 2nd floor (as is)



Drawing 4 - Ground floor (operations)



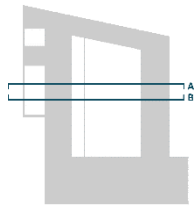
Drawing 5 - 1st floor (operations)



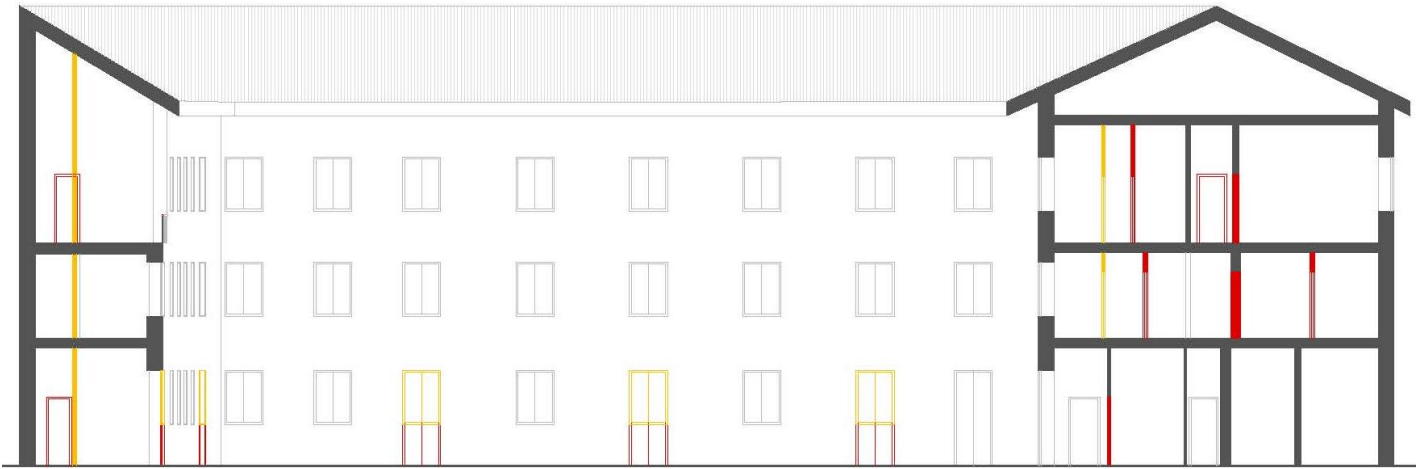
Drawing 6 - 2nd floor (operations)



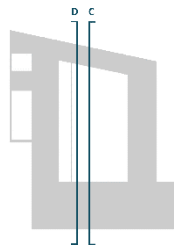
Drawing 7 - Section A (operations)



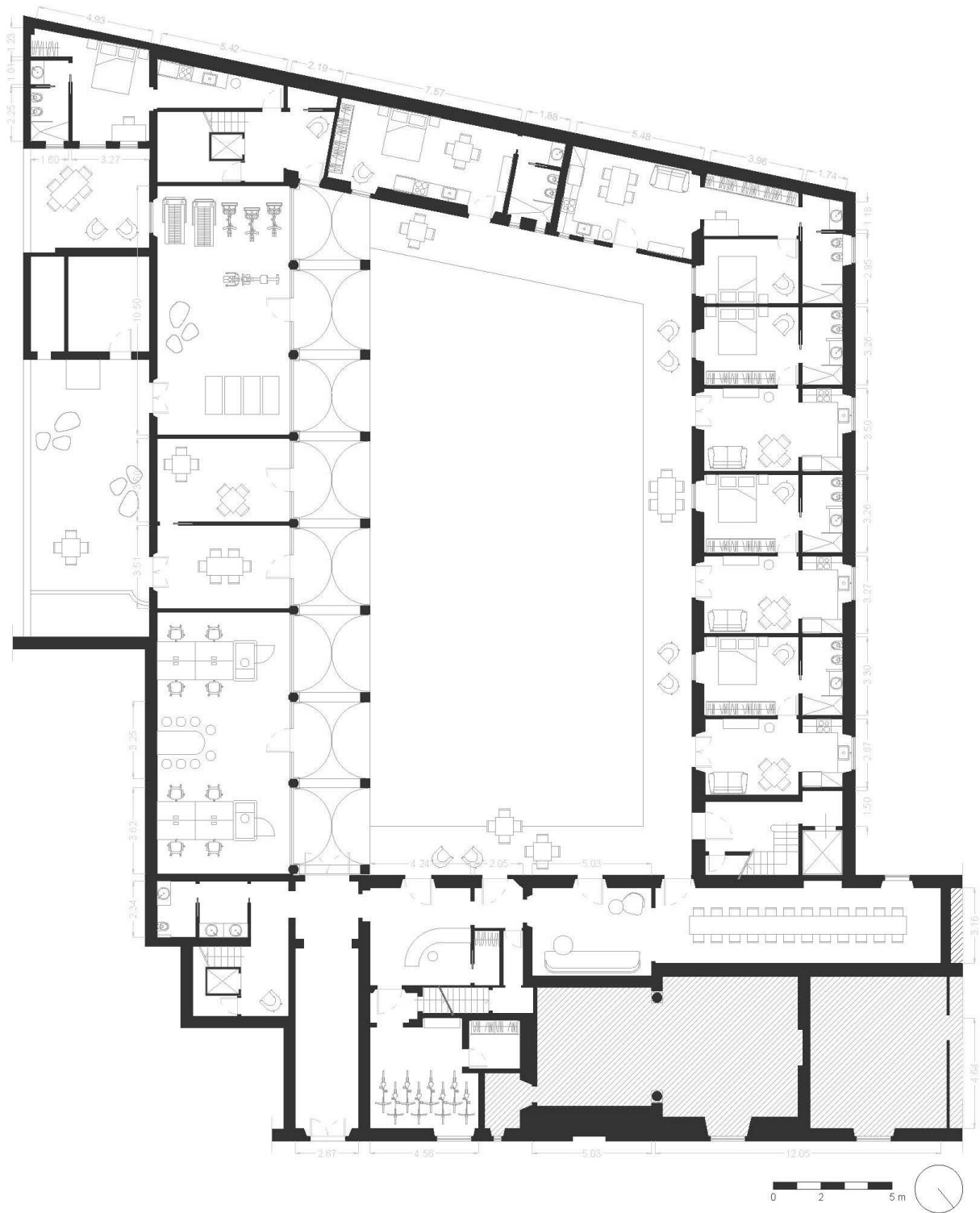
Drawing 8 - Section B (operations)



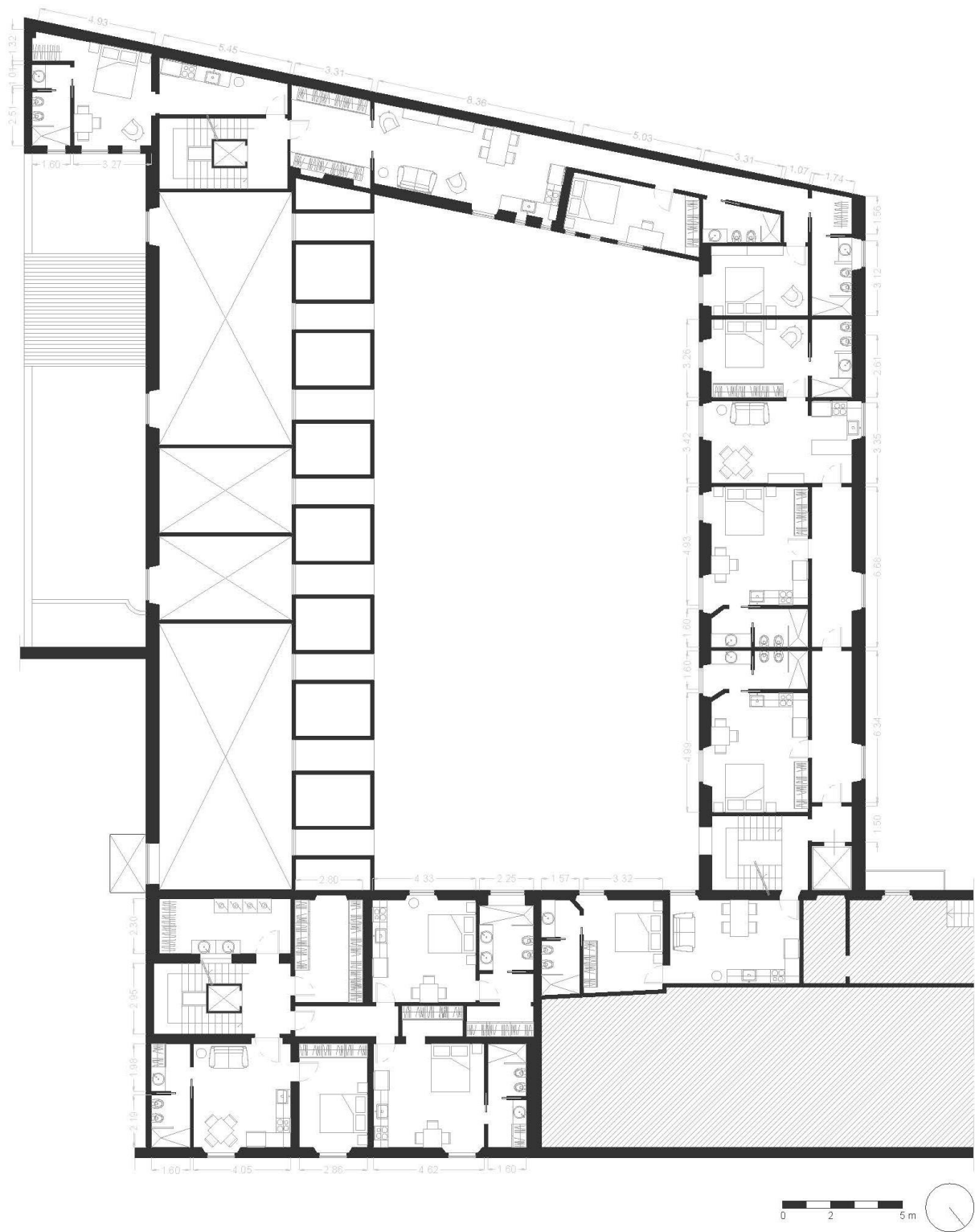
Drawing 9 - Section C (operations)



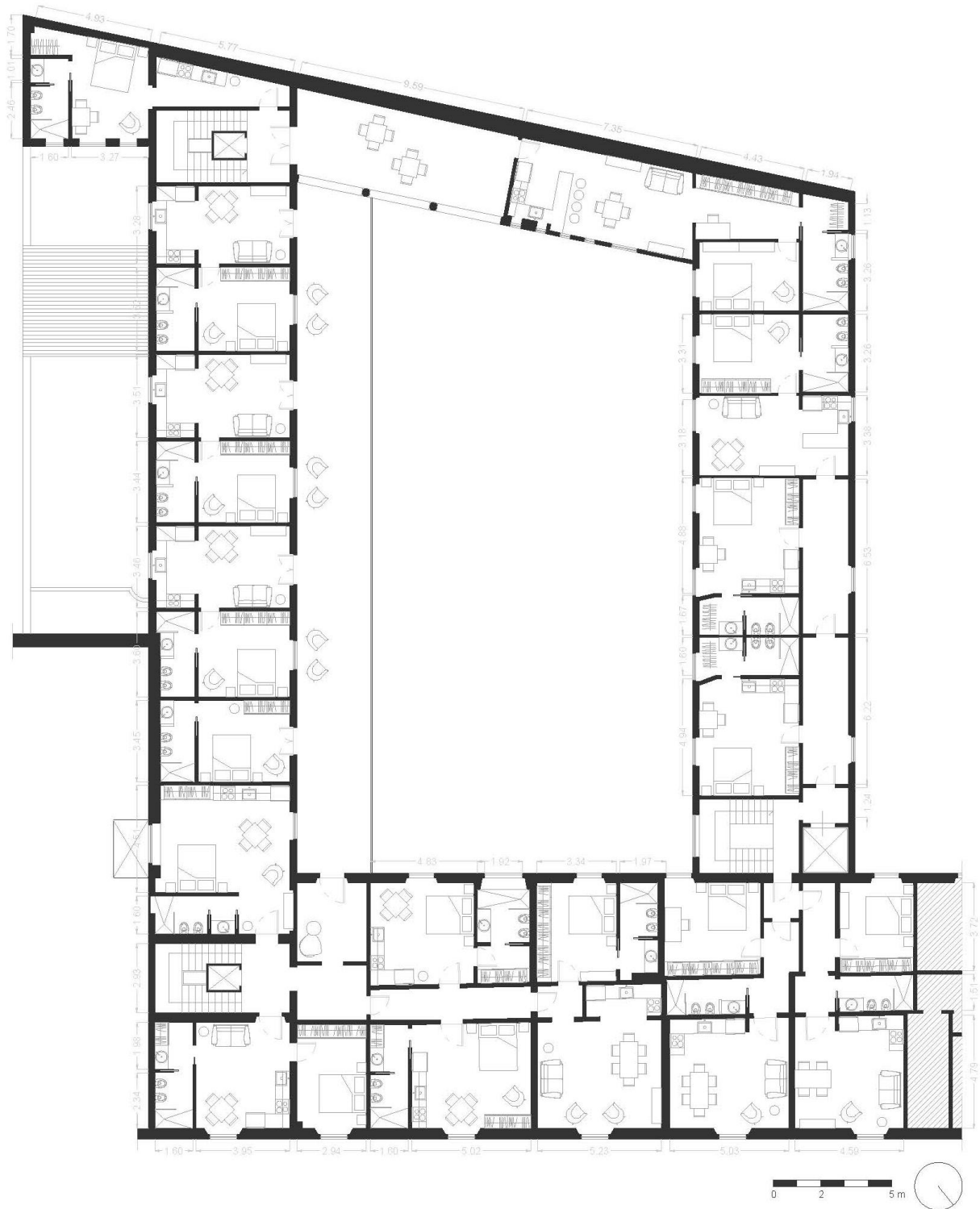
Drawing 10 - Section D (operations)



Drawing 11 - Ground floor (project)



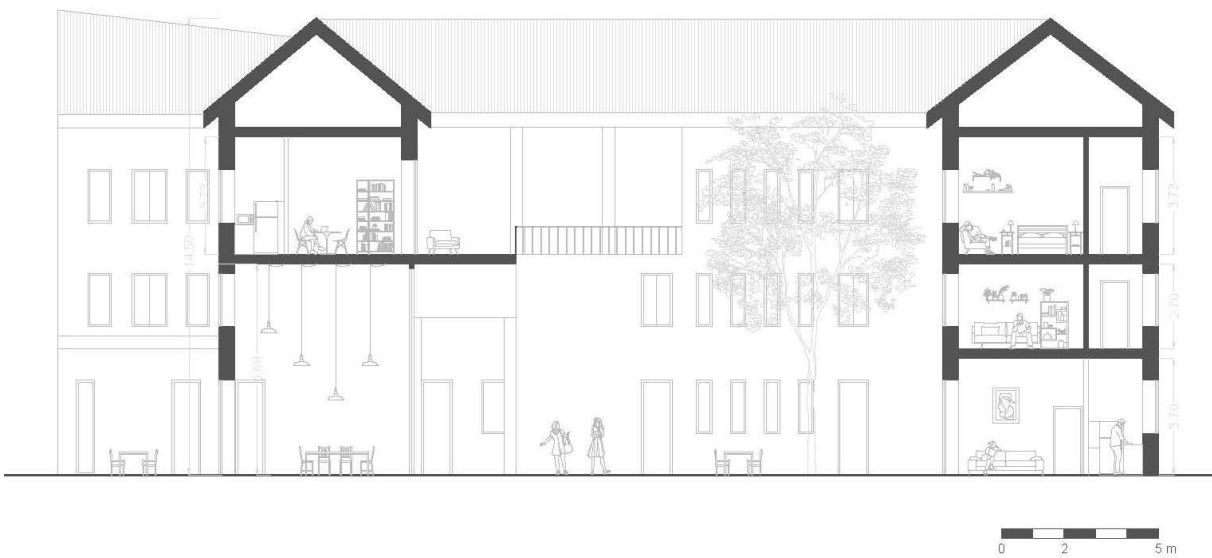
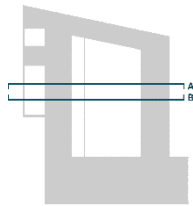
Drawing 12 - 1st floor (project)



Drawing 13 - 2nd floor (project)



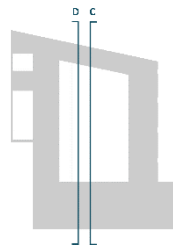
Drawing 14 - Section A (project)



Drawing 15 - Section B (project)



Drawing 16 - Section C (project)



Drawing 17 - Section D (project)

	program	TOT	GF	1st	2nd
amenities	reception area	27	27		
	lounge room	20	20		
	community room	38	38		
	co-working space	62	62		
	creative room	40	40		
	fitness area	62	62		
	bike storage	27	27		
	laundry room	14		14	
	guest bedroom	20			20
	TOT	310	276	14	20
housing	studio apartment	398	65	152	181
	2-rooms apartment	731	176	122	433
	3-rooms apartment	95		95	
	TOT	1224	241	369	614
services	storage space	20	8	12	
	guest toilette	10	10		
	technical room	20	20		
	entrance hall	28	28		
	circulation	146	30	42	74
	TOT	224	96	54	74
	indoor TOT	1758	613	437	708
outdoor	courtyard	370	370		
	porches	94	94		
	terrace	94			94
	loggia	36			36
	service	78	78		
	outdoor TOT	672	464	0	208
	project TOT	2430	1077	437	916

Chart 26 - Project surface distribution by square meters



Figure 31 – Internal Garden



Figure 32 - New Terrace



Figure 33 – Apartment Type



Figure 34 - Community Room

Evolution

This work intends to explore the feasibility of the development of multifamily residential in Florence, Italy. Starting from pointing out urban and social topics that are now under discussion worldwide, a framework introduces then the real estate market in Italy with a special focus on the residential asset that keeps growing in volumes as never seen before. The city of Florence is discussed to value how attractive it is for residential investments, and the residential solution of multifamily is explored to demonstrate at a later point that the two can actually match: Florence is good for multifamily and the other way around. The proposed study does not stop to finding out whether the development of multifamily in Florence is feasible or not, but it concludes with the composition of a residential reference model and its application in the built environment of the city. Firstly, some guidelines are identified to shape a theoretical model that can be applied or not to unused properties of Florence, then a renovation project of an abandoned building is suggested to practice the model abovementioned. This work focuses on the premises that leads to the architectural layout of the identified property, and it does not deepen its the architectural design project. The layout composed as outcome of the study carried out demonstrates how existing buildings could support the development of new assets even in consolidated urban centers as Florence. Future development to this work is represented by:

1. the commercial feasibility study of the identified property in Florence,
2. the architectural design project of the identified property in Florence,
3. the application of the multifamily model to other properties in Florence,
4. the composition of a multifamily reference model for other cities,
5. the identification of potential residential properties in other cities.

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While conducting this research, both references from bibliographic and online sources have been consulted. Resources of following sections are listed by alphabetic order.

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