Urban regeneration hypothesis

——*take Milan Greco Pirelli station as an example*

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URBAN PLANNING AND POLICY DESIGN

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1.
ABSTRACT

1.1

ABSTRACT

The Greco-Breda train station is part of the redevelopment plan for the abandoned station area in Milan. The airport stretches along the Milan-Monza line, separating the third district of Bicocca from the Precotto residential area.

The project area is in a hinge position relative to the two areas, which have distinct history and morphology. This paper starts with the concept of urban renewal at the European level, based on the development process of urban renewal, and compares different cases around the world, gradually deepens into Milan and Greco-Breda, analyzes and evaluates Greco's existing projects, at the end of the article. According to the existing project situation, a new strategic plan is drawn. The program is closely related to the urban renewal theme and is divided into two categories: long-term and short-term. The content involves the use of public space, the proportion of green space, and the availability of service facilities.

2.
INTRODUCE:
The European Context And Theoretical Framework

2.1

Historical and background

2.1.1

The development of European cities

From the perspective of human history, the city has played an essential role at any stage. Cities are the carriers of new economic activities and lifestyles, and they are also affected by the current socio-economic environment and development level. Therefore, if we want to understand European urban renewal, we must start with the urbanization background of Europe.

Today's European urban system is the result of more than two thousand years of people's lives and migration activities. Smart humans build, build, and expand their homes in suitable locations, making them a center of urban culture, trade, and industry. The European urban system reflects the historical process of European economic, cultural, physical environment, and politics. After the fall of the Roman Empire and the decline of the Mediterranean city, in the 10th century, the European urban system reappeared and remained relatively stable until now.
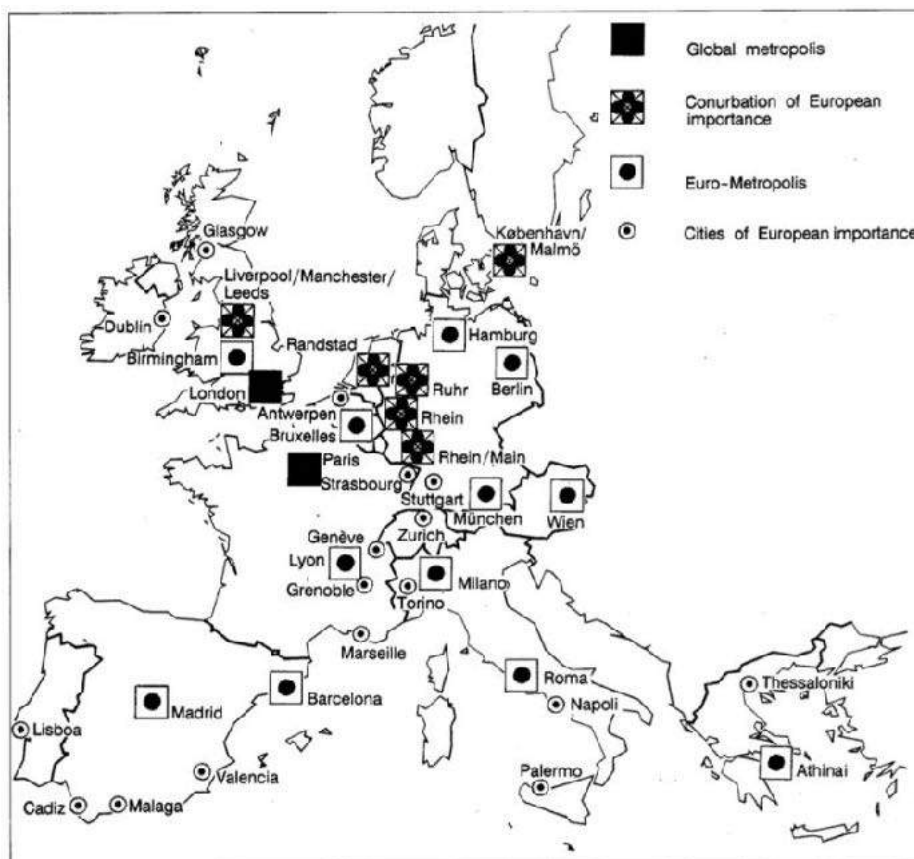
Slow urban development, in addition to war, disease, the impact of trade factors is also significant.

Beginning in the mid to late 18th century, it first occurred in industrial cities in the northwest of England, and it expanded throughout Europe for a century. From the Netherlands, Belgium, northwestern France and Germany, to northern Italy, to southern Germany and southern France. At the beginning of the 19th century, the ever-increasing wealth and progressive medical conditions reduced human mortality, especially infant mortality, which led to accelerated population growth, and more people chose to work and live in cities. Later, urban growth ended with population changes due to reduced mortality and birth rates. As a result, the town began to suffer from a severe decline in the population. The city began to suffer from a severe decline in the population.

From such a variable population phenomenon, we can see the different aspects that Europe presents in various stages of urbanization in different regions. In the northwestern part of Europe, where economic and demographic transitions have ended, de-industrialization and de-urbanization have taken place; post-industrial cities have begun to emerge in southern Germany, northern Italy, and southern France. At the same time, in parts of Spain, Portugal, southern Italy, and Greece, some cities still repeat early industrialization and urbanization.

Field	Background trends	Implications for cities
Population	— Decline of birth rates — Ageing of the population	— Unbalanced demand for public infrastructure — High demand for health and social services — Urban decline in the North and North-West
Migration	— Continuing rural-to-urban migration in peripheral countries — International migration South-North and East-West growing	— Housing and employment problems in target and gateway cities in prosperous regions
Households/Life styles	— Decreasing household size — Higher labor force participation of women — Reduction of work hours — New life styles	— New social networks, neighborhood relations, locations and mobility patterns — Need for new services and new housing, land and transport policies
Economy	— Reorganization of production and distribution — Polarization of firm size — Liberalization, deregulation, privatization — Internationalization	— Increased competition between cities — Innovation-oriented local economic policy — Technology centers and parks — However, also intra- and inter-regional disparities, social tension and eroded public services
Transport/Communications	— Technological change stimulates personal mobility and goods movement — Road transport dominant — Growth of high speed rail, air transport, telecommunications	— Dispersed urban development is further stimulated — Efficient public transport in small and medium-sized cities difficult — Polarization between European core and periphery continues
Environment/Resources	— Transport and industry-generated pollution, energy conservation, urban sprawl important — Industrial pollution in South European countries and East Germany urgent	— Cities in all European countries are affected — Car restraint, antipollution, energy conservation, land use control policies are required

According to the data given by the United Nations, 50% of the population has lived in cities at the end of the 20th century, and 80% of the developed population will live in urban areas in the future. About 75% of Europeans in Europe currently live in cities. Compared with other regions

and countries, the European urban system is relatively balanced and stable. The urbanization process in Europe mainly occurred during the industrial revolution in the 19th and early 20th centuries, but with the urbanization process a series of complex economic, social, material, environmental and financial problems emerged. Therefore, people are increasingly aware of the environmental costs of urbanization and the importance of sustainable development.

Cities can be classified by level: global metropolises, European metropolitan cities (satellite cities), and European cities. Paris and London are two global metropolises in Europe. After the reunification of Germany, Berlin has also become a global metropolis. For example, Copenhagen, Randstad, Frankfurt, Milan, Rome, Vienna, Munich, and other cities. Both assume the role of economic, political and cultural functions of great importance in Europe; the last categories are essential cities such as Lisbon, Stuttgart, Turin, and Naples, although their primary services are above the national level. Still, It constitutes a crucial urban network in Europe.

Despite the existence of so many different levels of cities, in recent years, there are still many cities in Europe due to the economic recession, people can not find jobs, or in the case of economic activity, a large number of residential land in the city is replaced by other property uses. , resulting in a large number of population migration and loss. At the same time, some towns in southern Europe are developing a growing trend. The informal labor market has attracted a large number of immigrants from rural areas, but such a simple model cannot be extended for a long time. Therefore, we can also say that urban recession and growth can exist at the same time, and the development of cities is also determined by the characteristics of different stages of urbanization.

In the process of urbanization, it has experienced a series of different stages of development: (1) At the beginning of the urbanization stage, urban development is dominated by the core area and develops at a relatively fast pace. For example, in Central Europe, the pre-war model was repeated during the post-war reconstruction period, and urbanization continued in southern and eastern Europe. (2) At the stage of suburbanization, the central city has experienced a decline, but the population is still growing, which leads to the suburban development speed is too fast, even exceed the core area, and the housing in the core area is stagnant due to lack of space. The decline has caused a large number of people to move out. (3) With the anti-urbanization stage, more developments have shifted to the periphery of the city, and some have extended
to small towns and medium-sized cities — the overall decline of urban areas. The trend of reverse urbanization in northern Italy is quite significant. (4) After entering the stage of re-urbanization, the population has seen a growth phenomenon. In the 1950s, the urban population

multiplied, and a large number of rural people in Europe migrated to cities. In the late 1960s, this phenomenon came to an abrupt end in many countries.

Suburbanization and counter-urbanization were very common in the 1970s, and during the two world wars, the suburbanization of British cities was most pronounced (Jackson 1973) and has become a widespread urbanization process (Dezer et al., 1991). The city center has lost a large number of people, and small and medium-sized towns have developed in large areas. Over time, Europe has gradually embarked on the road of urban development. The results of suburbanization and counter-urbanization are undoubtedly harmful. There may be a small number of people who like this situation, but most people are still dissatisfied with the problems caused by suburbanization and de-urbanization: longer work Time and commute time, more energy and land consumption, dependence on private cars, etc. The opposite effect of suburbanization is the decline within the city. Many European cities are actively taking measures to improve their negative impacts. Italy's Florence and Bologna are typical examples of this trend.

In the 1980s, the trend of re-urbanization emerged. Small cities are growing at a much slower rate, and some big cities have begun to recover after a sustained recession in the 1960s and 1980s. The tide of immigration in East Germany and Eastern Europe marked the first re-urbanization of former West Germany, followed by France, the United Kingdom, and the Netherlands. From 1980 to 1985, only the urban population of Seville and Lyon grew, and from 1985 to 1990, the situation changed: the people of Frankfurt, Amsterdam and Rotterdam also grew together, while Milan The population decline in Brussels and Brussels has also slowed down. Therefore, we can conclude that re- urbanization is affected by many factors such as economic, social, and population growth. In the process of re-urbanization, the economic benefits are more significant than the social benefits, and the relevant policies and regulations are updated. However, while achieving economic benefits, it also pays social costs. Low populations and low value-added economic activities were replaced by urban centers, with a large number of high-income groups. The end of the 1980s and the early 1990s was the watershed of European urban development, marking the beginning of the "Renaissance" of the European population and economy.

2.1.2

Overall situation in European cities

At the end of the last century, the European urban system was deeply affected by changes in all aspects and strengthened by the development of a single European market. At this stage, the leading role of major European cities is gradually increased, and sustainable development is conducive to the construction of large-scale high-tech industrial and service towns to provide them with skilled labor, beautiful work, and high-quality services and culture. Leisure facilities. The gradual improvement of the European high-speed railway network has also strengthened the leading role of large cities. The urbanization and semi-urbanized hinterland of large cities will continue to expand in the area of about one hour of the metropolitan area. The accessibility of international airports is also in urban development. Become very important.

From a European perspective, some marginal cities benefit from the development of a single European market, and local decision makers can decide whether their hinterland can expand and increase their trade. The political development in Eastern Europe in recent years will improve the geographical location of cities with traditional links to the Eastern European market before the war, such as Hamburg and Copenhagen. The unification of Germany will give you a place on the edge of Western Europe, and the development of already stagnant cities will bring new challenges. Cities that are adjacent to Eastern European countries will benefit economically from the unique political geography of Europe, re-establishing connections and markets, and expanding their regional hinterland. Cities like Prague and Budapest will regain their status in pre- war European countries after a long time.

Here we have to mention the gateway cities in Europe. The pressure on the city portal is also an essential reason for the changes in the European urban system. Because the gateway city is always under pressure from immigrants from Eastern Europe, Africa, and the Middle East, this has caused the existing infrastructure (hospitals, schools) to be unable to afford the increased population, and the local economy will also be burdened by the increase in the number of low-end labor, thus affecting the local social and political environment.

From a national or regional perspective, urban systems within a single European country can also be significantly affected. The first change is the traditional national urban network. The first significant cities will lose their importance in the country. Some towns in the marginal areas will become necessary. The rural areas and minimal cities that have already declined will continue to decline. A new type of urban space and urban network will be created, and the

urban-rural integration will further expand and develop along with transportation. With the easing of the East and West and the adjustment of national defense policies, some cities will be affected and have an economic impact. But everything is a double-edged sword, which will surely bring a series of urban problems.

First, there is a more excellent recession in industrial cities. Unemployment is a severe problem in industrial towns. The coexistence of economic downturn and harsh environment makes it difficult for these cities to change the current situation of lack of investment and physical decline. Strengthening environmental protection and raising awareness of ecological treatments Although it can spur many public and private companies to support declining industrial cities, it is still not enough. Some small and medium-sized industrial towns in remote areas or relying on coal mining and steel production are even more difficult. It is challenging to meet the requirements of international investors and gradually become the most disadvantaged city in the economic development of Europe. Second, some port cities are also under high pressure. They are affected by fierce competition from other large port cities in Europe. Their modernization and structural specialization have failed, and they will also be in a recession. Third, the urban-rural integration zone between the national transportation channel and the economically developed region is denser and further developed. With low land prices and a better natural environment, it has become the best choice for moving out of the inner city and industrial development and also provides a place for public transportation to transform, distribute and process goods. However, this development will hurt the local environment, and usually exceeds the carrying capacity of public utilities and social facilities. Fourth, cities in remote areas of Italy, Greece, Portugal, and other countries will benefit from increased national, international tourism and second home development, but these cities must strive to maintain their relative position in the national urban system. Reduce the growing gap between the center and the surrounding area. But this is only based on the quality of the protection of the environment (not for industries that require less environmental standards and enterprises that seek cheap labor), so there are many factors to consider.

From the perspective of the city, many problems are fundamentally derived from the economic status of the city and the corresponding city level and status. By updating material reserves, technology, and social infrastructure and services, cities with the right economic conditions are better able to cope with rapid changes than those that are declining. Wealthy towns have the resources and funds to secure their homes to enhance their adaptability. But it also pays the price. Especially in particularly affluent cities, the market continues to promote the development of the town. However, due to the lack of adequate public control, it also brings blind land investment, social group isolation, and inner city residential areas. Material decline, waste of natural resources, increased the spatial separation of labor, excessive urban expansion, and so

on. Therefore, effective public control becomes very important, and the key lies in the following aspects:

How to build a better future urban form is crucial in urban development. It can be achieved through measures such as traditional cultural facilities and the construction of municipal motor vehicles and subway networks. It can also meet the growing urban growth in Europe by creating a vibrant skyline of high-rise buildings. The purpose of the vital position. For example, the redevelopment of the old dock area in London will continue his large projects to meet its development needs.

The role of urban infrastructure and services in cities is also important. Developed cities can improve their support and expand their services. The pressures on cities with relatively lagging economic development are enormous, due to the reduction of public funding by the national government. The reduction of taxes by local companies, etc., how to solve the problems caused by aging infrastructure has become one of the main contents.

Many cities face poverty. The general trend in European countries is to reduce government intervention in social security and to limit the eligibility of groups that are in great need of welfare support.

The core issue is the urban environmental problem. Therefore, the key to local policy formulation and planning should also consider the quality of the environment. Urban ecological problems In prosperous cities, the increasing traffic volume, unbalanced land use development, and the neglect of the ecological environment by various enterprises and individuals have seriously threatened the urban environment and overall development. The lack of funds for public finances in terms of drainage, waste discharge, and energy generation has often become a significant obstacle to improving infrastructure in some southern cities. But there are also no successful urban cases, such as Rotterdam and Lyon, which have successfully found a relatively balanced development point between the ecological environment and economic interests.

2.1.3

European cities in the context of globalization

Over the past 20 years, major urban areas in Europe have directly or indirectly received significant impacts on the global economy, which have had a considerable impact on commercial localization choices, inter-sectoral shifts, and the positioning of urban labor markets. Economic globalization and technological innovation have much promoted the rapid development and change of urbanization in Europe. Globalization is the product of the continuous development of global economic and trade, the constant development of international capital, and the interaction of multinational cooperation and industrialization in underdeveloped regions. Nowadays, while the group seeks rapid economic and trade competition, Europe's strong position as a commodity production base is not only challenged by traditional competitors such as the United States and Japan but also faces competition in newly industrialized regions such as the Pacific Rim and Latin America.
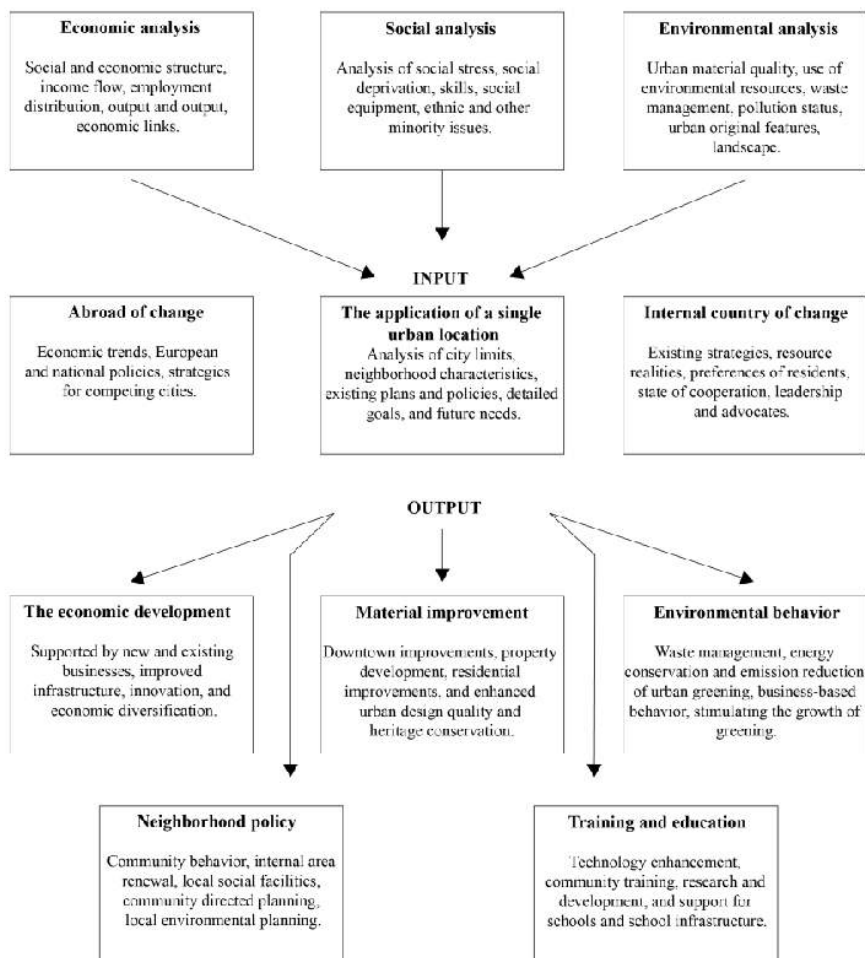
Business environmental factors and recent changes in industry categories have led to very intricate spatial patterns and patterns. The standard textbook analysis of European regional economic strength is base on traditional core and marginal theories (Hull, Jones and Kenny, 1988). There are always various definitions of the definition of the core of Europe, but it is still pointe out that the Golden Triangle exists. For example, Paris, London and the Ruhr Triangle, or Birmingham, Milan, and Hamburg. Core theories describe these two regions: large-scale production, control, and command functions are highly concentrated, and areas outside the core, the marginal areas, have less economic potential and links to the global financial system.

In the late 1980s, the traditional core-edge theory redefined, and three major economic zones divided within Europe. The old core covers the old industrial areas in northern Europe, undergoes industrial restructuring, and uses prestige to play a dominant role to support the process of economic globalization. The new core covers the Alpine region and the Mediterranean region, which were initially underdeveloped in industrial areas, and they benefited from the recent development of the modern industry. The new and old cores together form a new base in Europe. The fringe of Europe includes Greece, Portugal, southern Italy, western and southern Spain, Sardinia, Corsica, west France, the Republic of Ireland and northern Scotland. These areas can only rely on small factories for traditional production because of their backward infrastructure, lack of technical support, and limited investment attraction.

The recessionary trends of many major European cities that have been affected during the first 20 years of the mid-1980s have largely reversed. In today's cities where people live and work, there are clear signs that the economy is recovering and the population is increasing. It is also more energetic. Politics and administration have also provided adequate policy support for the development of the European market. Although there are some imbalances, it also plays a crucial role in the event of European cities. At the same time, European cities have gradually shifted from inward-looking development to outward-oriented development, focusing on the potential of mining cities. Evolving global economic cooperation, increasingly competitive investment and trade, and comprehensive urban development are crucial to the success of cities in these competitions, and the links with international financial network organizations have become increasingly close, becoming regional and global — the dominant force in economic relations. In short, the current European cities have deeply influenced by political forces and entered a new era of corporate towns.

From a macro perspective, globalization also represents to a certain extent that the economic development of various countries and regions is increasingly constrained and affected by the global financial status. It is becoming more and more challenging to pursue a single high-speed

economic growth, so it seeks broader International cooperation, and economic policy support has become the most effective ways. With the rapid development of cities and regions and the impact of globalization, many cities need to find a balance between international and domestic. The growth of the European single market does provide a driving force for the entire European region, but the increasingly powerful urban network organization can provide a more effective promotion, but this trend will also bring about a comprehensive update of the internal structure of the city.

2.1.4

The essence of European urban regeneration

Urban regeneration belongs to the field of public policy and is an aspect of urban regional management and planning, rather than the planning and development of new urbanization. This urban policy has been unique for more than two decades and can trace throughout the twentieth century or even earlier. Early urban renewal focused on improving the living and physical environment, and less consideration given to the economy, social communities, and employment. With the changes in the economic structure of European cities, the problems faced have also changed, which has caused more deep-seated issues, such as economic recession, social security problems, unemployment rate, and poverty rate. Since then, European urban renewal has gradually taken into account economic recovery, material environment, social community, employment, etc., which has become the primary trend of urban renewal and development.

2.1.4.1

Economics

The most fundamental reason is generally directly related to the economy. The most direct factor of urban regeneration is an economic recovery. The economic benefits of the city have greatly improved due to the development of the industry, which has led to the development of related industries. The increased necessary activities are also the survival and growth of the city, and the apparent benefits of the town have also expanded accordingly. The industrial revolution brought unprecedented prosperity in Europe, but under the influence of the oil crisis of 1973, many old cities in Europe experienced economic restructuring, and with the development of the service industry, traditional industries gradually disappeared from the urban environment. A series of problems such as a decline in corporate profits, an increase in unemployment and an increase in the social cost of economic competition has brought enormous financial pressure on national and local governments, resulting in a reduction in public spending and services. Urban poverty and the decline of traditional communities are also becoming more serious. At the same time, the physical infrastructure of many cities is outdated, needs to be replaced and costly, especially in the rapidly expanding cities of the late 18th or 19th centuries. Therefore, economic renaissance has become a problem that many cities need to consider, and the content they contain is also very complicated. Due to the changes in the urban economic environment and the development of global economic growth, some cities have shown signs of decline; efforts to attract investment, increase employment opportunities and improve the urban environment can better promote economic recovery; the sources of funds for economic recovery are diverse, increasing Competition for limited funds and so on.

The demand and supply of cities is the key to economic recovery. By increasing industrial production and improving the service quality of the service sector, it will attract more consumption and thus improve the city's demand capacity. The supply of the city is reflected in the land redevelopment, the development of education and training, and the adjustment of the internal structure of the city, which is embodied in the construction of urban roads, the development of new industries, the development of science education technology and commerce, technical knowledge training and labor training. During the Industrial Revolution, cities were at the heart of production and population, different from what needed in today's cities. Nowadays, cities are more likely to re-plan the future and handle and exchange various types of information, especially financial information. As the leading trend of urban construction and development, the city should establish its role in future economic growth.

The 1996 "Competition: Creating a Business Center in Europe" white paper puts forward and emphasizes the problems of urban supply, encourages small and medium- sized enterprises to break the rules, boldly innovate, train the labor force, and improve their quality and ability. One of them is that when the economic development goals of cities and regions are different, production, land, labor, and capital are the main areas of government interference, and space economic benefits are the result of their effects.

Through the fund support and subsidies, preferential policy establishment, public development agency, bidding fundraising, and comprehensive means of this series of measures to promote urban renewal, thereby driving the city's economic development.

(1) Fund support and subsidies
In the process of urban renewal, land subsidies are a necessary measure for subsidy support. The earliest land subsidies were introduced in 1966, after the Aberfan disaster in the United Kingdom, the grants for abandoned land. It was mainly used in rural areas earlier and gradually shifted to urban regions left after the 1980s to restore the effective use of some ground through the provision of funds. Separate beneficiary areas and beneficiaries have different specific subsidy policies, which divided into 100%, 75%, 50%, and other various levels of subsidies. For example, for land clearing areas, local governments can enjoy 100% subsidies, while the private sector 80%. In the 1982 urban development subsidies, government donations were small, encouraging the inflow of private sector resources. Since 1984, material renewal projects have gradually increased, and the private sector has become a significant force on urban renewal, but the subsidized projects account for a small percentage. In 1987, the Urban Renewal Grant (URG) broke some of the limitations and provided developers with direct access to the government, but limited the conditions for subsidized land development (must be greater than 20 acres). Subsequently, the emergence of public subsidies (CG) became a new form of a grant, and the regional office of the Ministry of Environment provided directly to help restore various urban projects. There is also a part of the city's updated economic support from the European Joint Construction Fund, which supports the financial restructuring of areas with relatively lagging development and industrial recession.

(2) Set up preferential policies
Since 1981, the British government has established 24 business districts and four expansion zones with a 10-year operation period. The enterprise zone is a development zone approved by the central government, developed on the principle of revitalizing the inner city economy and restoring the internal city function. It also stipulates nine preferential policies and management rules for enterprise zone development. These preferential policies are conducive to promoting economic growth, attracting investment, and effectively improving the investment environment.

(3) Urban development agency

The establishment of an urban development company is also an effective measure in the process of urban renewal. The first proposal was for the redevelopment and construction of an abandoned dock area. Due to the vast area and facing arduous development tasks, the local government could not complete it. In 1980, through the Local Government Planning and Land Law, the British government established the Urban Development Corporation (UDC) to renovate the area, to achieve regional revitalization, improve the utilization of land and building facilities, and create attractive Environment, creating a pleasant housing environment. By 1989, the company had processed a large amount of land. In 1993, the Law on Lease Reform, Housing and Urban Development promulgated, and the British cooperative company established as an urban renewal agency. This also reflects the government's continued concern for land and asset development and inward investment.

(4) Auction fundraising

By bidding for the allocation of funds for urban renewal, the emergence of this approach opened up a new model of competitive fundraising, which encouraged local authorities to establish partnerships with the public sector, the private sector and voluntary groups for joint bidding, becoming the largest urbanity at the time. Policy budget project. It allocates funds for the inner city renewal plan and housing construction from top to bottom and reorganizes the funds of local government agencies. The government prefers to invest in comprehensive and holistic urban development projects, and its greater regulation and funding capabilities also strengthen the control of the implementation projects. At the same time, it has caused competition among departments, and how to make up for residents has become a problem. In 1993, the UK's Ministry of the Environment proposed a different update budget (SRB) for seven main objectives: 1 to improve local employment rates, strengthen job skills training, and provide an appropriate opportunity environment for young people and vulnerable groups. 2 Encourage the development of emerging industries, stimulate the growth of a sustainable economy, and thus enhance local competitiveness. 3 Protect and improve the environment and infrastructure. 4 Improve the living environment and maintain community diversity. 5 Pay attention to the interests and development of ethnic minority areas. 6 Strengthen community security and crack down on crimes. 7 Vigorously develop medical care, culture, and sports to improve people's living standards and quality. This budget is now the main form of urban renewal support for the UK central government, and the EU structural fund has also established in this way.

(5) Comprehensive means

In the early 1980s, urban policies and plans were relatively scarce. The City Action Group (CAT) was created by the Ministry of Environment, the Ministry of Employment, the Ministry of Trade, and the Ministry of Industry to make intergovernmental adjustments and help the

private sector to seek market funding to better Good to enter the local area. In 1994, it was included in the Integrated Environmental Office and invested in more than 5,800 projects, which provided more than 31,000 jobs, more than 175,000 training opportunities, and more than 44,000 companies received funding.

2.1.4.2

Physical and environment

As the primary material representation of the city, material renewal is usually necessary. It is the most important and intuitive factor. The key is to understand the constraints and potential of existing material resources and to clarify the regional positioning during the renewal process. Declining real estate, abandoned land and factories, and declining urban centers are the most direct reflections of the economic downturn, showing the derailment of urban development and socio-economic changes. The decline of the city is also due to the deterioration of infrastructure and the ruin of the building, which cannot meet the local development needs. Various conditions limit the development of urban renewal, understanding the trends of the market and economic development, clarifying the material and time scale of urban renewal plans, and clarifying the important role of the physical environment in the process of renewal,

proposing clear planning strategies and establishing relevant institutions. And the corresponding maintenance and operation of the financial mechanism to ensure compliance with other renewal plans in the region to ensure that the actions reflect the government's strategy and socio-economic conditions.

The physical environment consists mainly of buildings, land and sites, urban spaces, open spaces, water sources, public facilities and services, and transportation infrastructure. The state of the building usually determines its final definition during the urban renewal process. Each update method is according to the comprehensive factors, policies, markets, and other factors that need to be updated locally. Therefore, it is very important to review each plot separately.

Measures for material renewal involve market, replacement, cooperation needs, and the environment, through which urban renewal is carried out to promote the development of the physical environment of the city.

(1) Market
Affected by the real estate market, material renewal needs to be more and more aware of the degree of demand for real estate from different companies. At the same time, the demand for infrastructure has become more critical with the development of information and communication technologies. The European Commission has recognized the disadvantages of the operation of the land and asset markets and has generally reduced the capital investment in physical infrastructure, but still considers the inclusion of "strategic development sites" in the particular plan documents. As the government's interference has decreased, land and asset

demand has gradually developed into a green space, and these beautification movements cannot truly solve the problem of inner-city decline and unemployment. Therefore, it is necessary to focus on the strategic assessment of the development of land and building supply and demand characteristics, determine the quality of existing resources, the trend of specific regional assets and the type of real estate, thus confirming whether the government's funds used to adjust supply and demand are unbalanced.

(2) Replacement and cooperation needs

Replace the traditional units in the urban area with open spaces using subsidies that can be obtained. The way to change this phenomenon is to rethink the renewal and improvement of vacant land within the overall scope of the city, to get economic benefits. Ensuring the supply of infrastructure and improving land use planning policies are all necessary conditions for solving the problem of material renewal.

(3) Environment

Material renewal is the improvement of the situation. The problems in the form of the material will affect the local development of the area. Therefore, it is indispensable to carry out environmental improvement work. There are also many facts that the improvement of the environment can promote real, local benefits. The situation has become a significant factor in several urban renewal programs, including better land handling, environmental improvements, and optimization, as well as quality control of the urban design. From the perspective of corporate functions, the connection between residential, leisure, industrial services, and the surrounding environment is relatively straightforward, and retail and high-quality commercial functions are more affected by the atmosphere. Due to the sensitivity of the retail and office functions to the environment, the formation of urban center management institutions and urban improvement zones has promoted. These institutions aim to improve the urban center environment and support the development of the center. In the central area, urban renewal is dominated by the modernization of buildings and infrastructure, enhancing functionality and ensuring a high-quality shopping and working environment. In other regions, the primary means of updating is to change the use of land, from the production industry to the transportation industry to the tertiary sector.

2.1.4.3

Social and community

The development of the city is bound to be accompanied by various social problems, and the issues have become more severe in recent years, directly leading to the deterioration of the neighborhood environment. A large number of immigrants mainly causes the current social problems. In the past, the population was crowded, and the atmosphere was poor. Although these problems are still present, the current social issues are more challenging to resolve. The neighborhood of the community lacks security, and the number of poor people increases day by day. It is impossible to solve this problem by merely relying on rebuilding. Urban renewal must take into account a wide range of social factors and formulate more policies to address social issues. Many countries in Europe have proposed newer plans to combine social welfare, protect historic buildings, create high-quality living environments in neighborhoods, and increase public participation after the 1970s.

In the 1960s and 1980s, residents protested in many countries to protest the damage caused by urban renewal or other construction projects to the neighborhoods of local communities, and the "neighborhood protection" was brought up. While keeping the district moderately stable, the area is part of the city's vitality and vitality. It is necessary to maintain the social structure and land functions of the neighborhood, ensure adequate service facilities, and a safe residential environment. As a means of community renewal, the ultimate effect of neighborhood protection should be reflected at the social level. Let people have a sense of security, belonging, living in a comfortable environment to meet the real needs of residents.

There are corresponding organizations that deliver community updates, so-called partners. The partners in community renewal can be divided into three types: public organizations, profitable and non-profit private sector organizations. Public organizations mainly include local authorities, central government departments, etc.; successful private sector organizations, namely enterprises and financial organizations, are increasingly crucial in community renewal; non-profit private sector organizations are provided under the guidance of the National Council of Voluntary Organizations (BNVCO). Various detailed implementation plans have played a perfect role in community renewal.

2.1.5

The implementation of European urban regeneration

After the 1960s, the new urban reconstruction plan reached its peak, followed by the decline of the traditional industrial economy, the loss of land, and rising unemployment, forcing European cities to face a series of problems to be solved. Urban renewal requires the participation of all levels of government, the private sector, and urban residents in the city to promote cooperation, and combines many political strategies and personal factors.

2.1.5.1

Management system

As a management system, interventions mainly implemented by national governments, regional and local governments, and professional agencies. The national level is generally divided into direct and indirect interventions in guiding urban renewal activities. The federal government does not have absolute control over urban renewal and material renewal, and will not be involved too much. For example, Belgium and Germany, the federal government is mainly responsible for some social budgets, and only pays some attention to urban renewal activities. In Italy, the national government has different management methods at each level and completes urban renewal activities together with the region and the local. The French and Dutch governments directly provide policy guidance during the urban renewal process.

The role of regional governments in the process of urban renewal is, of course, important. However, because each country or region has different characteristics and different conditions, its role is also very different. It is closely related to the level of regional legislative capacity and the ability of financial control. The Lombardy District Government of Italy has considerable power to implement the regulations of the central government to better exercise the relevant fiscal power. But in Germany, this situation is not.

To a certain extent, a stable regional and local government can influence the success of urban renewal projects, so it is also essential to effectively improve the management structure. This requires the authority to have the power to implement the urban renewal strategy without any restrictions, an influential political institution or leader, a stable and robust financial and financial management structure so that the urban renewal plan can operate well.

In addition to the management subjects mentioned above, urban renewal projects can also be implemented through several professional agencies. For example, the formulation and implementation of the Rotterdam plan are mainly undertaken by the city committee and operated by the public sector. The central management organization of Lille in France is a socio-economic mixture with the power to purchase land, investment, etc., as a commercial organization with a higher ability to obtain benefits. Professional agencies in each region have established close ties with national and local governments, and it is for this reason that the status of professional agencies is growing.

2.1.5.2

Financial structure

Urban renewal projects must have a source of funds. These funds, operated by fund owners, managers and investors, invest in different urban renewal projects. It generally involves various types of investment companies, as well as the public sector (financial department), and funds are typically terminated at the intermediary agencies, and they are invested in public, commercial, and shared forms to operate urban renewal projects.

(1) Public funds

The central government usually participates in various urban renewal programs as a significant investor, and federal funds are often non-profit. However, because such funds are only invisible subsidies to the private sector, there are certain hidden dangers. Because the land is sold at a low price, and the government provides illegal grants, this will lead to the private sector's profit-seeking and thus lead to competition imbalance. The existence of such funds has attracted a lot of controversies, and it cannot stop its development because it has visible effects on the implementation of the entire urban renewal. Although it violates many social policies, it still bears the critical responsibility of the urban renewal policy.

(2) Commercial finance

Commercial finance is the second source of funding for urban renewal activities, and investment in the business sector has made more projects more accessible and more plentiful. Let private investors join while concentrating a large number of public funds to develop the foundation and transportation, and promote urban renewal and development. For individual investors, the risks they take in this process are also reduced by the participation of the government and other participants, and the rate of return is increased, so more private investors are willing to participate.

(3) Mutual fund

As the third source of funding for urban renewal activities, it often considered another form of government funding, but in fact, its situation is more complicated. The primary financial support of the French government comes from the trust bureau (public banks, most of which come from the general public's savings rather than taxes), the UK is usually the responsibility of the local branches of the construction industry and the custodian bank, which involves the process and involves The objects are particular and cumbersome. There is no source of funding for this type in the Netherlands and Italy.

2.1.5.3

Public participation

The status of residents in urban renewal is very important and essential. The city's series of activities, especially urban renewal activities, is also based on the principle of serving residents, and residents participate in the whole process. But in actual projects, is this true? In fact, from the perspective of many residents, many of the activities of urban renewal destroy the related interests of their living environment.

The neglect of the interests of the residents has brought about protests and negative participation of residents and established a variety of protest groups under specific organizations. In the face of these organizations, the government has not responded correctly and caused conflicts to continue. Under such circumstances, the government should choose a positive attitude and discuss with the residents positively, the problem can be solved, and to a certain extent, it can promote and strengthen democracy.

Many neighborhoods have established community centers after the war to provide a venue for community activities. However, the ability of many traditional neighborhood organizations to solve resident problems is getting lower and lower, and can only be solved by establishing new street committees. However, there is another problem: it is often in the decaying region where the resident organization is weak, and the establishment of the neighborhood committee becomes extremely difficult. The biggest challenge facing these residents' organizations is the predicament and development of the old city. Also, it helps residents to deal with problems and needs, strictly supervise the construction of neighborhoods, negotiates with government departments, encourages residents to participate in community activities actively, and participate in relevant activities. Multiple functions such as discussion of planning projects, and as it improves, its elected officials also have leadership, replacing the direction of the first community organization, which inevitably creates new barriers between leadership and residents.

In recent years, the public's call for participation in urban renewal is getting louder and louder. Residents also hope to learn as much as possible about these urban renewal plans that affect their own houses, neighborhoods, and even property. Many European countries have tried different forms of public participation. It has also achieved varying degrees of success. The existing democratic mechanisms in Europe cannot guarantee the realization of democratic ideals for inhabitants. Indirect democracy and direct democracy cannot coexist. From the nature of urban renewal, residents' participation is indispensable and also in line with democratic

principles. At the same time, the form of assistance should be consistent with the actual situation, and maintain the high transparency of the government's administrative department, to improve the decisive role of public participation in urban renewal.

Public participation will, of course, involve multiple interests in urban renewal activities, so there may be severe conflicts of interest, even in the form of violence. In theory, urban renewal is to achieve the public interest, but in fact, it is the compromise between the various entities to make their interests. For example, the government wants to increase the image of the city portal, investors wish to obtain land to expand their business, and residents want to gain direct benefits (low rent, etc.). Faced with the different interests of different groups of people, it mainly involves the following aspects: 1 improving the housing and neighborhood environment; 2 retaining the original housing; 3 reasonable rent; 4 security; 5 minimally damaged by the update; 6 vulnerable groups Protected and cared. As residents, the residents of the old city are the least powerful, lacking funds and technical support, and have little interest in related long-term plans. They are more likely to choose their natural development. But in recent years, their advantages have become more prominent. In terms of quantity, it is far more than other group organizations; and under active organization, it is more united and targeted; participation is getting higher and higher. Therefore, at present, the original resolution ability of resident groups has been significantly improved, and the historical continuity of the locality has been maintained to some extent.

In general, achieving these goals in the process of urban renewal activities requires not only the strong support of the government and various agencies, but also the active participation, cooperation, and self-discipline of the public, and the overcoming of many difficulties and problems. The implementation of the update activity can be implemented.

2.1.6

Policy and legislation

About the European Urban Renewal Policy, this section uses Germany, France, and the United Kingdom as examples to explain the urban renewal policy in the context of Europe as a whole.

2.1.6.1

United Kingdom

The UK's urban renewal policy covers residential renewal policies, inner-city corporate development policies, and overall urban renewal policies, from slum clearance to how to improve internal city function and vitality. The UK at the end of the 19th century, faced severe urban housing and environmental problems. Therefore, the British government focused on urban reconstruction to improve bad residential areas and clean up slums. For the first time, the Public Health Act of 1848 authorized local governments to formulate public health regulations on buildings and streets, but it was unable to control the complexities between adjacent buildings and public land confusion, and the urban physical environment continued to deteriorate.

————Residential renewal policy

The Housing Improvement Act of 1875 and 1890 first introduced the legal provisions on the elimination of slums. The government intervention function was extended to eliminate slums that did not meet health standards and build new types of labor, but the industrial and residential land in the city was chaotic. Still can't be solved. Therefore, the "Working Class Housing Law" of 1890 was proposed, requiring local governments to take concrete measures for residential areas that do not meet sanitary conditions.

The 1909 Residential and Urban Planning Laws mainly regulate the residential development of urban suburbs and stipulate the planning content of urban residential areas. At this point, urban planning began as one of the government management functions. In 1930, the Greenwood Housing Act adopted a combination of the then-influenced "Building a Single-House Housing Law" and "Minimum Standard Housing" to address slum issues better and provide financial assistance to slums. In the Residential Law amended in 1957, the government can renovate designated areas through alteration or land use orders, and then the subsidy system was added to the Housing Act of 1959. In the 1960s, the United Kingdom began to focus on slum upgrading, providing housing through the reconstruction of new residential areas in the region and suburbs,

improving old residential areas, and gradually completing the transformation of urban slums. In 1964, the "Residential Law" proposed "improving the area" to focus on the change of non-standard houses. Subsequently, the government introduced the Priority Education Zone (EPAS), which is mainly used for the increasingly inner severe city problem and alleviates urban housing problems by delineating different types of housing improvement zones. In 1968, the focus of the urban plan shifted to areas where migrants were concentrated, trying to provide employment training and financial support to community residents through land and building improvements to meet the social needs of the inner city community.

In 1974, the British government no longer improved the harsh physical environment in the living environment, but also began to develop the harsh social conditions within the region, and set a five-year time limit. At the same time, the Home Office launched a comprehensive community program to try to analyze and solve local problems.

The Housing and Planning Act of 1986 gave the government the power to set up a simplified planning area. By adopting the same zoning development control method as the corporate SAR, the public gradually participated in the planning, which also brought about urban renewal. Positive influence. In 1989, the "Residential Renewal Area" was established, which proposed the restoration and selective redevelopment of typical old residential areas and limited the conditions of the "Residential Renewal Area": at least 50% of the residential areas in the area are below the national standard — lack of necessary service facilities.

———Related policies for the development of inner-city enterprises
The Barrow Report of the 1940s proposed to decentralize industrial and industrial populations, especially in London and the southeast to the northwest of the United Kingdom. The Urban and Rural Planning Act of 1944 first proposed the redevelopment of large areas of a war-torn land and abandoned land in urban areas in the old city. The Industrial Distribution Law of 1945 delineated the "development area," which refers to areas where the unemployment rate is higher than the national average and requires the government to provide funds to assist in the completion of development, with a focus on developing productive industrial areas. However, due to its ambiguity and uncertainty, it has severely affected the planning of the development zone by local authorities. Therefore, in the Industrial Development Law of 1966, the development zone was stopped, the concept of "new development zone" was proposed, the scale was expanded, and the "special development zone" set before 1945 was further revised and improved.

In the mid-1970s, most factories in the UK had collapsed or moved to the suburbs, leaving a large amount of abandoned land in the inner city. In response to this phenomenon, the Inner City

Act of 1978 proposed the establishment of industrial and commercial improvement areas and provided for 50% of subsidies to such areas, such as improving significant entrances and exits, adding parking lots, improving the surrounding environment, and so on. In order to better solve the inner city problem, the Local Government Planning and Land Law was promulgated in 1980, and it was proposed that the local planning bureau implement a land registration system for the existing open space and wasteland in the inner city to control the number of wastelands and free space in the inner city. Increase. At the same time, the establishment of urban development companies, the development of land information systems, and urban development assistance system, the establishment of enterprise areas in select inner cities.

The Residential and Planning Act of 1986 proposes that in addition to the benefits of corporate development, some development restrictions may be waived, such as allowing special industrial projects to be developed in simplified planning areas. This period is mainly based on tax reduction and simplification of development control restrictions. It is hoped that this series of measures will be used to encourage private enterprises better to carry out development activities.

————Related policies for the inner city rejuvenation

In the face of the recession in the inner city of Britain, the British central government adopted a series of strong intervention policies, formulated mandatory laws and regulations, strengthened the supervision and management of urban renewal and response to the function of the inner city. The region (the unemployment rate is higher than 20%, the signs of abandoned land and abandoned houses are apparent, and the population tends to lose). Special government subsidies and tax policies are implemented to help the inner city promote economic growth.

In 1977, based on a large amount of research and practice, the British government promulgated the urban white paper "Inner City Policy", proposing to develop the economy in the inner city, improve the urban material environment, strengthen social development, and alleviate social conflicts in housing, land, Support was provided for transportation, planning, environment, education, and social service facilities. The government then introduced a series of major institutional reforms, including the landscaping Urban Environment Act of 1976, which protects the unique buildings of the inner city with historical value. Street building group; The Inner City Law of 1978, the preparation of urban public transportation planning, and the inclusion of seven fading urban areas into the "Inner City Partnership Program."

After the 1980s, the British government's urban renewal plan turned to market-oriented, and the inner city revitalization and transformation policy turned to real estate development as the forerunner, and market demand was valued. The 1982 corporate district and subsequent urban

development projects (UDG, 1982) and urban regeneration projects (URC, 1987) have played a perfect example. Different from the 1970s, the Urban Development Corporation (UDC) is guided by the market mechanism and believes that as long as economic growth and material environment improve, social problems such as unemployment, education, and poverty can be solved. Therefore, the development goal should be to achieve regional revitalization and efficient use. Land and building facilities, providing pleasant housing, etc. Therefore, some people have criticized that the government policies of this period have relaxed the management of the system to a certain extent, weakened the role of planning, and lacked more long-term strategic research, which has significant limitations.

Thus, in the 1990s, urban development in the UK turned to revitalize or revitalizing the city's economic vitality. In 1991, the British government began to implement the urban challenge policy, trying to exchange planning and renewal decision-making power with local governments. In 1993, the Ministry of the Environment proposed an individual renewable budget policy, inheriting the basic concept of encouraging local partnerships in the "City Challenge" and the operation mode of local partner groups bidding for the central fund.

After 2000, the British government began to re-examine the policy of decentralized development of the past cities, recognizing that the revival of the city must only guarantee the city's characteristics and quality of life. So far, the government has begun to focus on the re-use of brownfields and vacant properties. The 2000 Urban White Paper on "Our Towns: Urban Renaissance in the Future" was promulgated and proposed policy measures to address urban life, social, economic and environmental issues. In the same year, public policy documents (such as PPG) intended to improve the design. Strategies such as quality, reduction of car parking lot supply, and increased residential density. In 2004, the "Planning and Mandatory Acquisition Law" combined localities, emphasized the role of government functions, encouraged the participation of the public, adhered to the principle of sustainable development, and played an essential role in the change of the original urban planning system in the UK.

2.1.6.2

List of relevant legislation and policies on urban regeneration in the UK

Development period	Name and year of promulgation	Description
The late 19th and early 20th centuries	Public health act (1848) The housing improvement act (1875) The housing improvement act (1890) The housing and urban planning act (1909) Greenwood housing act (1930)	The introduction of the housing improvement act was the first legal provision for slum clearance in British history.
1940s—1950s	Urban and rural planning law (1944) White paper on land use control (1944) Industrial distribution act (1945) New towns act (1946) Urban and rural planning act (1947) Housing act (1957) Housing act (1959)	The urban and rural planning act of 1947 laid the foundation for Britain's modern planning system.
1960s	Housing act (1964) Industrial development act (1966) Urban beautification act (1967) Urban and rural planning act (1968) Priority education district (EPAS) system (1968) Urban planning (UP) system (1969) Community development programme (CDP) system (1969) Housing act (1969) General improvement district (GIA) system (1969)	The urban and rural planning law of 1968 established a sound urban development planning system, which was a continuation of the urban construction in the reconstruction period during the urban renewal in autumn.
1970s	Inner city research programme (IAS) (1972) Residential improvement enterprise district (HAA) system (1974) Integrated community programme (CCP) (1974) White paper on inner city policy (1977) Inner city act (1978) Inner city partnership programme (ICP) (1978)	"Inner city policy" is the watershed of British urban renewal policy. From this time on, the focus of urban construction gradually shifted to inner city.
1980s	Local government planning and land act (1980) Urban development corporation (UDC) system (1981) Enterprise zone system (1982) UDG system (1982) Housing and planning act (1986) Urban regeneration project	The market as the leading, guiding private investment for the purpose of real estate development mode, and strive for economic growth.
1990s	Urban challenges (1991) Special regeneration budget (SRB) (1993)	Community public participation and other new contents have become the main trend of urban renewal policies in Britain in this period.
2000	White paper on our town: urban renewal for the future (2000) Planning policy guidelines (PPG) (year 2000) Best practices report (2000) Planning and mandatory takeovers act (2004)	The enactment of the planning and compulsory acquisition act brought about significant changes to the planning system in the UK, during which government functions and the public became more important and the principle of sustainable development was implemented.

France

In Western European countries, France's urban planning legislation is relatively late, and France's first local administrative system is exceptionally striking in Europe – local dual administration, representing the top-down place of the country's overall interests. The government and the "local collectives" directly elected by the residents on behalf of the collective interests of residents jointly manage local affairs. Therefore, the development process and focus of the French urban renewal are different from those of other countries.

After the Second World War, the French government faced the severe damage caused by the war, adopted a policy of active urbanization, directly and extensively intervened in urban development, and implemented the so-called "constructive urban planning" to meet the needs of development and construction needs. Planning behavior: development of new districts, reconstruction of old neighborhoods, etc. And through the implementation of economic plans and regional development plans, the state has controlled the road network, railway system, urban reconstruction, residential development, public facilities, and so on. At the same time, the rapid growth of industrialization has led to a massive influx of rural people into cities, and housing faces a massive shortage of scarcity. In 1950, the financial subsidy system for housing construction was proposed to cope with the problem of the post-war housing shortage. In the same year, the National Urban Development Fund was established. The public engineering institution and economical hybrid company established in 1951, the Real Estate Law promulgated in 1953. I have promoted the development and construction of housing. Beginning in 1954, France adopted measures to control new industrial buildings and decentralize state-owned enterprises to control the expansion of the Greater Paris area. The "Evacuation Policy" strictly restricted the population of Paris, Marseille, Lyon and the industrial regions of eastern and northern France. And the industry continues to concentrate and encourages companies in these regions to relocate to economically backward areas, thereby developing transportation.

In the 1960s, the protection of the old city and the construction of the new town were emphasized. The Divisional Protection Law promulgated in 1960, and the Law on the Protection of Historical Areas published in 1967 all stresses the protection of historical and cultural areas. In 1962, the Malraux Act supplemented the "optimization of urban areas" and "urban renewal," and provided for the restoration of old city houses, allowing the old city center to protect it as a cultural heritage. In 1967, the "Land Guidance Law" proposed the "Contract Development Zone" (ZAC) based on the principle of voluntary consultation, replacing the original "priority urbanization area" and "urban renewal" system.

After 1967, the French government began to pay attention to the relationship between urban management and development, gradually shifting from the importance of urban development to the quality of urban development. In the mid-1970s, the emergence of the economic crisis also marked the beginning of the urban crisis. Improving the existing urban living environment has become a top priority. The Administrative District Reform Act of 1972, the Agrarian Reform Act of 1975, and the Nature Protection Act of 1976 all explained the environmental quality assessment, requiring various types of planning to increase the content of environmental protection. In 1977, the state established a city planning fund dedicated to the transformation of traditional neighborhoods and urban centers.

In 1991, the French government passed the City Guidance Law (LOV), which focused on the quality of life of residents and the level of municipal services. The 1993 Urban Planning Initiative (GPUL) aims to restore the vitality of the 12 most challenging neighborhoods. In 1995, the "Regulations for Planning and Renovation and Land Development" strengthened the "Urban Plan" action and opened up the "Urban Rehabilitation Activity Area" (ZRU). The "Sustainable Planning and Renovation and Land Development Guidance Law" promulgated in 1999 wants to ensure that the urban planning and regulation system intervenes in the implementation of the land development policy through national directives and guidelines on land development, to prevent the urban space from expanding and encroaching. I am surrounding rural areas.

In 2000, the Law on Social Solidarity and Urban Renewal (SRU) was broader in its view of land development and urban development, and its vision was broader. The discussion of urban planning involved various aspects of urban policy, social housing, and transportation — public policy in different fields. Future urban policy directions will mainly be used to promote urban renewal, coordinated development, and social solidarity. To save the use of space and energy, to revitalize downtown areas, and to improve the social mixed characteristics of new urban development models; through the construction of social housing regulations, to promote the diversification of the residential regions in urbanized areas, towns, districts and other areas, Resisting social differentiation (Liu Jian, 2004).

List of relevant legislation and policies on urban regeneration in the FRANCE

Development period	Name and year of promulgation	Description
1944—1954	National urban development fund (1950) Estate act 1953	The promulgation of the real estate law facilitates the direct intervention of public institutions in the site selection and layout of new buildings.
1954—1967	Urban planning and housing code (1954) Evacuation policy (1954) Optimizing urbanized area (ZUP) system (1958) Zoning act (1960) Marro act (1962) Protection of historic areas act (1967) Land guidance act (1967) Agreement development zone (ZAC) system (1967)	During this period, the renewal focused on the construction of urban infrastructure and planned development, and the land guiding law became a turning point for the national government to try to cooperate with local governments.
1967—1982	Residential improvement system (1970) Boucher act (1970) Urban planning code (1972) Building and housing code (1972) Administrative region reform act (1972) Land reform act (1975) Nature conservation act (1976) Town planning fund (1977) Decentralization act (1982)	The 1970s was an important period of urbanization in France, when the country ended large-scale construction and entered the thinking stage. The act of decentralization marked the end of this period.
1982—1999	Inter-ministerial committee on urban development and urban social development fund (1984) Urban guidance act (1991) Town planning action (GPUL) (1993) Guidance law on planning, regulation and land development (1995) Urban planning action (1995) Urban revitalization (ZRU) (1995) Guidance law on sustainable planning and land development (1999)	During this period, environmental values were emphasized, and "communes" were established to promote the integration of the state and the local.
2000—	Social solidarity and urban renewal act (SRU) (2000)	The promulgation of the law on social solidarity and urban renewal marks a new stage in the legal construction of French urban planning.

2.2

The evolution and purposes of urban regeneration in different period

After years of changes in European countries and different cities, scholars have gradually begun to summarize the theme of urban renewal systematically. As we learned from the background of the previous chapter, urban regeneration is a broad term referring to the necessary and planned architectural activities in urban areas that do not fit the life of modern cities and require escalation. These activities are based on a combination of technology, housing, population, social issues and local economic, physical, and environmental changes. To become an attractive place for residents, other users and temporary visitors, cities always need to invent their strategies on different themes at different times. In identifying policy processes for the region, local policies need to satisfy social needs under the conditions of different periods with a focus on the strengths and weaknesses of each city. These characteristics make do the definition: urban regeneration as comprehensive and integrated vision and action which seek to resolve urban problems and bring about a lasting improvement in the economic, physical social and environmental condition of an area that has been subject to change the offers opportunities for improvement. At the same time, however, Hausner argues that regeneration has its inherent weaknesses, and some methods are short-term, decentralized, project-based, and have no overall strategic framework for city-wide development. These policies are not entirely for the protection of old things, nor new things, rather, regeneration embodies the latest iteration of an urban policy framework that has been in use since 1945. Its name and definition may have changed over the years, but its fundamental purpose in solving problems in urban development has not changed. In this paper, we divide the policy evolution of urban regeneration into five different stages of urban reconstruction, revitalization, renewal, redevelopment, and regeneration

2.2.1

Urban reconstruction

Although the entire process of urban development is almost accompanied by remediation, each city is striving to correct the destroyed social structure, economic structure, physical infrastructure, and natural environment. In the thesis, we refer to the modern urban regeneration movement that originates from the large-scale urban rebuilding and reconstruction activities after World War II. However, due to the mechanically physical environmental update that directly or indirectly destroys the original social fabric and the integrity of the internal space, which is widely questioned and reflected in the later period. Europe has witnessed the history of urban reconstructions and architectural restorations. Michael Falser, chairman of the International Center for the Study of Art and History at the University of Heidelberg, commented on "Der Tagesspiegel": "From the time people started building, they began to develop, renovate and rebuild the destroyed buildings."

In 1945, many European cities were in ruins. The war has continued to burn for years, and cultural monuments of centuries have been reduced to rubbles. In fact, not only the city was destroyed, and a large number of houses, schools, hospitals, transportation facilities, etc. were damaged, but also the people who lived in the urban center were directly threatened. The Second World War has destroyed many European cities, such as Coventry in the United Kingdom, Warsaw in Poland, and Berlin and Cologne in Germany. Generally, people choose to use the unfinished building wrecks to start reconstruction. We will do our utmost to restore the original appearance and important buildings of the city, restore labor productivity, solve post-war housing problems, and begin to make new plans and transformation step by step. This was a very logical choice in that particular period.

The Athens Charter had a huge impact on planning thought after World War II. The planning of European countries urban reconstruction was mostly based on the Athens Charter at that time. The urban planning theory of this period considered that functional division was very important. Dwelling, working, recreation and transportation are the four basic functions of the city. The urban land should be divided according to urban functions. At the same time, in the context of rapid economic growth in the post-industrial era, people were increasingly dissatisfied with the disastrous and dilapidated living environment and were eager to improve the image of the city. Under the idea that CIAM advocated the architecture must change with the development, the governments of the victorious countries have introduced the spatial planning. The old buildings in the city center have been overthrown and replaced by shopping centers, high-end hotels, offices, and advertised as high-rise "international" buildings. As the main body of investment,

the government has an absolute right to speak in the process of updating. The demolition and reconstruction of the bulldozers has greatly improved the urban built environment quality.

In the United Kingdom, for example, from the 1940s to the end of the World War II, the British government proposed to evacuate the industry and population in central London. The Greater London plan drew on the idea of taking the surrounding areas of the city as consideration for urban planning of E. Howard and P. Geddes, which reflects the concept of town and city agglomeration of Geddes. After the war, the British government implemented the plan that put forward four geographical zones from the inside to the outside within a radius of about 48 kilometers around London: the inner circle, the suburban circle, the green belt circle, and the outer circle. This plan reflects some of the main theoretical perspectives of European urban planning in the early 20th century. It has played an important role in controlling the continuous expansion of London urban area and improving the quality of urban environment, but there have been many problems in practice. The investment in the construction of the new city was enormous, and the effect on the evacuated population was not apparent. The people of the new city mainly came from the outside world. In some respects, it had increased the pressure on London itself. Moreover, this plan is underestimated for the rapid development of the urban economy in the next 20 years, resulting in infrastructure that cannot keep up with the needs of the society.

Unlike some cities that have been long-planned and well-funded, Warsaw is one of the cities that have been forced to into the flames of the War. In 1945, the Polish government decided to rebuild the city on the original site and formulated the Warsaw Reconstruction Plan. It limits the industrial development in the original city, requires the construction of residential buildings along with the existing transportation network, expands the green area and implements the city's green corridor. In the year after the war, Warsaw has recovered to 470,000 people. Some European cities took such principles to rationally restore urban infrastructure, control industrialization, expand urban service functions, increase housing, and expand the ecological connection between green space systems and cities.

In general, in the 1950s, there was an idea of restoring the face of the city, solving more realistic housing problems and creating a better living space. There was also a suburban masterplan planning idea of transferring urban centers and developing urban outer circles. Between 1945 and 1955, it was considered necessary to rebuild historic town centers and monuments, but from 1955 to 1960, Industrialization has developed rapidly, and it has become more urgent to solve the problem of housing for workers. Population and economic activities gradually break through the boundaries of the city and develop into the surrounding suburbs.

2.2.2

Urban revitalization

Since the 1960s, with the acceleration of industrialization and urbanization in Europe, the number of cities and population in the world has been increasing. The community renewal of welfare in the 1960s gradually replaced the bulldozer-style reconstruction. The 1960s was a golden period for the rapid economic development and universal prosperity of Western countries. People hope to rediscover and eliminate poverty in a "rich society" expressed explicitly as a "gentrification" tendency. At the same time, in order to prevent unplanned excessive urbanization and avoid the expansion of large cities, the concept of developing small and medium-sized cities was valued in most countries. Based on transportation and communication modernization, the urban population experienced centrifugal movement in the 1960s. The phenomenon of Suburbanization was more prominent, and the Metropolitan region was gradually unified, that is, the population is developed from the concentration of various urban points to urban agglomeration. This is a new phase of urban development. The interaction between urbanization and suburbanization has changed the spatial structure of large cities.

In the 1960s, racial discrimination caused large-scale conflicts in many cities. The further division of some American cities has also intensified since then, and millions of white residents have begun to move out of big cities such as New York and Chicago. Although there are many reasons for this, the difference between rich and poor and ethnic conflicts are undoubtedly the two most important factors. Almost all major cities in the United States have begun to suffer from such a common problem - the fact that white people and wealthy people have moved out has caused poor people to live in the cities and formed slums that are difficult to change. Most Hispanic Americans live in specific communities and poor communities in large cities. Many immigrants who were facing the pressure of survival chose to rely on having children as their livelihoods. Because the welfare system in the United States encouraged childbearing, mothers could get a considerable amount of money for having children.

Moreover, Latin American and African ethnic minorities also have a tradition of attaching importance to blood and advocating fertility, which had led to the rapid expansion of the ethnic minority population in the United States.

Many factors such as economic development and social reasons have led to the gradual reduction of the population of some historic centers, which has caused the phenomenon of suburbanization and urban centers in a recession. A large number of slums with outdated infrastructure appeared. Regional planning makes the urban structure homogenous but the

function is clearly defined. The value of urban central area has soared and formed the financial district to crowed out other functions, constantly accelerating suburbanization and new city construction, and also bringing huge urban traffic burden and many social problems such as crimes. At the end of the 1960s, the problem of developing inner cities in various countries was increasingly severe and accompanied by excessive suburbanization. At this time, large-scale slum clearance campaigns were carried out in Europe and the United States.

Urban Revitalization refers to a set of initiatives aimed at reorganizing an existing city structure, particularly in neighborhoods in decline due to economic or social reasons. The revitalized urban space and effective infrastructure can create conditions for a sufficient city, promote innovation, improve quality of life and economic development, achieve common prosperity and improve environmental quality. However, urban revitalization initiatives may be large-scale projects that are complex in implementation and operations and require innovation in technology and scope. At this time, the traditional material construction plan was developed into a comprehensive plan of material and economic planning, social development planning, science and technology culture planning, and ecological environment planning. Another new paradigm has emerged, which is the public-private partnerships (PPPs) can help promote the implementation of urban revitalization projects in several different ways. There are many measures at the sociological level and the urban planning level to realize the urban revitalization, including the construction of satellite cities and new cities, the development of high-density network to solve traffic problems, the seperation of pedestrians and vehicles, the introduction of elevated systems, etc.; at the same time, people payed more attention to the inner city about the eradication of slums, the renovation and improvement of residential buildings, and the revival of the central business district; the issues of historical districts and the adjustment of old industrial areas also became the topic of revitalization.

2.2.3

Urban renewal

Since the 1970s, the deindustrialization has had a significant and lasting impact on industrial cities. People move out of the inner city. The transformation of the industrial structure leads to the bankruptcy and external migration of the enterprises.

This vicious circle has accelerated the phenomenon of the central depression. At the same time, the phenomenon of suburbanization of some cities has appeared. At the end of this phase, all countries focused on revitalizing the inner city and launched strategies at various levels, such as policy support, thematic research and development, the establishment of funds, financial support, strengthening of urban infrastructure, transportation system construction, strengthening old district reconstruction, housing restoration and internal modernization movement, and environmental protection and other measures. The neighborhood relationship become the focus of new construction. "Return to the city" and the so-called "gentrification", as well as bottom-up community planning appeared in the city.

The "people-oriented" multi-target urban regeneration model aims to improve the environment quality, create employment opportunities, and promote harmony in the neighborhood. People are becoming more and more aware of the complexity of urban problems. Based on the previous "people-oriented thinking", they began to plan and practice the connotation of urban regeneration. At this stage, large-scale urban development projects have ceased, and urban regeneration has begun to focus on the revival of the urban cultural environment. From a government perspective, the government should focus on multi-objectives, public participation, and protection of the historical environment. As residents, they should establish independent organizations to maintain the community and the original way of life, and generate "voluntary renewal" and bottom-up "community planning". This stage has experienced the "people-oriented" thinking and "multi-target positioning" of urban regeneration, and has completed the transition from theory to practice, from "large scale" to "small scale". In the 1970s, the "community planning" of humanism became the primary way of urban regeneration in Europe and America. The bottom-up "community planning" and "voluntary renewal" gradually began to form, and it also became the main way of urban regeneration.

The Charter of Machu Picchu was a programmatic document on urban planning published by C.I.A.M at the end of the Lima Conference in December 1977. It was finally signed in Machu Picchu and named after it. The conference was based on the Charter of Athens as a starting

point. It critically inherited the concept of the Charter of Athens and criticized it for the functional division of cities and the sacrifice of urban structures.

The same points of the two charters:

Emphasize the interrelationship between people and regard it as the basic task of urban planning.

The city is a dynamic system. The urban planner must regard the city as a structural system in the process of continuous development and change, and propose the concept of dynamic planning.

Emphasis on public participation in planning - different people and different groups have different values. Planners need to express different planning judgments and provide technical assistance to different interest groups.

The different points of the two charters:

The dominant idea of the Charter of Athens is to divide the city and its buildings into several components; The goal of the Charter of Machu Picchu is to reorganize these parts organically, emphasizing their interdependence and relevance.

The cornerstone of the Charter of Athens is mechanicalism and physical space determinism. The Charter of Machu Picchu promotes social and cultural theory, arguing that space is only a variable affecting urban life, and the key factors should be the various groups in the city, social interaction patterns and political structures.

The Charter of Athens regards urban planning as a description of the ultimate state; in contrast, the Charter of Machu Picchu emphasizes the procedural and dynamic nature of urban planning.

The "Internal Policy" promulgated by the United Kingdom in 1977 pointed out that urban renewal involves many aspects of the physical environment, economy, society, culture, politics, etc., and multiple departments, which is a comprehensive solution to urban problems. The policy has focused on the comprehensiveness of urban regeneration. From the past, the United Kingdom has encouraged the spread of cities to become a continuous inner city regeneration, which is also a key node of urbanization and urban theory. The purpose of the policy is to increase the attractiveness, popularity and economic vitality of the region through the initial investment and stimulation of the government, and break the vicious circle of the original decline, so as to promote the further updating of relevant facilities and establish a benign cycle, which will eventually form a self-sustaining area.

Located in the heart of London, the Barbican Centre is the UK's largest financial and trading centre. Since the fire in London in 1666, the economic and trade zones have been strictly separated from and residential zones in this area, where it was overcrowded during the day and no residents at night with serious problem of public security. During the Second World War, the area was almost destroyed, leaving only a church and an ancient wall. After the war, to revitalize the inner city, planning and design projects started in 1955. In 1981, all construction tasks were completed, creating a good living environment for the inner city. It demonstrates the important practical significance and realization possibilities for the reconstruction of the inner city, and enhances the confidence of the city authorities to reduce the evacuation of the population to the suburbs and to avoid the declining central urban areas. The success of urban regeneration in this area has been well received by urban planning circle all over the world.

2.2.4

Urban redevelopment

After the widespread application of information technology in the 1980s, the human society as a whole began to enter the post-industrial society. Scholar Daniel Bell divided human history into three stages: pre-industrial society, industrial society and post-industrial society. The post-industrial society is based on theoretical knowledge, and the core is the competition of knowledge between people. The economic structure of European countries has shifted from a manufacturing economy to a service economy. With the gradual industrialization, the productivity of their respective industries has changed, resulting in structural changes of the labor.

The urban regeneration policy has undergone a significant change. From the reconstruction of the government-oriented welfare community, it has quickly turned into a market-oriented redevelopment of the old city with real estate development as the main form. The reason is, first of all, since the 1970s, the global economic downturn and the adjustment of the global economy have had a tremendous impact on economic growth. The economy of European countries were greatly affected in the 1980s. The manufacturing-oriented cities began to decline, leading to a large number of unemployed workers in the city, and the middle class moving out of the inner city. The focus of government work shifted to how to stimulate local economic growth. The neoclassical development model that emphasizes the role of the free market, echoes the free market policy system and forms the cornerstone of the urban regeneration policy system of the 1980s.

In the 1980s, the entire UK was flooded with various real estate development projects. Flagship projects such as commerce, office, convention centers, and trade centers have become the main local regeneration models. The British government began to reduce funding and improving government efficiency. The private sector is seen as the primary force in the rescue of urban recession. The privatization movement began to prevail. At this stage, private companies began to slowly intervene in urban regeneration projects, and established a number of private or joint urban development companies. The public sector has for the first time become a secondary role in urban regeneration. Its main task is to create a relaxed environment for private sector investment activities and economic growth. Protective renovation policies were proposed in the principle of protecting the structure and fabric of the old city, protecting the large framework such as the urban street network, upgrading the existing roads and other facilities, inserting some new contents into the space of the city, and taking great care of the large public projects

that change the urbanscape. At that time, the original public areas such as docks, industrial areas, and public transportation hubs have become the main targets of the flagship projects.

In the United States, the federal government carried out the policy to cancel or reduce funding to the city, and allowed state and local governments to be responsible for urban projects.

The distinctive feature of market-oriented urban regeneration is the in-depth cooperation between the government and the private sector. The government has introduced incentives to provide a relaxed and good context for private investment. The private sector provides funds to build landmarks and luxury entertainment and facilities in the city center to attract the middle class back to the city center and use as a catalyst to stimulate the economic growth of the old city. As a result, most of the market-oriented old city redevelopment projects have achieved commercial success and are still the most widely used regeneration model in most cities today.

2.2.5

Urban regeneration

The concept of urban regeneration was first embodied in" City Challenge" program in the UK in the 1991, where the UK central government merged 20 funds related to urban regeneration into a "comprehensive regeneration budget" .

Emphasizing the public participation is an important feature of the comprehensive revitalization of the community. The key is that those residents who have original property rights would be willing to unite their ownerships to share profits across all development gains. Robert (2000) summarizes the current urban regeneration characteristics: "Urban regeneration is a comprehensive and holistic concept and behavior to solve a variety of urban problems related to economic, social, physical and other aspects, to make Long-term and continuous improvement for the cities and regions in change".

The emergence of the concept of urban regeneration is connected closely with the rapid global capital flow and the acceleration of the globalization process. Industrial manufacturing economic activities have spread, while control and management are relatively more concentrated. The same kind of economic activities are more concentrated in the same area, and there are more suburban industrial parks far from the city center are built. The external migration of the workplace promoted the spread of the living place from the city center to the periphery At the same time, the global city itself also shows a new trend of spatial restructure, the urban function of the same nature is more concentrated in the spatial distribution.

The specific urban spatial structure is characterized by multiple sub- centers, decentralized manufacturing industry and more concentrated services.

It is becoming increasingly clear that urban regeneration should be an update to the community, not just the development of real estate and the renewal of the physical environment. The protection of historical buildings in the community and the maintenance of the social fabric of the neighborhood are as important as the elimination of recession and devastation. Because of the last stage of scientific and technological

progress and industrial restructuring, the original urban structure cannot adapt to the development of the new industries. The inefficient use of space led to the city urgently to carry out in-depth adjustments and construction practices under the new concept, and it is urgent to revive the old communities and neighborhoods. . At the same time, urban regeneration pays more attention to human, environmental, low-carbon, sustainable, ecological and other development models, and needs to develop new development strategies.

However, regeneration has surpassed its predecessors decisively as a political policy. This is due to it being an adaptable, encompassing and elastic metaphor, grounded in religious, sociological and 'quasi-medial' doctrine.

The idea of eco-city and sustainable development has been proposed and widely accepted. The concept of eco-city is based on the ecology of a city, simulating the social dimension, and the various elements of the city, human beings, nature and so on. The concept of sustainable development lays the foundation for an eco-city. People pay more attention to issues related to the human settlement environment and the sustainable development of the community. On one hand, the urban content is unprecedentedly diversified, the urban regeneration target is more extensive and involves more aspects, and on the other hand, the specific action strategy tends to be cautious, gradual, and small-scale reconstruction and neighborhood renewal, and advocates participation in urban regeneration, from government to community groups, scholars, individuals, and so on.

2.2.6

Conclusion

The urban planning idea in Europe has shifted from the physical planning under the guidance of radical functionalism to the post-industrial rational stage of "humanism" with sustainable development as the core, which is characterized by small-scale, gradual regeneration and emphasis on community planning.

1. Change of thinking object:

Since the emergency of the "humanism" and the sustainable development thoughts, there is a bottom-up "community planning" based on voluntary renewal, which pays more attention to human scale and people's needs, the improvement of human settlement environment and the development of sustainable community.

2. Change the way of thinking:

The object of thinking is considered from the simple material level, and then to the integration of material and sociology, economics and other comprehensive aspects. The urban regeneration plan is more integrated into the consideration of all levels of society. In addition to the protection of the old city, it is more about thinking and adapting to all levels of modern cities.

3. Change the selection of strategies:

In the past, the large-scale urban regeneration, dominated by developers, has changed the original urban landscape and has not been able to adapt to the new situation. The updated theory, practical content and form, and so on have become more diversified. It focus on the improvement of urban functions, the sustainability of the overall environment, and the flexibility of the action strategy itself.

3.
The development and regeneration in Italy

3.1

Italian towns and urbanization

3.1.1

History and background

As the cradle of European nationality and culture, Italy has a long history and precious cultural resources. In terms of gross domestic product, Italy is the seventh largest economy in the world, with a per capita GDP of between US$3.5 and US$39,000, exceeding the EU average.

Although Italy has the Alps and the sea as a geographical barrier, it is not a natural "geographical" term in history. Due to the obscuration of physical geography, Italy has been separated and city-states in a long historical period. More than two-thirds of Italy's regions are mountainous, and better-cultivated land concentrated in the southern lowlands of the Italian peninsula, but the area of cultivated land is also minimal, due to the Mediterranean climate, the cereal harvest is meager. In some parts of Italy, such as Venice, there is no cultivated land at all. Therefore, traditional agriculture in Italy is dominated by excellent work and processing.

Italy's urbanization process and urban development have a robust historical continuity, and growth is relatively slow and stable. Italy occupies a strategic location in the Mediterranean region. Maritime shipping links the coastal cities and areas with different resources. Economic development and trade exchanges are frequent. The emergence of cities is mostly due to the needs of commercial trade rather than agricultural production. Venice is the demand for retail business. The town that developed is typical. Italy has formed a large number of productive urban systems and networks during the Roman Empire and the Eastern Roman Empire. The Renaissance period was a critical period in which the southern Italian cities further declined, and the northern towns began to rise. The north and central urbanization levels were relatively high. The urgent centers of the Renaissance culture mainly concentrated in Florence, Venice, Rome, and Ferrara. With developed manufacturing and commercial prosperity, is the economic center of the Apennines region; administrative centers dominate the southern city. Since the Middle Ages and the Renaissance, cities have played an important role in Italy: they are independent city-states, with sovereign financial and jurisdictional powers, and are the cradle of urban and local culture. The political structure of the central city control region and the multi-center political structure of the country have continued to modern times.

After the end of World War II, the Italian Republic established. After the war, the urbanization process in Italy continued the pre-war architecture and continued to develop around the large,

medium, and small cities that have been formed in history. In the 1950s and 1960s, Italy experienced continuous large-scale immigration from rural to urban, from south to north. In terms of the proportion of the urban population to the national population, Italy's urbanization level rose from 54% in 1950 to 64% in 1970. Since then, it has been stable. By 2010, the level of urbanization was 68%, and only 40 years have grown. 4%, maintaining a relatively high proportion of agricultural production and rural population, can be described as an alternative in the contemporary developed world.

Changes in the level of urbanization in Italy since 1950
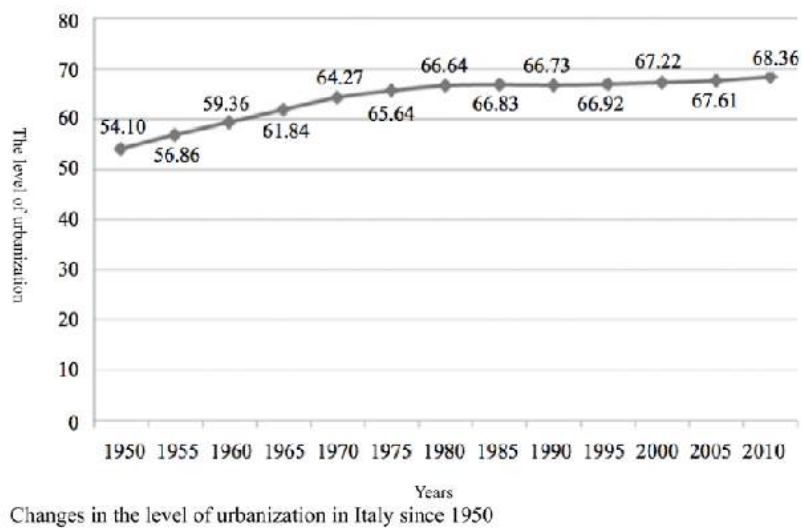
In general, the urbanization process in Italy after the war is still a fast-growing development in the northern region, and the manufacturing industry characterized by rapid growth in productivity and employment has played a significant role in this process. Similar to most developed countries, the large-scale population migration after the war and the healthy natural population growth triggered the upsurge of building houses in Italy. Most of these houses were built in the suburbs of the time, and about 25% of them were public housing. The urban development in the 20 years after the war was highly concentrated, and the big cities got faster growth. For example, the population of Milan increased by 30% during this period, and the people of Turin increased by 36%. On the other hand, a regional imbalance has expanded. In 1965, the three wealthiest provinces in Italy accounted for 26% of the country's income, while the poorest three regions accounted for only a tiny 0.67%.

Since the 1970s, the metropolitan area (città Metropolitana) has been proposed as a possible way to resolve regional imbalances. The population and employment of central cities began to spread outwards, and "urbanization" rather than "urbanization" "Become the main driving force and characteristics of urbanization after this, the distribution of Italian towns has become increasingly scattered rather than concentrated, and the population of many urban centers has

begun to decline. For example, the urban population of Milan fell from 1.7 million in the 1970s to 1.3 million in 2000, and Naples fell from 1.2 million to 1 million. Urban growth during this period began to favor the fringe of large cities, especially in areas with excellent transportation links and extensive public services. With the expansion of regional and urban autonomy, more investment has led to small and medium-sized cities. In the 1970s, under the impact of the world economic crisis, after the left-wing government took office, it focused on serving vulnerable groups on the margins, safeguarding the rights and interests of citizens, providing public housing for workers and low-income groups, and strengthening regional infrastructure construction. However, in the 1980s, the pace of public housing construction in Italy slowed down, and small-scale projects replaced large-scale urban and infrastructure development. Due to the decrease in the share of public housing and the rise in housing prices, the migration of population outside the central city has further intensified, and the outward movement of employment opportunities has accelerated the pace of this phenomenon. At the turn of the century, the importance of metropolitan areas and urban networks continued to be emphasized, social and environmental awareness began to increase, and environmental legislation became more stringent. Due to Italy's rich historical and cultural traditions, cultural heritage has become more and more recognized as a region's wealth. The emphasis on housing has been replaced by community construction and infrastructure construction. The government no longer subsidizes the property rights of the houses, and the central city continues to extend from the old city.

The process of continuous decentralization accompanies this decentralized development model by the central government. When the Italian Republic founded in 1948, power highly concentrated in the central government. The establishment of the region in 1970 was a necessary measure for the reform of the national decentralization system. The subsequent change of the regulatory system was a process of expanding local autonomy, including the municipal government that tried to establish independent financial power. In 1990, Italy provided legal guarantees for the establishment of a municipal government, trying to develop a municipal government above the city government in a region with a high degree of urbanization. The metropolitan area includes a close socio-economic and infrastructure within a specific scope. A metropolitan government manages Contact, large, medium and small cities, towns and villages with cultural and geographical homogeneity. In 1990, ten urban areas were proposed, mainly in central and northern Italy, including Turin, Milan, Venice, Florence, and Bologna. Later, in 2000 and 2009, Italy revised the regulations on metropolitan areas. However, since the delineation of the metropolitan regions involves the adjustment of provincial and municipal administrative divisions and the change of authority, there are not many successful cases in this area.

3.1.2

The current structure of Italian area

Today Italy has three levels of government under the national government, namely the region, the province, and the community. The whole of Italy divided into 20 areas, and under the part, it further divided into 110 provinces. The "province" of Italy is roughly equivalent to the scale of China's prefecture-level cities or counties. It is also very similar to the administrative system of the cities and counties in China. It adopts the management mode of the central city (Centro città) to control the hinterland (hinterland). Each province centered on a port. This center may be a small city or a large city like Rome. When the city's population is more significant than 50,000, the city becomes a "provincial capital." Under 110 provinces, it further divided into 8,100 municipalities, which is equivalent to the scale and scale of China's towns and villages, with populations ranging from thousands to tens of thousands.

The distribution of large, medium and small cities in Italy is relatively balanced, and there is no such phenomenon that the capital of other European countries such as France or the United Kingdom is significantly larger than other cities. There are currently three major cities in Italy, located in the central, northern, and southern parts of the country, namely Rome, Milan, and Naples. The population of the three cities is not large. According to data from the Italian National Statistical Institute in 2008, the urban population of Rome is 2.7 million, with a population of 4 million in the hinterland; the urban population of Milan is 1.3 million, and the total population of the hinterland is 3.9 million; the urban population of Naples is 960,000, and the population of the hinterland is 3 million. The combined population of these three cities totals about 5 million, accounting for 8.4% of the national population.

In addition to these three major cities, Italy has 12 medium-sized cities with a population of over 200,000 and below 1 million, including Turin, Genoa, Florence, Venice, Bologna, etc. The total population of the city is 4.7 million, close to living in large The population size of the city is about 400,000 per medium-sized city. These 12 medium-sized cities mainly located in the southern and northern coasts of Italy, and also include the inland capitals of some provinces (Figure 2).

At the same time, Italy has 132 small cities (that is, the urban population is more than 50,000 and less than 200,000). The urban population living in these small cities is about 11 million, and the average population of each small city is 83,000. Among them, 62 small cities located in the hinterland of three major cities, and the other 70 are relatively independent central cities and provincial capital cities. In addition, Italy has thousands of towns with less than 50,000 people.

In summary, about half of the urban population in Italy live in small cities, another quarter lives in large cities, and a quarter lives in medium-sized cities. Italy has the characteristics of relatively balanced large, medium, and small cities, the distribution of multi-center urban systems and the administrative system of urban management in the rural hinterland. As mentioned above, the formation of these characteristics is related to the unique historical process of urbanization in Italy, and also related to its unique physical geography, political and humanities traditions and technical, economic aspects. Due to the late reunification of Italy, the historical period of division and rule between the kingdom and the city-state is relatively long. Also, the local self- government policy emphasized since the 1970s has formed a more decentralized urban system structure.

Large, medium and small cities throughout Italy

On the other hand, Italy has less heavy chemical industry, but mainly light industry and handicraft industry. The degree of intensification of industrial enterprises is not high, and the scale is generally small. Workshop-style small enterprises scattered in the vast urbanization. In the rural hinterland, under the support of the transportation infrastructure network with dense borders, enterprises and enterprises maintain close economic and social ties, and participate in international market competition in the form of "cluster" rather than "group." Therefore, unlike the fact that the cities brought by the economic prosperity of most European and American countries are gathering more and the scale of enterprises is expanding, in Italy, the urban system is more dispersed with economic development, and the complex network of small and medium-

sized enterprises has successfully replaced traditional heavy industry. In the department, a new type of public system has emerged, and its economic development has also been unique in southern Europe, presenting an "economic miracle of Italian characteristics." In addition to the high-density metropolitan area, Italy also has a vast and well-balanced urbanization area consisting of small and medium-sized cities, municipalities and villages supported by excellent transport infrastructure.

3.2

The regeneration in Italy

3.2.1

The concept of regeneration

The idea of urban regeneration was proposed at the end of the nineteenth century until the 1960s when it was applied to urban development on a large scale. In general, it did not have a long history. At the first urban regeneration seminar held in the Netherlands in 1858, the basic concepts of urban regeneration were explained, namely, the repair and renovation of the houses in which they lived, for streets, parks, green spaces, and weak residential areas. Such as the improvement of the environment to form a comfortable living environment and the behavior of the city. These include industrial restructuring, population movement, building demolition, and the attribution of land acquisition rights.

After World War II, European and American countries generally began a large-scale urban regeneration campaign, to restore cities that were hit by the Great Depression of the 1930s and the destruction of the two world wars, especially the problem of housing deprivation. The first urban regeneration movement in the West mainly characterized by large-scale "push-and-reconstruction" of the declining areas of the city. However, this "big demolition and large construction" update method did not achieve the expected results, but to a certain extent, brought significant damage to the city. Such as the collapse of traditional neighborhood relations, the disappearance of urban cultural characteristics, etc., and triggered a series of acute social problems.

After the 1960s, European and American countries have reflected on the previous urban regeneration movement, actively exploring and implementing a more "prudent" and "harmonious" urban regeneration strategy. In practice, they gradually realized that urban regeneration is not only the real estate development and the renewal of the physical environment but also the historical and cultural and "protection" of the neighborhood society.

3.2.2

Timeline of regeneration

3.2.2.1

After WWII——70S—INA-House

After the end of the Second World War, the reconstruction process of this war-torn country was so unexpectedly efficient, which was later called the "Italian miracle." In this phase, Italy has developed a dual pattern: industrial areas against agricultural areas, modern capitalist society against backward semi-feudal communities, and rapidly growing urban systems against the gradual decline of the rural world.

In this period, as a planner, there is not much to say, because most of the phenomena are the result of political and economic choices. A large number of housing and urban problems have been shelved, or allowed to operate in the real estate market, and soon land speculation has become a significant trend. Regardless of where the private developers are developing, the city government should provide the necessary infrastructure for these developers. However, the municipal government has not fulfilled these obligations, and because the reasonable taxation has not been carried out, the land is often directly Speculators control.

Based on such a background, the Italian Parliament proposed the INA-House Plan (1949-1963). On February 28, 1949, the Italian Parliament approved a draft regulation on increasing the occupation of workers and promoting the construction of workers' houses and formulated a plan. It is used to build affordable housing, the INA-House program. The program, which lasted for fourteen years, represents an essential stage of post-war economic policy and is one of the most important, consistent, and universal implementation experiences in the Italian social housing sector. Providing healthy and modern housing for the city, accommodation in new urban centers or communities offers thousands of families the possibility to improve living conditions. For Italian urban planners and architects, this also seems to be a real opportunity to shape the rapid and decentralized expansion of Italian cities.

The legislative process of the bill began in July 1948 and was submitted to the Council of Ministers by the then Minister of Labor and Social Security Amintore Fanfani. A few years after the end of World War II, more than a month after the establishment of the V De Gasperi government, the Minister intended to solve the unemployment problem through the development of the construction sector and to promote the economic recovery of Italy better. Since 1942, Fanfani has been concerned with housing issues and has addressed various social

poverty issues in his Colloqui sulcate article published that year, emphasizing the centrality of housing degradation in determining poverty.

The plan is funded by a hybrid system as a means of re-launching the economy and employment, establishing economic housing, and also "institutionalizing charity" as a social plan to meet the needs of the poor. The committee that implements the program is an institution that conducts general supervision, with the head of Guara, the enactment of regulations, the allocation of funds, and tasks. On the professional side, the plan is coordinated by INA-Casa Gestione and directed by architect Arnaldo Foschini. On April 1, 1949, architect and urban planner Giuseppe Samonà defined a "great residential machine." On July 7, the first construction site was completed in Colleferro, near Rome; until October 31, More than 650 companies across the country have been put into operation. The "big machine" is producing at full speed, producing 2,800 rooms per week and providing housing for about 560 families every week. Until 1962, 20,000 construction sites, large cities and small towns throughout Italy provided work for 40,000 construction workers each year.

The program has built about 2 million rooms over the past 14 years, and more than 350,000 Italian families have planned to improve their living conditions. According to the survey, 40% of households live in cellars, caves, barracks, basements, and 17% live with other families before moving into new homes. Many people come from rural areas, immigrants from the south, and many refugees from Istria and Dalmatia. Therefore, the actual effect of this plan is beneficial.

However, at the beginning of the plan, Italian urban planners did not doubt the intention. From the post-war period, urban planners sharply demanded the development of a national strategy and a central agency capable of coordinated reconstruction, and their extensive national planning policies — disappointed and lost confidence in the hope of an organic expansion of Italian cities. And due to the increase in the occupation of workers, in Turin, Milan and Rome began a self-sufficient ecological community. These are the most exciting initial experiences. Italian urban planners cannot but be satisfied with the first implementation of their project (Presidential speech at the opening of the conference, Proceedings of the 3rd session of the National Urban Planning Institute "Urban Planning and Industry," Milan, 1951, "Urbanismo", 1951, 8, Page 8). Once the initial doubts were overcome, the program began showing the technicians the opportunity to redeem the "degenerate reconstruction" that has been done so far. In this vast new district plan promoted by the state, they now see the possibility of influencing urban development and the material and social forms of cities. INA-Casa seems to be the first real opportunity to achieve "reconstruction," and neighborhood units have proven to be useful materials for shaping the intangible and extensive urban growth that has spread to Italian cities,

spreading them to vast local territories. Residents began to feel that the community became an integral part, and finally, even on the land of our country, they tried to reproduce the European experience that had been achieved - and for a long time - the garden city and the self-sufficient community.

Buildings, public spaces, gardens, kindergartens, schools, churches, and community units form a new urban part. From a morphological, functional, and social perspective, part of the city is self-sufficient and "complete," or trying to do so. Communities and their homes, collective facilities, and open spaces have not been proposed as simple physical conditions for existing cities. From the perspective of the community, it is expected to form a civic community; it not only improves the quality of personal life and the family core in the family environment but also enhances the living space in outdoor spaces and collective facilities. It is these common spaces that promote new residents. Relationships and encourage community development.

Some of the areas built under the plan now form the main content of Italian twentieth- century architecture and urbanism and are elaborated between different urban, spatial, and community concepts. It is not only the most famous interventions designed by renowned architects but also the efforts of project participants to improve and disseminate the quality of design during this period. INA-Casa has achieved good results because it has made a series of choices to control and coordinate the design of interventions.

Initially, the selection of the designer's competition, which was a private registration for the "INA-Casa Designer," played a decisive role. Consistent with the "anti- industrial" approach and the exclusion of prefabricated use, the path chosen for community design excludes the centralized drafting of standard projects but envisages the extensive participation of Italian designers, which in turn facilitates the reconstruction of the free profession in the construction industry. The program relaunched the building-related job. In the past few years, there were 17,000 Italian architects and engineers, and about one-third of them participated in this experience.

The mission from the agency provides a vital opportunity to resume work for professionals who have been active before the conflict and for the youngest to start their professional activities. It can be said that the plan represents a tool that expands the profession of workers - as its stated goal - the occupation is an Italian designer.

Neighbors, economical homes, and people's homes provide themes for these designers, not just technology, but also ethics. They are committed to improving the living space of our clients, which are "invisible" to some extent, consisting of thousands of families who need healthy and

dignified housing, which provided to architects, engineers and city planners — an opportunity to measure your social responsibility. The theme "Homes for All" helps to characterize it as a "public role".

The construction office has an important function of communication quality in interventions across the country, and its task is to verify the quality of locally developed projects based on very fast procedures. Many architects later recalled how they sent the drawings on the top floor of the INA building to Rome in the morning, and the project was corrected and approved in the afternoon.

The guidance and coordination of the plan are also carried out through a small "manual" published by INA-Casa, collecting recommendations, guidelines, programs, examples, designing housing, buildings, cores and communities through guidance rather than codification, attempting to intervene in all interventions. Measures are attributed to a specific technology, construction, and city quality while avoiding excessive recognition of program achievements. The examples provided are not presented as a standard for the application, but as a model to be interpreted and redesigned, while following the needs and conditions of different local situations.

Today, the value of this experience still reflected in its material achievements, the communities established in the 1950s and early 1960s, but in the second half of the twentieth century, communities surrounded by very chaotic urban growth and inundated communities continue to emerge. There are recognizable faces in the space of the Italian city. A consistent modern heritage requires value-added interventions that combine protection and redevelopment.

3.2.2.2

70S — 80S — Bologna

With the economic growth of the city and the development of the world economy to a certain level, people began to re-examine the definition of "development." In the end, the economic rise at the cost is the so-called "development," or the economic development while paying attention to tradition and Is environmental protection a real "development"? After realizing this problem, the urban cultural heritage as a symbol of urban historical development has been gradually taken seriously. European and American countries have started early in the protection of ancient cities, and the effect is pronounced. Bologna, Italy, is one of the best cities in Europe and the United States. Bologna has long established relevant laws and regulations and has used some economic means to provide financial support for historical protection. It also educates local citizens on historical and cultural protection and pays attention to the cultivation of their awareness of protection.

In essence, the city is an organic whole with human beings as the main body, relying on the natural environment, based on economic activities, close social relations, and continuously operating according to its laws. Like bio-organisms, urban development also undergoes the process of formation, growth, prosperity, decline, and renewal. Urban Regeneration believes that old city renewal is an automatic and self- improving function of the city. When urban development tends to decline, and municipal services are declining, without the intervention of urban renewal mechanism, the city Will gradually disappear to death. Therefore, the city must realize its metabolism through the renewal of the old city. The essence of urban development is the process of continuous urban renewal. The regeneration is the source of the city's development momentum to avoid recession.

At the same time, urban development is a process of continuous accumulation of civilization. As a gathering place for human production and life, the city is not only a suitable carrier of cultural development but also a core force for nurturing and promoting the evolution of human civilization. The famous German philosopher and historian Spengler once commented that cities produce almost all the great civilizations of mankind, and world history is the history of cities. "Without cities, civilization is rarely likely to rise." The old city, which has a large number of historical buildings and traditional neighborhoods, not only continues to bear certain urban functions, but also records rich historical information and cultural memories, and plays a unique and essential role in the inheritance of human civilization. Therefore, the old city update must be based on reasonable protection.

"Protection" is a concept that makes the city harmonious and sustainable. A large number of practices in European countries show that the historical and cultural heritage and the environment they have dedicated to protecting are becoming their most valuable asset and the source of life and charm of the city. However, "protection" does not mean that it does not move. As a modern city, only historical memory without advanced functions is unsustainable, the rapid development of science and technology, the production and lifestyle of the information society, and the long time of tempering. Many ancient areas have been unable to adapt to today's requirements in terms of structure and function, such as aging houses, outdated facilities, structural imbalances, functional decline, development delays, etc. These physical, structural, and functional discomforts are causing urban development. The trajectory breaks, so it is necessary to update it. The crux of the matter is how the new construction is unified in the existing environment of the city. How to inherit and promote the city's existing texture and historical and cultural heritage, while giving it a new spirit and function of the times, adapting it to the current and future of the city. Development. After the failure of the "big demolition and large construction," European and American countries adopted a more sensible and prudent attitude towards the renewal of the old city, and gradually explored four ways (4R mode) in practice, namely: Reconstruction and remediation. (Rehabilitation), development, and utilization (Redevelopment) and overall protection (Reservation).

Bologna is a city in northern Italy with a population of about 500,000. The historic central town has a population of about 100,000 and covers an area of about 140 square kilometers. The area is small, and its history is extremely long. Because it is located between the Po River and the Apennines, it is surrounded by mountains and rivers. It was inhabited as early as ancient Greece and Roman times. The Romans settled in the village in 189 BC and became one of the largest cities in northern Italy during the Roman Empire.

After the decline of the Roman Empire, the architecture of Bologna was almost destroyed, and only the eastern part of the newly built city was protected, forming the urban center of the Middle Ages and the Renaissance. In 1088, Bologna established the first university in Europe, the University of Bologna. The buildings of that period, including the City Hall, Basilica and Palace, became the most crucial building complex in Bologna, and have been preserved intact under the proper protection of the citizens of Bologna. The preservation of Bologna's entire historical buildings is inseparable from the local government's cultural heritage protection policies and guiding principles.

Bologna is the first city in the world to propose "protecting people and houses together." It is not only to protect the buildings, but also to keep the inhabitants and protect the ancient life of the city. This is the complete protection of the culture. This historical city in northern Italy has the

most significant medieval and Renaissance buildings in Europe. Before the renovation of the old city, the downtown area of Bologna was a place where real estate developers were coveted. They hoped to demolish old buildings and drive away from residents through the ancient city to make real estate development and make huge profits. However, the low-income residents who lived here depend on the employment opportunities and social connections in the city center and are reluctant to relocate. This has made the old city's transformation resistance a lot, and the living problems of the bottom-level residents of the society have become very sharp.

Guided by this background and ideas, the Bologna government completed the urban master plan in 1960 and proposed the following three principles:

1. The policy of "anti-development." Bologna should control the speed of development to avoid too fast and should make full use of the existing service facilities without the need for new and expensive renovations.

2. Give priority to the planning of corporate housing for low-income groups. All local government resources should aim to improve the living conditions of the working class and provide a good quality of life. The specific construction work must be made public. 3. Protect historical heritage and the natural environment. After seeing the unfortunate fate of the United States and most European cities, I hope to avoid the destruction caused by the reconstruction of social structure and social development. I hired the famous Roman architect Chai Latati, to formulate the protection plan for the ancient city.

Then, in 1970, the central district's overall protection plan was adopted. The main point is to use public housing funds to improve the living environment of community residents and protect ancient buildings. At the same time, in the form of law, it is necessary to retain more than 90% of the Aborigines after the renovation of the central area. And the protection plan emphasizes reorganizing urban life, rather than merely changing the surface or reducing road transportation costs. Analyzing historically culturally valuable buildings, establishing rules for protecting ancient cities; and scientifically using public housing funds to protect historical environments and Improve the conditions for continued living; selectively use uninhabited, historically valuable buildings to provide social services that are easy to understand and educate; and emphasize the public participation in planning at all levels. The specific practices in the plan are as follows:

■ The government has signed a contract with the local private property owner to provide technical and financial assistance to the individual property owner who agreed to the renovation and renovation in the designated downtown protected area. The private property owner will still lease the house to the original inhabitants after the house repair is completed.

■ Legally, the rents of low-income families in the community cannot exceed 12% to 18% of their total household income, and the government provides rent subsidies to some low-income residents.

■ Adopt a small-scale rolling update method. After the renovation of a house is completed, the nearby residents will be moved in, and these residents will be involved in the subsequent renovation work and put forward their own opinions.

The overall protection of the downtown area of Bologna has achieved remarkable results: the historical features, original structure, and global environment of the downtown area have adequately protected and improved. The local traditional neighborhood structure has been maintained, and the residents' residence has been The conditions have been greatly improved; in the process of updating the old city, the community's sense of belonging and cohesiveness has been dramatically enhanced; the protection significance of historical and cultural blocks has been understood and supported by more citizens. In short, through the overall protection, the Bologna government effectively protected the traditional features and social structure of the downtown area and fundamentally avoided the historic damage caused by speculative development to the city and the aristocratization of the downtown area. Social destruction.

In addition to old blocks, "overall protection" is sometimes applied to the entire old city, and the overall protection of the ancient city is often referred to cities with a long history and precious historical and cultural resources. For a long time, Rome used the form of government legislation to protect the ancient ruins of the Roman city, the Roman City Hall, the Pantheon, the Colosseum, the Arch of Constantine and other cultural relics, historical buildings, and urban features. The city's development needs and advanced functions are taken up by the new city, New Roman, built near the ancient Roman city. The practice of protecting the old city and developing a new city in Rome effectively solved the conflict between development and protection, modernity and tradition, and was followed by many cities in the world.

In the "4R" model above, "reconstruction" is the most expensive and radical method, and is generally only applicable to areas of the city that have suffered severe damage or where essential functions have been lost. However, regardless of the European and American countries or China, this "big demolition and large construction" old city renewal has caused "irreversible" damage to the city, so in practice, this method needs to be used with caution. Remediation, development and utilization, and overall transformation are more moderate, more prudent, and more economical ways of urban renewal. Compared with reconstruction, these methods can often achieve better results with fewer funds, and can also reduce the Social problems coming. However, urban renewal is a complex system of engineering. In practice, multiple channels are often needed to achieve the goal. Therefore, remediation, development and utilization, and

overall protection are commonly used in combination, but the focus is different according to the actual situation.

The protection and renewal of the old city are one of the most challenging problems in urban construction, and the operation mode of urban renewal, especially fundraising, is a prominent difficulty. Urban renewal must involve the adjustment of interests. How to coordinate public interests, commercial interests, and the interests of indigenous peoples is a problem that must be solved in the process of urban renewal.

Since urban renewal is a public welfare undertaking, a high-risk investment, and no government-led, it is difficult for civil society to start on its own, so the role of the government in urban renewal is crucial. It must not only firmly grasp the direction of the transformation of the old city, prevent the destruction of historical and cultural blocks by various speculations, but also fully absorb the opinions of the people so that the urban renewal can truly achieve the ultimate goal of promoting urban development and satisfying people's needs. The current standard practice is the cooperation between the government and the private sector and limited market operation. That is, the government is leading, formulating urban renewal plans and policies, guiding and stimulating private enterprises to participate in urban renewal construction, while the community plays a role from consultation to participation, and eventually becomes the owner of urban renewal. For example, the US Urban Construction Promotion Law stipulates that the transformation of old cities must fully guarantee the participation of multi-interest groups, including construction and land renters, owners, and related business enterprises. In this way, this multi-partnership has also proved to be a more inclusive update model of "bottom-up, top-bottom combination."

3.2.2.3

80S — 90S — Genoa

Many scholars believe that after World War II, especially in the 1960s, there was a turning point in the principle of urban planning for existing cities, which is also known as the "history of the historical center." However, focusing on Italy's planning experience in existing cities, we can easily find that an active historical division must consider its problems before and after. In Italy, in recent years, the most iconic historical center renewal experience has come from Genoa. Overall, all benefits are operational in the case of urban renewal in Genoa. In other words, its management capacity combines many different sources of funding with ordinary or extraordinary planning projects and tools to create an effective update process in the waterfront and the old city center.

Genoa is often described as a city that periodically thinks about its economic base and identity. Therefore, in order to truly understand the city's latest transformation, it is necessary to review its past: on the one hand, we must take into account the main stages of modern urban construction, and on the other hand, we must consider the basis of the changes in the past 30 years.

During the reunification period in Italy, Genoa was just separated from the previous city-states. Facing public debt financing from half of Europe, it tried to transform itself from an industrial city to a port city. This transformation phase lasted for more than a century, during which Genoa continued to grow in terms of city size, population, trade, and industrial production, becoming one of Italy's major cities and further promoting Genoa in the 20th century. The second half became the capital of Italy's "first capitalism."

In the 1980s, the crisis in the port economy and the public sector marked a sharp turning point. According to the data, the number of workers employed in the manufacturing industry dropped from 169,000 in 1981 to 99,000 in 10 years. The number of inhabitants reached a peak of 848,000 in 1965, and fell to 763,000 in 1981, 679,000 in 1991, and 610,000 in 2001, compared with 600,000 in 2015. Traditionally considered to be the historical center of Genoa - Pre, Moro, Magdalene and the old port area, a total of 198 hectares of land - the population of the population from 55,500 in 1861 to 52,000 in 1951 It remained unchanged, and it fell by more than half in the next 40 years (only 2.23 million in 1991). But in the next 20 years, it maintained a relatively stable number (23,500), with the city. Compared to the overall population, there is an opposite trend. This marks a turning point in the city, a transformation that has only been re-

launched in the historic center, and an opportunity to rethink the new economy and urban identity.

The so-called "Plan for the City," presented in the early 21st century as "a strategic plan with operational attributes", combines urban design with economic and social content. The primary feature of its emphasis is a concern for action and feasibility: "a clear, not very complex... tool, but operational, and can be summarized into about 100 data sheets", clarifying The goal of the intervention, the related resources, and the number of practices and the operators involved. In the case of Genoa, the framework of "planning for the city" constitutes a definite core of the planning of the historical center, which is presented in a unique document format called "operational planning of the historical center" (Operational Plan for the historical Centre).

Genoa's historical center: within the dotted line is the "2001 Operational Planning" scope; the solid line is the UNESCO World Heritage Site.

Genoa's initiatives in the historic centre are mainly characterized by the ability to coordinate different funding channels, especially those related to significant events (Columbus Celebration 1992, G8 Conference 2001, Genoa's European Cultural Capital 2004), and Effective coordination of "comprehensive projects" – in the process of updating, through active public guidance and increased private participation. Genoa's efforts to improve public space through a series of initiatives to improve road paving, increase public and lighting facilities, refine urban

landscapes by reshaping building facades, and establish car-free zones, combined with the reshaping of old ports to achieve history. The re-use of the coastal area in the central region has an indirect impact on the recovery and micro-transformation of the completed heritage. From a practical standpoint, these initiatives have attracted new residents and new urban users to enter the historic center (including students, tourists, night-time casuals, etc.) and thus play an important role in the urban renewal process.

The results of these initiatives are very different from the tourism-oriented approach, bringing a mix of old and new populations and their lifestyles. The goal of tourism is to turn the historical center into a theme park for tourists. Genoa's practice is to re- explore and develops its historical center and waterfront space, making it a comprehensive and livable place to serve diverse urban residents, including permanent residents and temporary populations.

However, one of the factors that triggered the transformation of the inner city of Genoa was the establishment of the University of Genoa School of Architecture in Stradone di S. Agostino in the historic center, where the original site was St. · The monastery of San Silvestro. This opens up the subsequent update process for some urban areas. The inner city of Genoa was ruthlessly hit in the 1980s, manifested as "deteriorating historical architectural heritage, increasing social conflicts, increasingly marginalization... and increasingly marked by crime and corruption. The social image of identity".

After the establishment of the School of Architecture on the site of the Old Town Abbey, students began to migrate to the area and rented houses at preferential prices, which further promoted the revival of the local retail and wholesale industry and the spontaneous development of the architectural heritage. Sexual regeneration, which also led to the re-identification of a "patchy" in the late 1990s, gradually attracted the integration of other social groups.

Therefore, the renovation of the ruins of the Monastery of St. West Visto – the establishment of an architectural school on its original site - triggered an overall urban renewal process. Then, a series of measures implemented in the old city, such as the regeneration of the waterfront space (a set of well-known interventions designed by Renzo Piano for the aged port facilities), open underground space (located near the historical center) And the three-stop subway in the waterfront area. The quality of the public open space, the increase in culture and museum activities, etc., combined, has produced a specific superposition effect.

The historic downtown area has become an attractive place to live and work, as well as a gathering area for entertainment and leisure activities. This is also a careful exploration process for real estate reassessment and the ensuing phenomenon of gentlemanship. The renewal of the

historical center of Genoa is adequately reflected in the parallel growth of a series of capital values: although this can be considered a specific element of the adopted urban policy and a strong indicator. However, it also outlines the boundary of the gentlemanship phenomenon. Although the latter is not homogeneous, it will inevitably bring about new problems: social polarization and the expulsion of earlier residents, between temporary population groups and long-term residents. In both aspects of time and space, there is a "gentle animation" conflict on how to use the historical center. To manage these new imbalances and tensions, it is an effective means to take appropriate measures and raise funds to achieve social housing interventions in the core historical areas. However, this is not enough at present.

The correct understanding of the Genoa Urban Renewal Project needs to be placed within the framework of the evolution of Italy's planning approach to heritage and historical centers. The Italian urban planning tradition in the development of issues related to the Old Town can be grouped into three phases. These three phases have significant differences in planning topics and practical operations.

1.Old town planning method: from "gutting" to "pruning."
In the early days, mainly in the second half of the 19th century and the first few decades of the 20th century, historical cities were necessarily considered to be obstacles to modern development. The problem that urban planners must solve is how to reshape the ancient city to meet the needs of modern cities, namely how to adapt to the old city to the new city.

There are many or widespread or profound interventions that have been conceived, which provide a deep redefinition of public organizations (Haussmann's proposal for Paris can be seen as such a prototype), a pair of existing ones. The reorganization of urban textures adapts to the new additions in the city. The open space (road network) constitutes the focus of urban planning intervention. At the same time, the completed historical area is considered to be a plastic material that can adapt to the transformation brought about by the new part.

Among them, the most extreme intervention in the operation of reorganizing the urban layout is to gradually save the floor more cautiously and humbly. Therefore, at the end of the 19th century, "cull" technology was widely used in an urban principle consisting of an engineering-oriented essential culture. Then, the planning methods that originated from history-art culture emerged, and the "culling" technology began to be attacked. As a result, the awareness of the protection of historical urban heritage is also continually improving. First reflected in the concept of "monument" and "isolation" techniques, for example, the removal of a few buildings around the monument, so that the memorial Appearing in the updated urban landscape in the form of a landmark building, further emphasizing the value of the memorial.

However, in the early 20th century, a new consciousness about the protection of historical sites gradually emerged, not only because of the artistic significance of historical sites but also because of their essential record value. This is a new vision, a practice of demolition and isolation. Criticism also raises objections to the "wide prejudice" that "the artistic and historical heritage of our country can be equated with those of the most important monuments and the most prominent works of art."

In such a cultural context, a new approach has been born, namely urban "pruning" or "thining out," which minimizes the existing built-up space through accurately targeted interventions. These concepts include two extremes: one is to preserve only the landmark monuments in those urban blocks, and the other is that the "environment" should be protected holistically.

2.A new structural role from the historical center to the ancient city
The second phase, after World War II, experienced a considerable turning point in the planning method for existing cities—the historical center was understood as a "unitary monument" and preserved. The city's past – its historical center – is considered a legacy that needs to be maintained. Therefore, the mission of urban planners has become how to protect ancient urban structures in the rapid development of modern cities. Correspondingly, urban planning in the historical center tends to transform into a unique plan for particular objects: an "island" is subject to "special" technical design guidelines that will historically center the area with other parts of the urban fabric. Separate and exempt from the power and rules that transform the latter. Therefore, the full space is no longer considered to be freely operable, or to some extent, can be sacrificed. Instead, it is considered to be worth protecting because it retains the value and integrity associated with it as a whole. The focus of historical center planning is on the full space and the protection of its different nature and qualitative elements. This new approach defines technical, operational steps and also produces a set of three hierarchical rules, including detailed control of all usage, ensuring that they are appropriate and coexistent. It is carefully examining the relevant attributes and the intensity of intervention in a single building. To meet the proper protection, renewal, and transformation requirements; to develop special rules for the physical output of the responsibility to ensure that it is subject to specific attributes (the historical center area is considered a resource pool here).

The third phase began in the early 1980s, and the planning for historical cities was no longer isolated from the world, nor was it cut hard from the overall urban population, but became a global restructuring plan for the city as a whole and its surrounding areas. At this stage, urban planning challenges the graphical concept of using a historical center as a unified individual block. The historical center is no longer a priority for absolute value. Historical significance has

become a tool that assists the surrounding area in value distribution or functional positioning, identifies parts of urban areas that have particular connotations, and promotes positive improvements in contemporary urban fabrics.

In contemporary urban planning, the main feature of planning for historical cities is inclusiveness: no longer limited by the historical center, it affects all parts of the existing city, regardless of the origin of its time. At the same time, its management elements are also compatible with reconstitution conditions. Ancient city as a "selector" of settlement value, its significance originates from the reorganization projects defined by urban planning and becomes an indispensable part of the overall urban organization plan.

3. The historical center area as the infrastructure of today's urban environment
For ancient cities, the significance of the new city plan is to consider the historical center as an "urbanity infrastructure" and further emphasize its characteristics – a gift to contemporary cities: one can change the current city The potential for livable conditions in the region. The historical center is neither space for detachment nor a place for self-reference. It is embedded in the contemporary urban area and plays an essential role in the overall organization of the latter.

Although the transformation of land use can affect the historical center, this may be meaningful and sometimes has a significant impact on its characteristics, but the historical center constitutes a "townscape" and is in its configuration, played a resilience and a non-replicable role. In the non-renewable urban area of this type of historical center, the dynamics of its physical space cannot be re-established. This is also the place where the historical center is different from these areas, and any other contemporary urban space and There are significant differences in "urban landscapes." At the same time, it cannot be replaced by other parts of the city because of its unique and unique performance.

As a city "framework" and a high-intensity related venue, the historical center has always had unique capabilities. This challenge can be achieved through urban planning as it identifies and activates the potential performance of many aspects of the historic center. In historical cities, the historical center operates as an element of contemporary urban style. In this respect, public appearance means a positive, productive, satisfying, and meaningful municipal state – as a certain evaluation criterion. It is used to identify successful, high quality, dynamic, and comfortable areas of the city.

4. The historical center area can be used as the core of a livable city in today's cities In the new urban composition, the urban landscape of the ancient city is an excellent opportunity to build a city reorganization project, with rarely associated attributes and high flexibility. This space can

continue to play a potentially strategic role in the construction of the urban center system and organize a livable metropolitan area rich in urban style. Therefore, historical cities aim to build a contemporary and comfortable city, while the historical center has become a theme and system in its urban reorganization planning.

As the updated case of the inner city of Genoa emphasizes, the core measures of historical urban planning today represent a complex integration of a comprehensive urban policy. This set of strategies is not subordinated to a city policy of urban planning or assimilation, but rather to the intersection of multiple measures and different types of means (overall, exclusive, ordinary, unique), and The function "mixed" of the context and its characteristics are coordinated. This affects not only the regional features (built environmental space and more crucial open space), but also the operational mode or performance profile, and also affects the existing practice that different population groups constitute their possible "coexistence" form, thus bringing An active, livable urban area.

3.2.2.4

90S — Porta Palazzo Torino

In the mid-1990s, the city of Turin began to deal with urban renewal and urban renewal. In the past ten to fifteen years, Turin, Italy, has increasingly focused on community regeneration. Since 1990, urban decay in the suburbs of Turin has been commonplace. The unemployment rate in these suburbs remains high, and the immigrant population is highly concentrated, thus facing severe social exclusion. A large number of immigrant flows from North Africa, Eastern Europe, and China has also settled in these areas.

On the one hand, the Fordist crisis has led to more than six million square meters of dismissed industrial areas not only being forced to reconsider their identity in the city but also rethinking how to make changes - as 80% of the capital of Turin Region - is included in Goal 2 of the European Structural Fund. Also, the 2006 Winter Olympics investment further promoted urban transformation. A large number of public and private national and transnational resources landed in Turin and developed significant urban transformation projects. The core idea at the time was that urban development plans were tools for managing and transforming cities: the establishment of new districts and new urban centers, such as the transformation of urban "backbone networks" and the reuse of large quantities of industrial land that was dismissed.

On the other hand, urban crises occurred during the same period, involving intensive, built-up and internal areas: historical districts such as Porta Palazzo and San Salvario brought stereotypes of conflict, and citizens' need for security was usually on the local political agenda. Adopt opposition and advocacy, especially for newcomers (first immigrants).

Thus, over the years, many different urban restorations and regeneration processes have been combined with integrated projects aimed at strengthening social structures, whether in urban semi-central communities such as Porta Palazzo or public residential areas (by the city). Recovery plans, neighborhood contracts, and means of local development actions). Since 1997, the city has used a large number of regions and resources to intervene in the "self-sufficiency" of urban renewal, which is essential for the recombination of social cohesion in unaffected urban areas.

Located in northwestern Italy, Turin is one of the most industrialized cities in Italy, also known as "Detroit, Italy" (Salone, 2006) or "a corporate city" (Rosso, 2004). In fact, until recently, the spin-off of Fiat (automakers) and its auto industry had had a significant impact on Turin's urban development, economic development, and social change. Fiat is also a famous social welfare

performer in Turin, providing housing for its workers and a range of social benefits, most of which migrated from the impoverished southern part of Italy to Turin after the Second World War. Since the mid-1970s, Fiat has begun to shift production to Turin due to rising raw material prices, federal financial incentives to invest in southern Italy and a growing union labor force, which has brought about a recession. Until the 1990s, Turin began implementing urban reconstruction strategies based on several milestones. These include:

■ Work with critical local economic and social stakeholders to develop a "vision"
for the city. This process led to the elaborate development of the Turin strategy in
2000 (Turin International, 2000).
■ I am transforming cities in socially and environmentally poor communities by
establishing a particular project in the marginal suburbs in 1997.
■ Promote new urban management systems and financial governance models. The
new model reorganizes and simplifies the management of local institutions.
■ Introduce participatory and partnership-based planning processes and support
several programs (local, national, European) and funding sources (public, private,
and non-governmental) to support integrated urban development policies.
■ A new master plan (Piano Regolatore Centrale) was approved in 1995, which has
not been in the city for nearly 50 years. The new program guides major urban transformations and large-scale infrastructure projects, especially in the area of transportation and transportation in the town.
■ Promote a new image for the city.

Since the late 1960s, the city of Turin has been divided by immigration flows. During the economic boom, the first immigrants came from southern Italy. As a factory city, Turin's population growth has increased from 710,000 to 1 million in 20 years. Most immigrants come from all over the world: Romania, Morocco, Peru, China, Senegal, Nigeria, and the Philippines. In the past 20 years, many local governments in Italy – including Turin – have begun to work on practical solutions to face more and more non-residents.

During this period (to 2006), the city of Turin adopted a "temporary approach" to immigrants, which means that municipal interventions by major local actors (private and public organizations) have defined immigrants under certain challenging conditions. Targeted. In recent years, cross-cultural exchanges have increased, and the concepts of mutual communication and social interaction have generated a large number of practices and projects.

Communities such as Porta Palazzo or San Salvario are more likely to be new immigrants than other communities in the city, but they also have undesirable consequences. On the one hand, these communities are vibrant and diverse, with Moroccan cafes, bars, kebabs, Turkish and Chinese restaurants; on the other hand, all these diversities are accompanied by cultural conflicts, communication breakdowns and lack of social connections. Because these communities are often repeatedly questioned by relationship rules, disputes and conflicts are intensifying. In Turin, although some parts of the city were affected by the big transformation plan (in response to the emptiness of the big cities left by the collapse of the industrial area), in other parts, the government realized the importance of shifting attention to the suburbs and the problem.

In 1997, Progetto Speciale Periferie (a unique project in the suburbs) was established, and later (2001) became Settore Periferie (rural sector), intervening in the urban environment in terms of the living environment and structural environment and social dynamics. Key elements of the project are integrated approach, citizen participation, procedural and organizational innovation, identity and belonging, improvement, and development opportunities. Under the protection of Settore Periferie, many interventions took place throughout the city. One example is the European Initiative (City II) in the Mirafiori Nord community, an industrial zone that has a plan for achieving three complex goals:

1. Create a meaningful urban environment for residents and encourage trade;
2. Social and cultural opportunities;
3. Connect communities to cities through high-quality services.

Another example is Corso Grosseto's restoration of urban planning. The project began in 2000 with a focus on refurbishing two public housing areas and refurbishing nearby sports centers and meeting points. Settore Periferie promotes the establishment of social support programs managed by architects, sociologists, and communication experts to ensure residents' participation and their understanding of all stages of urban improvement.

Just a few steps from the historic city center, Porta Palazzo has always been an immigrant community in Turin. The community's central square boasts an outdoor flea market (Balon), Europe's largest flea market with an area of 52.000 square meters, which is the main social and physical feature of the community. The market includes approximately 1,000 suppliers, attracting 40,000 flea markets on Saturdays and 100,000 shoppers a day, a vibrant community. The vast majority of women, men, and street vendors gather, while the children run around, hiding in their mother's carts, selling vegetables, clothes, or cooking pots. It may be that the particularity of the market and street life has always attracted newcomers in the area to find

accommodation. In the 1960s, the community experienced a migratory flow from southern Italy, followed by migration from China and Morocco in the late 1980s, and recently from Romania and Albania.

According to official statistics, about 22% of the community population is of immigrant origin (compared to 3-4% of non-residents in the city), but when one considers informal residents, this percentage adds up to about 40%. This high concentration of immigrants means that there are different languages and cultures in the neighborhood. This also means that Porta Palazzo has experienced noise, discussion, legal and illegal negotiations, which are part of a very complex system of internal and informal rules, overpopulation and the concentration of the most vulnerable groups in the city. Porta Palazzo has a rich heritage of town and architecture, but most people think this community is unsafe, dangerous and noisy.

In 1996, the city of Turin faced the unfavorable social conditions of the community and the overall urban recession. In the context of the innovative actions of the European Regional Development Fund, it proposed a "no-go" project to the EU. This led to the establishment of the 2nd door of the 1998 Urban Pilot Project, Porta Palazzo. Located near the market, The Gate is committed to improving the living conditions and socio-economic status of the Porta Palazzo community.

The committee is a non-profit organization that is involved by both public and private institutions. Its plans are mainly funded by the European Union, the City of Turin and the Ministry of Public Works. The Gate implemented a social, environmental, commercial, economic, and physical (private and public space) regeneration strategy in the Porta Palazzo community. On December 31, 2001, the gate closed the European phase of the project, during which time it carried out 18 actions: the urban renewal process has begun.

The Turin City Council supported the process initiated by the Commission and in 2002 converted the Porta Palazzo Commission/The Gate into a local development agency responsible for the sophisticated urban renewal project under Settore Periferie (rural sector).

As a local development agency, The Gate maintains the same structure: a private sector, public institutions, private companies, and local community participants. Currently, the board of directors consists of five primary majors (integration, urban planning, economic development, social policy, and security policy), two neighborhood committees, two foundations, three trade organizations, chambers of commerce and three local NGOs. The institution promotes positive citizenship, involving local actors and citizens (associations, interest groups, people, etc.) and,

on the other hand, negotiating and co-planning with other agencies working in the territory (police station, Healthcare services, waste disposal agencies, etc.

The Gate organizes fundraising events and responds to bids from private foundations, local authorities, district boards, and national ministries. The extended intervention project coordinated by the Porta Palazzo Project Committee is divided into the following five areas: the built environment, the social environment, the cultural climate, the economic environment, and the sustainable environment. Also, there are three services: social support services, geographic advisory services, and communications and information services. Many different urban restoration and regeneration processes are combined with integrated projects, both in urban semi- central communities such as Porta Palazzo and San Salvario and in public residential areas (through urban restoration plans, neighborhood contracts, and local development initiatives) in identity and life. Areas with deteriorating quality conditions re-establish social cohesion.

The political reforms of the Italian government in 1993 against the mayoral election played an essential role in the economic and political transformation of Turin. Over the years, Italian local authorities have operated under a healthy centralized system with no clear and specific abilities. The mayor was elected indirectly by the elected political committee until the adoption of Law No. 81 in 1993, allowing the mayor to be directly elected in the constituency of a town with more than 15,000 inhabitants.

The first mayor of Turin to participate directly in the local elections was Valentino Castellani, who has since the elections developed a coordinated strategy for the urban renewal of Turin. The positioning of the city has changed from an industrial city area to an outside area to enhance its competitiveness and to find an international service center.

Before the city renewal process began, the area was a decadent inner-city neighborhood, poor social services, cultural integration of low international immigration, a highly mobile population, countless short-lived microenterprises, and poor reputation associated with local crime and illegal immigration. At the family and architectural level, Porta Palazzo also demonstrates social issues such as domestic violence (especially for women) and lacks social cohesion for a long time due to shared values and the shared desire of many immigrant countries living in the community.

Therefore, the main objectives of the project include:
■ Promote a comprehensive and interdisciplinary approach to society, the economic, cultural and material regeneration of the Porta Palazzo community,

covering an area of 500,000 square meters;

■ Achieve flexible "bottom-up" reconstruction of the region to achieve value and build on local resources;

■ Mobilize internal and external resources (including financial resources) to invest in community development projects.

According to Curti (2007), he led more than 10 Porta Palazzo Development Agency Between 1997 and 2007, these goals will be achieved by:

■ Establish flexible and autonomous institutions; promote public-private partnerships;

■ Seeking political participation and support at all levels of government;

■ The process of ensuring is transparency;

■ Promote multidisciplinary, participatory, and inclusive process regeneration in cities;

■ Provide local participants with the means, tools, and capabilities to improve local living conditions.

Turin's decade-long urban revitalization practice has provided a perfect experience for urban planning disciplines. Such a sustainable social regeneration project has become an active milestone for public policy at the local level, as well as for the development of modern Italian cities.

3.3

Comments

From the post-World War II to the present, Italy has undergone a long process of urban development reform and renewal and has implemented numerous urban projects. From paying attention to social housing to the overall protection of historical cities, to the transformation of public spaces, and then to pay more attention to community regeneration. This series of explorations and research have played a useful role in promoting urban development in Italy.

In the past few decades in Italy, planning practices have undergone earth-shaking changes. There is no tradition of national urban development or recycling policies similar to those of the Nordic countries. Urban planning has been well integrated into space and economic development policies for many years. In Italy, the Ministry of Public Works and Infrastructure has indirectly developed national urban development policies through significant infrastructure projects and investment plans. However, after the mid-1990s, the Ministry of Public Works began to promote the Temporary Urban Renewal Program to adjust the EU's urban planning model and the British Urban Challenge Plan (Bricocoli and Savoldi, 2005). The new model develops competitions based on regeneration project proposals between cities and communities to attract limited national financial resources for urban renewal.

The major urban renewal plans launched in Italy since the 1990s include (Janin Rivolin, 2004):
• City Pilot Project (PPU - Progetto pilota urbano, ERDF / EU 1989-93, 1997-99)
• Comprehensive Action Plan (PRIN - Programma integrato di intervento, L. 179/92) • URBAN (ERDF / EU, 1994-99)
• Territorial Treaty (Patto territoriale, L. 662/1996)
• Regional contract (Contratto d'area, L. 662/1996)
• Regional conventions for employees (Patto Territoriale, each Occupazione, 96 / C) • Urban Renewal Plan (PRU, Programmi di Recupero Urbano) (DM 1.12.1994)
• Urban Regeneration Plan (PRIU - Programma di riqualificazione urbana, DM 21.12.1994)
• Neighborhood contract (CDQ - Contratto di quartiere, DM 22.10.1997)
• Urban Regeneration and Regional Sustainable Development Program (PRUSST - Programma di riqualificazione urbana e di sviluppo sostenibile del territorio, DM 8.10.1998)
• Agricultural Convention (Patto agricolo, DM 29.06.2000)
• URBAN II (ERDF / EU 2000-06)
• Comprehensive Regional Plan (PIT - Programma integrato territoriale, QCS 2000- 06)
• Neighborhood Contract II (DM 23.04.2003)

These plans have gradually shifted from one-way and sectoral approaches in the early 1990s to urban renewal, mainly to housing renewal programs and environmental improvements to promote integrated and multi-dimensional neighborhood regeneration programs. Despite this, there are few comparative evaluation studies on the results produced by these programs.

"Building a city" means realizing the strategic development vision that affects the lives of residents. If modernity is indeed a mix of society rather than a mixture of race and culture, language, cultural forms, habits, and identity will be affected in the chaos and conflict of suburbs. These are places with extraordinary creativity; on the one hand, there are adaptation strategies; on the other hand, there are also creative reactions. The suburbs are different and distorted urban areas, the new meaning of the city, and the local conflicts become clear. We need to know that there are no shortcuts, no simple solutions, and our responsibility is to understand and truly solve these phenomena. The city is a complex organization that needs to rebuild the urban structure on a regional basis. It is essential to establish a "second generation" policy for housing to ensure the quality of life of residents and to achieve urban quality standards consisting of services, mixes, and connections. This means providing security and supportive policies in the context of social vulnerabilities, encouraging social proximity policies to build networks and seek to ensure.

Cities are made up of complex layers of structure that cannot be changed. We must consider space, economics, politics, and social organization. We must be aware that there is a continuous power relationship between different actors, diversity, and multiple functions, uses, and lifestyles coexist.

At the same time, cities also need external relations, which involve a full area, because they can't just study their microscopic situation. The problem lies in the urban transformation from a macro perspective, rather than changing the city from the details. Identity whom we work with, whom we negotiate with, and use public space inclusively to create more opportunities in the city. The historic city has created a space for identifying relationships: squares, markets, parks, and these significant public spaces are also essential elements informing residents' associations.

Contemporary cities privatize public spaces and standardize and standardize their use: children can play here, and older people can stay there, where you can go shopping. Often, new citizens are these immigrants who violate these rules in public spaces: they use sidewalks, squares, parks, and they can create conflict, confusion, and noise. In fact, the negotiation of the rules reaffirms that the public space belongs to everyone and should, therefore, be regulated, provided that all participants can sit on the same table (ie the elderly, but there are also Bangladeshi or Pakistani children playing in the square) Cricket, or Peruvian women cook in the park for their

compatriots on Sunday). Recognizing the socialization of public space means emphasizing the primacy of the city and the right to gather in public places.

Providing tools for local communities and building a network of cultural and economic resources means incorporating the social sustainability of urban transformation. Any process of urban renewal involves the risk of upscale and the risk of expelling the most vulnerable. We must protect the inhabitants of the tools to improve their quality of life while maintaining considerable contact, working to develop the local urban identity, and community memory and work hard to solve problems.

In addition to the community perspective, like other European countries, Italy also faces a significant challenge from the old industrial areas, which occupy a central location. New industrial centers—Milan, Turin, Genoa—and heavy industries, including Rome, Venice, and large parts of Naples, have been developed as areas. With government support, excellent international practices can sometimes serve as an opportunity to stimulate public and private investors. For example, the Turin Winter Olympics in 2004, the Holy See in 2000 and the Columbus Festival in Genoa in 1992. In general, urban renewal in Italy has gone through a long process in which people also recognize that urban issues are a complex issue that requires a different mindset: we need to look at the city from a different perspective so that It takes action on its structure on its hardware. However, professionals involved in social work often do not consider the equipment to be so necessary, but the device can change people's lives. At the same time, investing in the resources, energy, identity, and conflicts of urban software is critical. Similarly, the habits of people involved in infrastructure implementation also believe that software is auxiliary rather than essential. But only the combination of hardware and software can make the city change and become more cohesive.

4.1

Le Sette Città Di Bologna

4.1.1

Introduction

In recent years, the hot spot of Italian urban planning is "City of Cities." This concept first appeared in the Roman master plan and was gradually used in Milan strategic planning and Bologna urban structure planning in later planning development. At this stage, this concept also appeared in public planning documents in areas such as Sydney and Catalonia. Although the situation faced by each city is different, including social background, city scale, and other differences, the meaning of "city city" is slightly different, but the picture of contemporary cities is the same. In general, cities are no longer single, homogeneous, but multiple urban segments with various characteristics and interactions.

The top left – bottom right are: traditional urban centers, planned settlements, sprawling cities, urban enclaves
(Source: google earth)

During the gradual disintegration of the city, based on the dense texture of the original city center, more new urban textures were created. Due to the urban reconstruction boom after the Second World War, a large number of planned settlements different from the traditional form,

4.
Case Study

along with the improvement of motorization, gradually spread from the city to the suburbs, forming an irregular decentralized texture, and appeared relatively independent but with essential functions. Urban enclaves, such as airports, logistics centers, exhibition centers, etc.

Located in northern Italy, Bologna is the capital of the province of Emilia-Romagna. It is one of the oldest cities in Italy and has a rich history and experience of urban planning. In July 2007, the city of Bologna canceled the original land-based regional spatial plan and approved the PSC: Piano Strutturale Communale, RUE: Regolamento Urbanistico Edilizo and the Urban Action Plan. (POC: Piano Operativo Comunale) a new planning system.

In this chapter, we focus on the "City of the Rocks" (La Città Della Ferrovia). The "City of Railways" focuses on the establishment of urban spaces related to international logistics and transportation, such as stations, airports, exhibition centers, business centers, etc., with high accessibility, high-end municipal functions, and a highly diverse population. Provided favorable conditions, a large number of construction projects such as railway stations, university campuses, exhibition venues, and business parks were completed here. The "City of Railways" will also become the most concentrated area for Bologna's future development, but it will also face the challenge of reorganizing the historical urban and industrial regions divided by railways in the future. As the core component of the overall structural planning, the "City of Railways" will also represent Bologna, representing Italy's new image on the international stage.

<u>**4.1.2**</u>

Strategy and actions

The "seven cities" have different interpretations of urban fragments and a vision for their future development. In the "Bologna Seven Cities" structural plan, the next strategic vision is achieved through urban construction and transformation projects.

Taking the "city of railways" as an example, one of the crucial pillars of Bologna is the logistics transshipment activities. Therefore, the "city of railways" is regarded as the central core of this

structural planning, and it bears a vital role in shaping Bologna. Bologna has the traditional advantages of economy, including culture, health, and other fields, but it is not affected by access to national and international networks. This is from the aspect of industrial docking.

From the perspective of specific material links, It is also insufficient. For example, road congestion, public transportation and urban systems are challenging to dock and so on. Therefore, the primary development strategy adopted by the "Railway City" is to reorganize the urban public system and establish useful and efficient links between international and domestic transit hubs, but at the same time, the quality of critical areas cannot be ignored.

Based on this, the architectural plan proposes two specific action strategies:

1. Strengthen the connection between the renovation and transportation of essential node areas and transportation.

The upcoming Bologna-Milan-Florence high-speed railway will bring significant changes to Bologna. The new train station is one of the most important projects, not only need to maintain convenient contact with the original station but also to bear the connection between the train

passenger and the city. Responsibility for other public transport within the area also includes the establishment of a light rail network between the train station and the airport.

2. Upgrade and reform key regions, divided into four categories.

The first category is the international and domestic passenger flow transfer station. Including the central railway station, the airport, etc., paying attention to daily management, improving the residents' experience and improving accessibility;

The second category is the international logistics platform, including exhibition areas, logistics, and business districts, focusing on upgrading existing operational capabilities and developing new platform areas;

The third category is access points in urban areas, including railway areas and abandoned military land. The strategy is to explore more possibilities for civic functions and reactivate the fading areas;

The fourth category is the point-like area of the central city, including the farmer's market, the old municipal gas storage field, etc., to regulate the structure of the central city.

In general, the strategy in the "Bologna Seven Cities" structural plan is presented through a series of urban projects, and these projects do not have a consistent reference standard, which is

City of railway
City of the Ring Road
City of hill
City of the Reno River
City of Savina
City of West Emilia Road
City of East Emilia Road
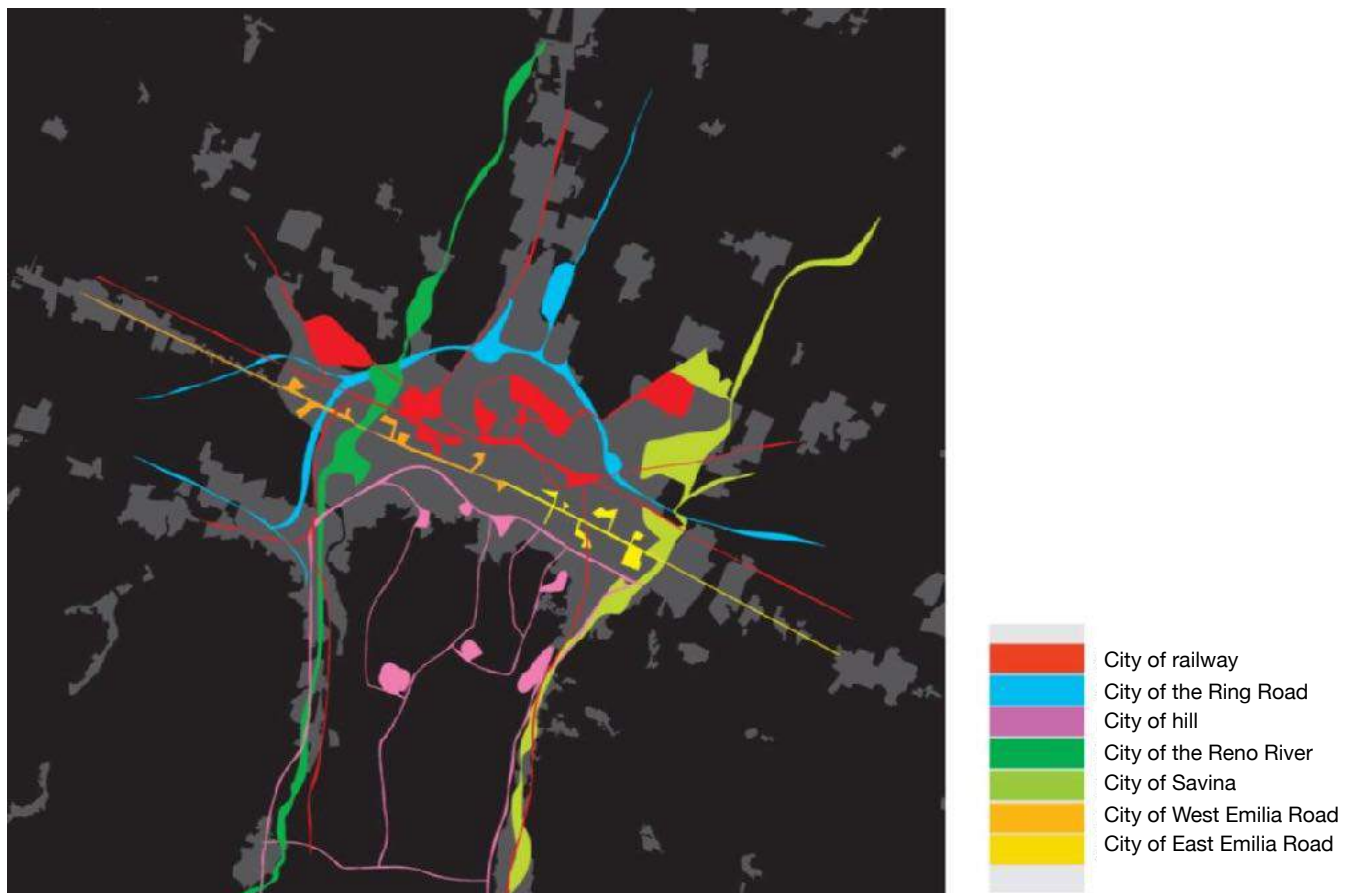
to determine the key areas and nodes according to the specific conditions of specific regions. Compared with traditional land use planning and rigid development indicators, such strategies and actions are more conducive to the differential development of urban segments with different characteristics and styles.

4.1.3

Results and impact

With a good action strategy as a guide, the "Bologna Seven Cities" structural plan also has specific practical operations for specific projects. There are 11 related urban construction and transformation projects involved in "Railway City," which we will carry out in this part.

1.Nuova Stazione ferroviaria Bologna Centrale

On July 18, 2006, Bologna and RFI signed a territorial agreement to guide the construction of the new railway station. The strategic goal is to create a new metropolitan downtown area and to improve the different parts of the city. At the same time as the implementation of the agreement, an international competition was announced and ended in June 2008. The construction of the new railway station has become a major urban investment project and has become a major project for strengthening and restructuring interventions. Once the project is completed, this node will be affected by the daily flow of about 180,000 people.

2.Aeroporto Marconi

As an important gateway to the international relations of the Emilia-Romagna economy, Marconi Airport strives to achieve more efficient versatility and improve logistics, exhibition, reception, entertainment, and other functions. The functional enhancement of the airport itself is a great opportunity for the development of the economy and society in the Bologna region, while at the same time achieving better regional integration and prioritizing environmental sustainability. These goals are achieved by improving public and private accessibility and the conditions of the airport and its surrounding environment. After the approval of the Territorial Agreement, Caldera di Reno and Bologna agreed to include the Bologna Seven-City Structure Plan.

3.Fiera district

Due to the lack of parking spaces and imperfect transportation, the Bologna Expo area was contested by famous venues. A territorial agreement was signed with Bologna in 2002 to narrow the gap between the current infrastructure and the planned expansion. It is expected that the metropolitan infrastructure network will be improved and the stability of the Bologna Expo area will be consolidated. Also, the exhibition area has a management office with important economic and institutional significance to play a management function.

4.Distretto logistics, commercial e direzionale del Centro agro-alimentary

The development of the Caab Functional Center between the City of Bologna, Granarolo dell'

Emilia and Castenaso have been incorporated into the structural plan. The PSC has established different conversion strategies to establish a certain link between strategic actions in three cities.

5.Nuove side di ricercar e didattiche dell' Università degli Studi

The agreement defines the territorial, urban, and infrastructure structures required for development in the Cnr-Navile area. Some university offices include chemistry, astronomy, and astronomical observatories, Savile's School of Pharmacy and Biotechnology, Lazzaretto's School of Engineering, and Caab's Agricultural College.

They have all been relocated, which is part of the plan. The successful implementation of this project heralds a good integration of the urban environment and the appropriate public systems. At the same time, it provides rentable houses for students near the new university, reducing the pressure on houses in the central and semi-central areas. In July 2007, the University of Bologna and Bologna signed a new student dormitory to provide housing services for university students. , thereby alleviating the pressure on the housing market imbalance.

6.Scalo Ravone e Prati di Caprara

To obtain the resources needed for maintenance costs for the RFI, the agreement on the new station in July 2006 stipulated urbanization and also established new settlements to build high-quality urban and environmental communities, combined with existing functions and equipped with new cities. Operating infrastructure. Using the central location of Ravone Airport and Prati di Caprara, they are placed in the center of the PSC reorganization. This transformation will try to make up for the scarcity of the collective interest space and equipment in the current Porto area and improve the city quality of the University of St. Viola.

7.Cyrenaica-Rimesse

The St. Vital Railway Service Station was built at different times, and the functions and services of the new site will provide conditions for its reconstruction. Some areas with good location and moderate size can be used to intervene and integrate surrounding urban debris, routes, and services. facility. To better achieve the goal, the relevant agreements were signed to strengthen the central position of "Villaggio del Fanciullo" while restoring and strengthening the former Atc warehouse.

8.Ex Officine Comunale del gas

This area has always been the subject of urban restoration and redevelopment projects, but due to land pollution, the project is very operability. By the guidelines of the provincial, regional plan and the negotiations of the municipal authorities of Granarolo and Castenaso, it was decided to relocate the local headquarters to the metropolitan area to provide services,

infrastructure and public space resources for the city, while being compatible with certain environmental conditions.

9.Bologna est

Bologna est will be redeveloped, which is quite strategic for its location and potential. To renovate the abandoned production areas already in the area (formerly Casaasta, former Sasib, and former Cevolani), the signed program agreement content has been incorporated into the constituent documents of the structural plan. This is an opportunity to coordinate the entire region, answer key questions on the edge of history, and fill the structural flaws in services and green areas. To this end, the new station agreement stipulates the Dopo Lavoro, which strengthens the railway sports and entertainment space.

The area close to the tobacco factory is an innovative research center, and the proximity of the cultural production base of the North Park to the entertainment area allows us to imagine the possibility of using some of the reconstructed areas to live and the young people interested in research and cultural production activities. Human services describe a youth cultural district that may form an interest in the future of the city.

10.Ex Mercato ortofrutticolo

The former fruit and vegetable market was affected by two transformational operations carried out by PRG in 1985, followed by the establishment of a new headquarters for the Municipal Management Office and the main residential area, Navile. As part of a participatory design experiment, the residents are provided with a variety of functions, complex and diverse (residential, commercial, and targeted) and strategic goals: building good inter-city connections and building new public The center and proper community identity, the establishment of continuous open space, the integration of parks and buildings to achieve the purpose of reconstruction.

11.Bertalia-Lazzaretto

The central location of Bertalia-Lazzaretto has long been isolated from the infrastructure belt and was compiled by the 1985 PRG. The theme of the international design competition held in 2001 was a mixed urban settlement. The implementation of the plan stipulates the coexistence of public service housing and university management centers, accommodation, business activities, the creation of a new urban center, the completion of roads and infrastructure, and the proposal by Psc to connect new settlements with the city, changing its isolation. The state of separation makes it an easy access area.

"City of Cities" as a method of planning operations, on the one hand, it recognizes the diversity of population composition and lifestyle in the city, numerous urban forms, and attempts to

integrate the different functions of the city; on the other hand, it From a certain height, create a better development route and framework for diverse urban segments. This concept is highly inclusive, encompasses the differences between existing urban projects, corresponding policies and future action plan objectives while identifying and maximizing the use of disagreements, concentrating different resources, and proposing different directions of development rather than trying Cover all urban areas with a unified framework.

Transportation

Railway Station   Exhibition Area

Lazzaretto University

Navile University   CAAB

Navile Market   Bertalia Lazzaretto Area

Based on the status quo, Bologna analyzes the status of the city in today's world from a macro perspective. Bologna is a vital infrastructure hub, exhibition center, production base, and logistics platform, and medical education capital. Bologna will become an essential node in Europe in the future. Based on strong network links, it will establish good connections with other European cities, especially in terms of trade, to provide a more suitable living environment for more people, and to enhance the centrality and various types of ports. The operational efficiency of the policy. At the same time, Bologna will also become the core of the metropolitan area of Bologna. At the regional level, it also needs to pay attention to the deteriorating environmental problems and implement targeted policies to reduce the negative impact of the environment on urban development. Pay attention to the protection of historical resource heritage. To repair and protect the environment and landscape; prioritize urban restructuring and urban renewal; improve public transport; provide diverse social housing;

increase open space, strengthen community centrality; and improve the performance of existing facilities as a strategic guideline.
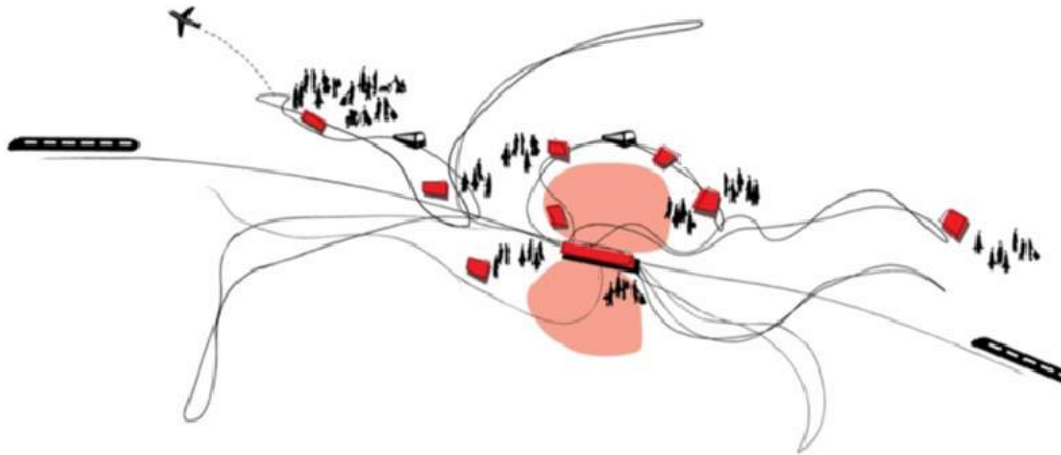
The main construction project of "Railway City".
Source: Commune di Bologna Settore Territorio e Urbanistica, Il Piano Strutturale Comunale (PSC) [R]. 2008.

4.1.4

Experience and inspiration

Behind the "Bologna Seven Cities" structural plan is the thinking of the "city of the city," the root of which lies in the further thought of the urban ecology. "The City of the City" and ecological perspective have theoretical and cognitive significance, to reveal the pluralism and complexity of contemporary cities, rather than trying to unite this complexity with a simplified universal model; It shows that the characteristics of urban fragments are the basis of the future development of the city. The planning and development of contemporary cities should be based on this difference and explore new planning ideas.

In the face of increasingly complex urban development, our understanding of it may go to two extremes. One possibility is to face enormous complexity and uncertainty, over- simplify the reality, and still regard the city as a homogenous body of continuous development, ignoring the more prominent personality of the urban fragment. The other may be caught in an agnostic way, thinking that the city is becoming a product of an infinite number of random combinations of pieces that cannot be recognized and understood.

The "ecological" perspective allows us to avoid such extreme understanding and capture the characteristics of contemporary cities more accurately. Modern cities are "city cities," and each city segment is a unique ecology. Just like the "Seven Cities of Bologna," although these urban fragments are part of Bologna, there is no doubt that they have unique historical contexts, realities and development visions, with residents and urban users with different living conditions. Have a unique understanding and memory of the environment in which you live. If we do not treat these differently, we will not be able to carry forward the characteristics of each ecology well and even hinder its development.

"Ecology" is not only a description of the precious status of the city but also a vision for the future. "City of the City" is not only a description of the city in a specific historical section but also a description of its inherent characteristics. It tries to reasonably project the future development direction and goals through such story. Urban planning is, to some extent, a description and arrangement of the future of the city. How to describe the future of the city is more convincing and more operable? The perspective of "ecology" is based on accurately understanding the current situation of urban segments. Its future picture is different from the development of a grand blueprint for the entire city, because the blueprint vision lacks a deep understanding of the city's current situation, requires consideration of the characteristics of the city segment, and simplifies the complex urban landscape, which is not conducive to the cause.

The potential brought about by the difference urban development in the 21st century will be extremely diverse and vibrant. Facing the trend of urban differentiation, new planning methods need to identify the complex reality of "city of cities," identify the characteristics and development trends of various urban segments and develop corresponding development strategies for each unique urban patch. The correlation between urban debris creates a diverse and healthy urban environment, enabling diverse populations to enjoy the benefits of the city. The key to this is to adopt a new "ecological" perspective, starting from a relatively micro scale, starting from the differences and characteristics, to have an accurate and in-depth understanding of contemporary cities.

4.2

Naples Afragola

4.2.1

Introduction

In 2017, the first phase of the Napoli Afragola Station in Naples was officially completed and opened to the public, marking the opening of a new gate to southern Italy. The first phase was initiated by Italian Prime Minister Paolo Gentiloni. "Any great country needs great projects as a leap. Afragola's new station is the infrastructure that drives the economic development of the South. "The Prime Minister said.

The railway station is positioned as one of the famous transportation hubs in southern Italy, serving four high-speed intercity lines, three section lines, and a local commuter line. A high-speed railway linking Bari and Reggio Calabria to Italy and northern Europe has been planned. By 2022, the new railway infrastructure will create a vital transportation hub for the city of Naples, serving the entire Campania region and extending the high-speed rail network in southern Italy with the Napoli Cancello and ring road commuter routes.

Afragola Railway Station is located at the main intersection of the southern Italian railway network, connecting 15 million inhabitants of Campania, Puglia, Molise, Calabria, and Sicily in

southern Italy. Railway network in the north and other European countries. Not only that, but it also shoulders the critical mission of transporting goods and passengers from different parts of Europe and northern Italy to southern port cities such as Taranto, Bari, Brindisi, and Palermo.

According to the data, the demand for railway travel has increased by 50% in the past ten years. To meet this demand, the Afragola railway station is built in the new north- south railway corridor in the eastern part of the metropolitan area of Naples, perfectly integrated into the local and Regional railway service network.

4.2.2

Strategy and actions

The Afragola station was initially designed to create an urbanized public bridge connecting the communities on both sides of the railway. The station is limited according to the passenger's circulation route, minimizing the walking distance of passengers coming and going, and simplifying The way to other train lines provides passengers with services from different trains.

The design expanded the public walkway on the eight railways, turning the pedestrian bridge into the main passenger terminal of the railway station, which can accommodate all the services required for all arriving and departing passengers and can directly go from here to below.

The internal space geometry is determined by the travel corridor, and the large entrance at both ends of the station is the entrance to greet and guide passengers to the high-rise public areas, with shops and other services inside. Visitors entering from both sides of the station meet at the central atrium, with cafés and restaurants serving passengers. Passengers can also go to the various stations below by the central hall built above the railway track. Such a public space is essential.

The Afragola station has built a reinforced concrete pedestal on which it is supported by a high volume with a glass roof covered by steel and Corian materials. The entire design follows an irregular shape along a curved line of up to 450 meters, and 200 columns of different forms support the elevated hall.

The concrete structure used here is a combination that provides the best performance. It was initially developed during the construction of the MAXXI Maxi Museum in Rome. It is a curved concrete member: replacing the wooden formwork with prefabricated steel elements. And the double arc shape is realized by the template, and the milled polystyrene model is made by CNC milling.

4.2.3

Results and impact

When all the lines at Afragola Station are put into operation, the station is expected to receive 32,700 passengers per day (4,800 people in the morning and evening peak hours) and take all 84 lines.

Every day, there will be 28 high-speed trains stopping at Afragola Station in every direction. Every 30 minutes (the peak time may be a little longer) will provide fast service to the established route. About 700 passengers will get on and off the station. Also, there will be 200 regional and local train services stopping here, further establishing important transfer nodes within the national, regional, and local railway networks.

Public train services will be opened on June 11. Initially, only 18 high-speed rail lines in different directions were received, serving approximately 10,000 passengers per day. As the new infrastructure continues to be built and the station completes a new phase plan, the station service will increase the number of trains in each direction to 28.

The Afragola Railway Station, 12 km north of Naples, is also planned for the local Accerra, Afragola, Caivano, Card. The community service of Casoria and Casalnuovo in Naples ranges from 10,000 to 50,000 people. Afragola will be an intermodal hub that will ease road congestion in the city center but will not replace the existing Naples Central Railway Station.

4.2.4

Experience and inspiration

The train station is located along the new north-south railway in the eastern part of the Greater Naples metropolitan area, integrating the new infrastructure with local and regional rail services, and connecting the communities on both sides of the railway to the local Ache Accerra, Afragola, Caivano, Casoria and the Casalnuovo community service in Naples, with populations ranging from 10,000 to 50,000. At the same time, it has established a vital transportation hub for national, regional and local railway networks, and is committed to alleviating the congestion in the city center, but it will not affect the status of the famous railway station in Naples.

The orientation of the main hall is conducive to the ecological sustainability of the building, which is an excellent example of the principles of sustainable development. The roof is equipped with integrated solar panels that combine natural light and ventilation with ground source cooling and heating systems to help the station minimize energy consumption.

Besides, the public sidewalk on the eight railways was expanded, turning this pedestrian bridge into the main passenger terminal of the railway station, creating the shortest distance for passengers getting on and off at the Avra Gora train station in Naples. At the same time, it can also provide passengers with services from different trains, which offers convenience for passengers.

4.3

London King's Cross

4.3.1

Introduction

King's Cross is located in the North District of London, centered on King's Cross Railway Station, established in 1852, with the Regent Canal as the boundary, the British Library to the west, the University College of London to the south, and the residential areas of different ethnic groups in the northeast. Small service industry. In the mid-19th century, it was an important distribution center for industrial transport in London. After the Second World War, due to the decline of industry, this area has become increasingly depressed. Until the opening of the British-French Cross-Harbour Tunnel in 1996, St. Pancras Station became the terminal of the Eurostar. As a result, the King's Cross renewal program was launched to restore its vitality and influence.

This renewal program is the most extensive urban renewal program in the UK since the 20th century. The project covers a total area of 270,000 square meters. It is developed by King's Cross Central Limited Partnership and started planning in 2000. It is scheduled to begin in 2020 and is expected to be completed in 2020. With a total value of £2.1 billion, the project is the largest comprehensive project led by a single developer in central London in 150 years. The plan includes the construction of 50 new buildings, 20 new streets, ten significant public buildings, and 105,000 m2 public. Space, 315 870m2 office facilities and 46 452m2 educational facilities, and completed the protection and renovation of 19 historic buildings. At present, a continuous investment of 4 million pounds per week is used for construction and maintenance.

The average annual transfer of the two major railway stations in the region is higher than 3.5 million times. The traffic volume of King's Cross Railway Station reached 3 134.7 million passengers between 2014 and 2015; the number of St Pancras Railway Station was 2 646.6 million.

Resources: http://www.smartteachers.co.uk/locations/#london-map
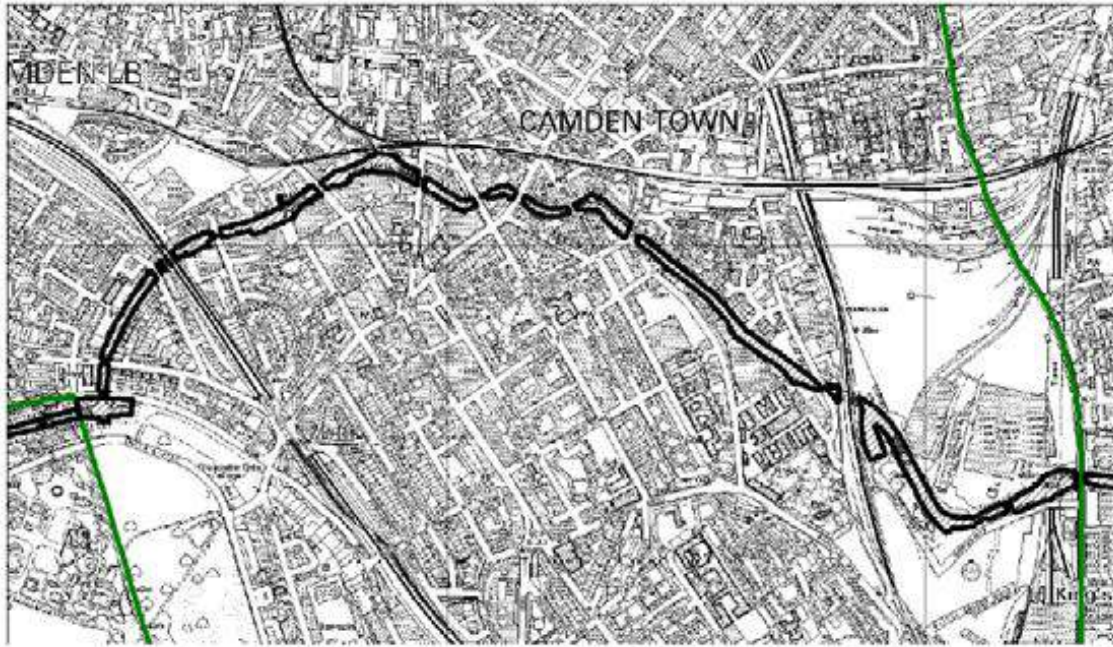
4.3.2

Strategy and actions

The King's Cross renewal project has implemented a development strategy based on creating a high-quality urban environment, retaining original historic buildings, and protecting urban public landscapes, making efficient use of land parcels, making the development process bright and clear, creating a patchwork of King's Cross area

North London line

Main route on the east Coast of UK

CTRL track line Embankment area

Regenet canal

Cross-Regency Canal Bridge

Main line

Camley street park

York Road

Gas Facility

King's cross station

Stanley building

St Pancras international station
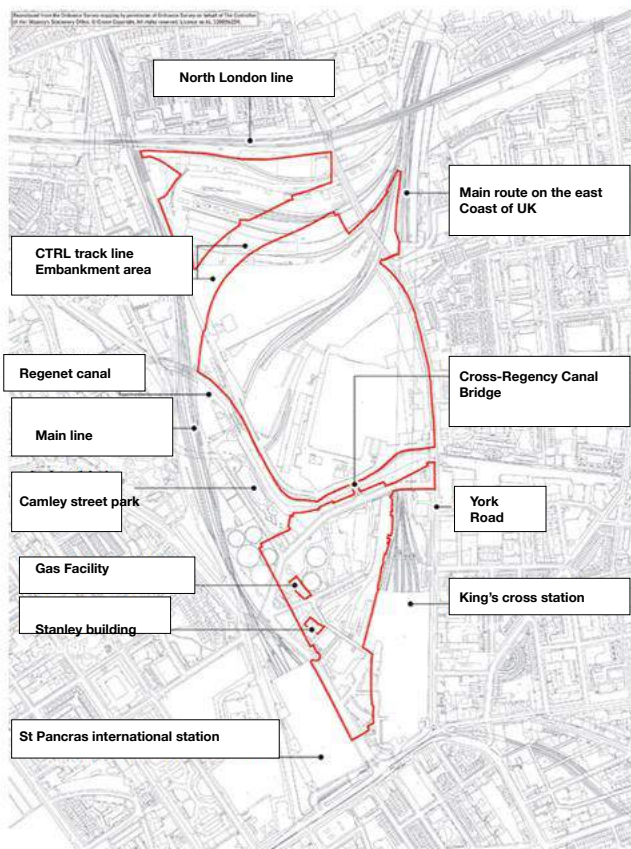
The United Kingdom proposed the urban renaissance from the mid-1970s and has been based on this in-depth research and practice. The task of urban revitalization lies in: under the conditions of the overall consideration of social and economic development, guided by planning and design, creating a dynamic and quality urban space for sustainable development. Among them, the principle of fairness as the basic principle, balancing the vibrant capitalist economy and the interests of the community people has become the main subject of the state and the government.

The planning of the King's Cross Central District is one of the pilot projects of the British Urban Renaissance Theory. With the goal of revitalization, the restoration and darning methods are used to consider the original urban texture and community needs comprehensively, and based on the interests of developers, Adhere to the principle of fairness for the welfare of the community. As a transportation hub in London, the King's Cross Central District must meet the title of a world city on the one hand and the needs of the local people on the other. By darning the urban texture, enhancing the subsidiary value of the land, speeding up the flow of people, providing better supporting services for the railway station; improving urban economic development by repairing municipal functions, improving existing problems, and serving local businesses and households.

Respect the urban texture, strengthen the connection with the surrounding areas; actively protect and utilize the original industrial heritage; investigate the needs and opinions of the community residents, and create the relationship between the new plan and the old community in a way that is mutually beneficial, complementary and humanized. Through the comprehensive restoration of woven texture, spatial reconstruction, regional economy, and the creation of the landscape system, we will establish a plan that integrates commercial, residential, office, leisure, and education.

The development of the King's Cross Central District has created a new look for the region and made the city's self-improvement and repair functions even stronger.
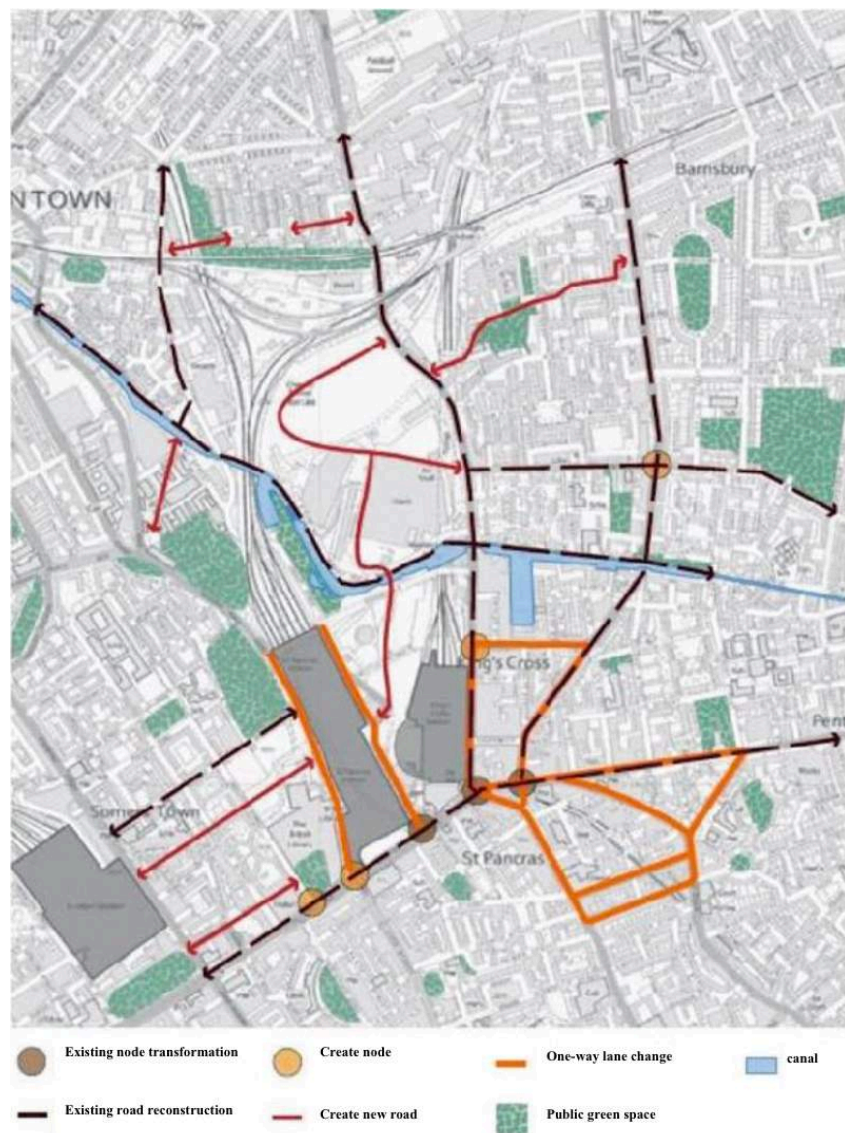
The revitalization of the plan focused on the flow of people in the area, the ease of traffic flow, and the transformation of industrial sites on the north side of the city. The central area planning

utilizes the theory of darning to strengthen the connection between the north and south roads, improve the road nodes, and weaken the physical obstacles caused by the railroad tracks; the interior of the plots focuses on the transformation of the industrial heritage warehouses, enhances the activity, and establishes convenient surrounding communities. It is creating a public space that attracts people, such as fun outdoor venues.

Material space and traffic node

From the perspective of material space design, it mainly lies in the darning of urban texture. The east-west traffic is blocked in the central area, and the north-south space is not conducive to the evacuation of people, which brings about the problem of mixed flow of people and logistics. The initial design requires the rapid removal of people and traffic; the motorized streamline opens and improves the north-south road, adding three east-west streets based on the original texture to strengthen regional connections; encouraging non-motorized travel, setting up public transport restricted areas and Develop a large number of linear general activity areas to create node space.
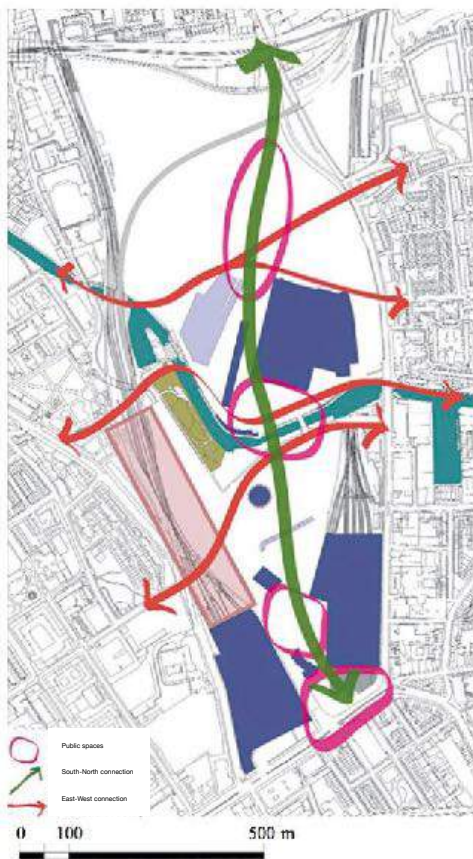
Emphasis on the connectivity with the outside and the purpose of the car route within the block, the design strengthens the connection of the East-West warehouse road (Goods Way). The government advocates environmentally friendly travel, the narrow space of the pedestrian crossing in the central area of King's Cross is dominated, The surrounding crowds provide more space for activities to meet the dual principles of mobility. By designing the main trails for pedestrians, the pedestrians in the square in front of the station are gradually deepened eastward, and active leisure spaces are set up on both sides of the trail to facilitate the community.

Most of the roads except the trails are accessible public areas. In addition to the outdoor space, the semi-open outdoor space and the indoor non-dead area add fun to the traffic flow

organization. The traffic space mentioned above is from the perspective of pedestrians, adding retail services to the ground floor to fill the gap in commercial space in residential areas.
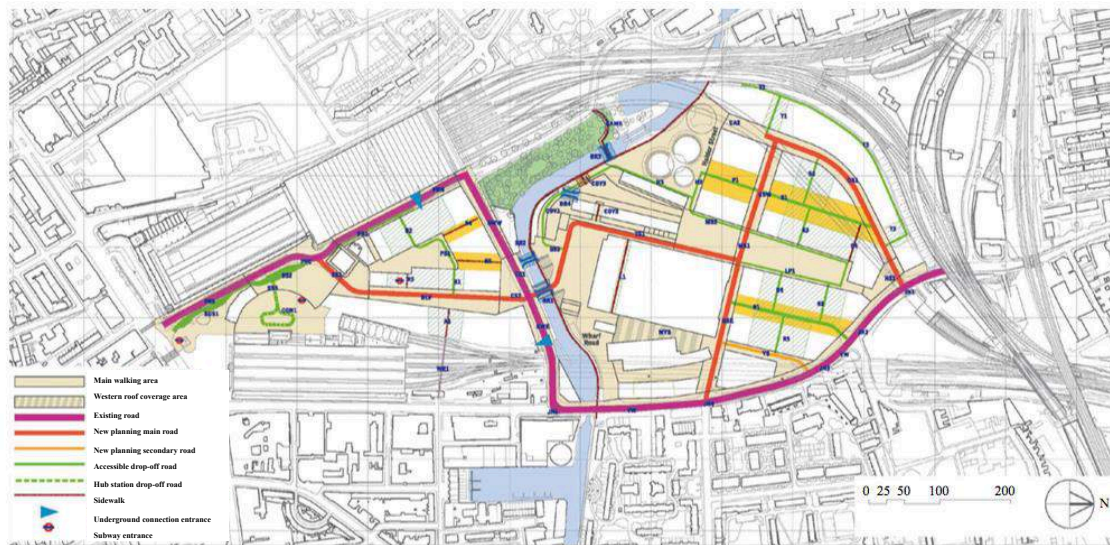
King's Cross Central District Public Trail Structure
Source: King's Cross Central: Revised Main Site Development

Node building and environment (source coal mine loading area, barn building group, original warehouse storage area, original gas storage tank)

In addition to the detailed design of the material space, the design of the King's Cross is also related to the economy, industry, and promote balanced regional development. For the first time, the project established a systematic public participation system, taking the perspective of the people as an essential reference. According to local opinion polls, the data shows that there is no entertaining general activity area in the area, so the Framework Findings Report proposes corresponding design requirements: public space needs to be purposeful, to better strengthen the regional atmosphere. The activity is more attractive to the crowd.

The design of the node building is a highlight in the King's Cross plan, creating new opportunities. A large number of historical buildings in the area are related to railway and industrial development, but as the industrial structure changes, many buildings have been demolished. Therefore, the King's Cross Central District puts its focus on historic buildings and advocates the reconstruction and functional replacement of the historical features to preserve the cultural history. Four important nodes have been set up in the whole plan, including: the pedestrian commercial area after the transformation of the original coal mine loading area, the Royal College of Art in the renovation of the barn building complex, the large supermarket in

the unique warehouse storage area, and the transformation of the original gas storage tank. British Google office headquarters and apartments.

1. Barn buildings and art colleges

The Central Saint Martins Teaching Building is one of the successful examples of historical building renovation. The project merged three barn warehouses and wanted to create a space for students, teachers, and the surrounding people to have more opportunities to interact.

As shown in the plane, the space between the three old buildings becomes the high-altitude space in the teaching building. The libraries and learning spaces on both sides echo each other, increasing the opportunities for exchanges between students from different departments.
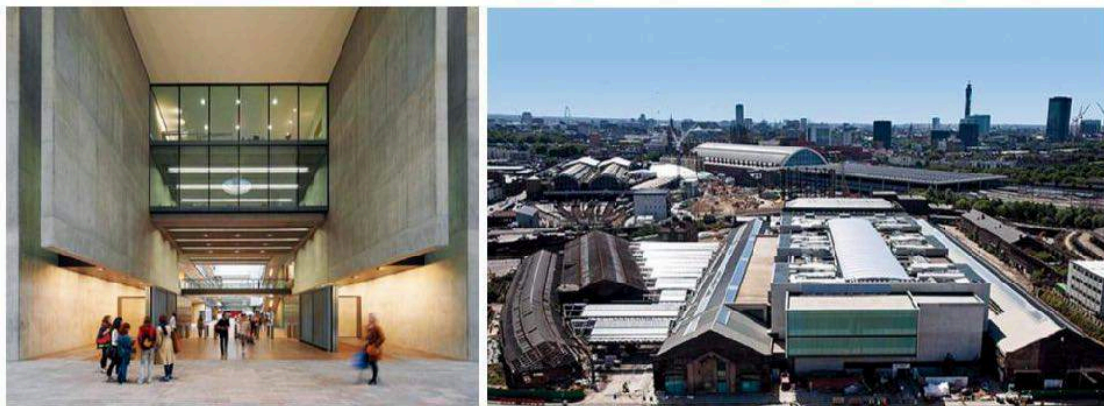
Barn warehouse and central saint martins college building hall and overall renovation
Source: http://www.gooood.hk/_d272943712

The original warehouse was reserved as an office classroom and other spaces, and inadvertently there will be traces of the old brick wall, steel column, and other industrial revolutions. The design of the San Martin campus is based on the protection of historical sites, giving the old building a new meaning, a new vitality, which not only changes the function but also the user's use and use attitude towards the use of space. From the passive consumption of space to the initiative to create space, this transformation is the best state of conservation construction, but also a new model of sustainable development.

As such a vital node design, the arrival of the Central Martin Art School has injected a robust cultural power into the area, giving this area of brown industrial space a new look. And this change comes from the user; the

building is just a carrier, directly or indirectly encourages the generation of various activities. Such a node design increases the active time in the area, provides a variety of public spaces for irregular movements, blurs the boundaries between public and private spaces, and brings interest to the city.

2. German gymnasium and new restaurant

The German gymnasium, which completed in 1864, has a profound influence on the development of the British movement. The building is located near the entrance plaza in the central area of King's Cross. Due to its particularity, its preservation is of great symbolic significance.

It can be seen that the reconstruction of the stadium not only retains the façade but also preserves and consolidates part of the structure inside the building. This historical building can well be preserved by transforming the building function of the original ample space. Extended use - from the original stadium to a restaurant that integrates catering bars.
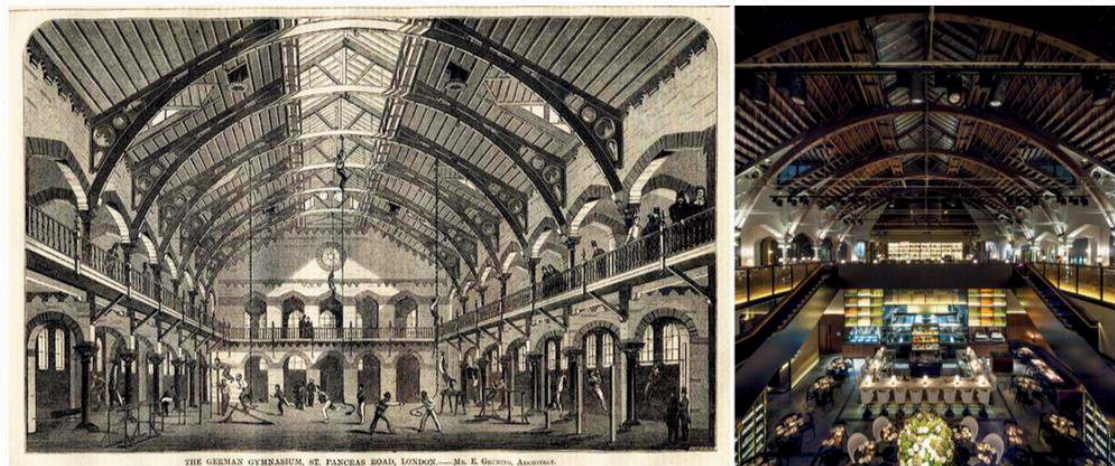
The history and present of the German Stadium
Source: http://www.danddlondon.com/wp-content/uploads/2015/08/German-

3. Warehousing and cargo area and supermarket

The warehouse storage area originally used as a storage warehouse around the railway during the modern period. In this design, the lack of supermarkets in the surrounding communities was considered. Therefore, the Waitrose supermarket, which integrates cooking, sale, and activities, was introduced, and the 6000m2 building was built. The renovation was carried out in three parts: a supermarket of 2,089 m2, a cooking school of 224 m2, and an event venue of 2,580 m2. The design of the Waitrose supermarket can improve the inconvenience of daily shopping in the surrounding residential areas, better serve the community, and repair the functions of the King's Cross.

Public space and community (path public space, humanized scale public space)

As a crucial part of planning, open space bears the vital role of concatenation and enrichment of the area. In the preparation of the central area of King's Cross, the public space takes the responsibility of filling the lack of space around the community. The plan establishes a general area that is closely related to the original streets and plazas and is self-contained, meeting people's needs for economic, cultural, and social aspects. By repairing public spaces, from large to small scales, from integration to decentralized forms, covering functions in culture, entertainment, and business, scope and services are repaired based on ensuring the primary retail industry.

The planned public space consists of 11 large and small activity spaces. Granary Square is the central point of the entire open space. It is the node of railway, canal and road transportation, helping to connect the main secondary walk. The transportation network strengthens the trail path frame of the first area.

11 large and small activity spaces of King's Cross Station
Source: reference [13]

The west side of the square serves as the second largest central public area, with the help of Central St. Martin's fashion art opportunity as a venue for events such as catwalks. The east side of the square forms a semi-open public space, making it the best place for students to have lunch and residents to relax. The central square is responsible for attracting people from all walks of life. The east and west squares are responsible for dispersing the flow of people. The characteristics of "one master and two assistants" make the whole public area become the central node of all kinds of traffic routes, connecting things and running through the north and south.

The public space consists of two categories, one is a linear space of the path, which provides a large number of services to divert foreign tourists to the north; the other is a public area that serves the residents of the local and surrounding communities.

In terms of scale function connection, we must maximize the safe and beautiful public space for pedestrians, children, and other users - the open space of the human scale. The King's Cross Central District links the different divided plots through the design of the public space, which is consistent with the idea of integrating the broken space proposed by the King's Cross Central District Plan. Most of the public areas in the plan are linear spaces, with pedestrians as the primary consideration, ensuring the flexibility of the pedestrian activity space, and setting up business along the street to promote the activities.

4.3.3

Results and impact

The successful transformation of two transportation hubs (St. Pancras Railway Station and King's Cross Railway Station), after the transformation of St Pancras Railway Station in 1996, became the gateway station for connecting the European continent to the UK and became one of the busiest platforms in the world. This 19th-century Victorian building has become a modern transportation hub with a capacity of 13 stations; the renovation of King's Cross Railway Station in 2011, covering reservations, restorations, and new construction, is at the heart of the King's Cross renewal program (see below)

Emphasis on multi-mixing, meeting a wide range of different objects, and public needs throughout the day. Taking the Regent River as the boundary, the south side is mainly office, the north side is mostly residential, and a large number of commercial and service industries are set up on the bottom of the building, which has good accessibility. Upon completion of the King's Cross renewal program, it is expected to create 2,000 new residential units, ten public squares, 315,870 m2 of office space, 46,452 m2 of commercial space and 30,000 jobs (Table 1).

FUNCTION	CONSTRUCTION AREA
Total Planned Area	739,690
Office	455,510
Retail	45,925
Hotel / apartment	47,225
Non-residential building	74,830
Leisure and entertainment	31,730
1900 residential units	194,575

(Table 1)

Upper limit requirement of planning each functional area (m²) References [5]

4.3.4

Experience and inspiration

Through the above understanding of the project, the essential experience of the King's Cross renewal project can be considered from the following aspects, including culturally dominant mixed spatial use, the introduction of large cultural institutions, protection of historical construction, and vibrant cultural entertainment. Events and public participation promote the implementation of community-based urban design concepts.

1. Culturally dominated mixed use of space

(1) Open space for mixed use

By creating a free space, it is ensured that users are not far from the lively squares or streets, and about 40% of the open space is available to everyone involved. At the beginning of the construction, Argent also believed that public space was very beneficial to attract early tenants. Light is brought into space through a variety of water body utilization methods. Water will give people a soft feeling, such as fountains and steps on the canal where people can rest. Open spaces are also mixed, and the Regent's Canal, Camley Street Park, and the city's natural landscape have become places of entertainment, parks, vegetable gardens, and popular cafes. Therefore, the mixed use of open space can be a good project design experience.

(2) Diversified office buildings

By building a wide variety of office buildings to attract global or London economic sectors, the entire region offers 23 new office buildings with a variety of sizes, such as European-style city squares, including lawns and terraces. Seven modern buildings surround the water feature and lounge area, and the Kenton District Council is a flexible government office space. The city is designed as a creative workspace, and the interior space is flexible and easy to segment. Its tenants include Argent, Hoare Lee, and creative agency Zone. Subsequently, in January 2013, Google also announced the move of its UK headquarters to the region. A diverse office area plays a vital role in the development of the entire region.

(3) Diversified retail

Pursue and realize artistic, cultural, and entertainment services through diversity. The retail and entertainment industries have become more attractive by forming rich and varied features through different clusters.

(4) Mixed residence function

Thirteen residential development plans, combined with commercial housing, shared ownership,

renting and affordable housing and student housing. Diversification of living can also bring vitality to the region to a certain extent.

2. Introducing large cultural institutions

Through the transformation experience of the Central Martin Art School in the King's

Cross renewal project, the introduction of a significant cultural institution in a region can inject fresh cultural blood into the part, connect different full streets and walking trails, and work for various artworks. Rooms, lecture halls, etc. provide an excellent opportunity to become the heart of culture and creativity, presenting artists, designers, and architects with a cultural and creative hub.

3. Focus on the protection of historical construction

The retention of historic buildings makes the area more distinctive, able to connect with the culture of the past and to exert its social and economic functions through renovation and renovation. According to the previous summary, we can learn from the three ways of the project's protection of historical buildings, namely, retaining the original features of the building, developing new functions; demolishing the main body, part of the innovation; combining old and new, echoing each other.

4. Upgrade and utilization of transportation hubs

Upgrading important transportation hubs will help enhance their efficiency as a transportation hub. The St. Pancras Railway Station and Kings Cross Railway Station in the project have also added retail formats while repairing and new construction. The development of catering and retail functions has met the needs of passengers, while introducing a particular IP to stimulate passenger spending, making the station a unique Commercial space. Therefore, in a plan, the convenient transportation can not only make the station open to a high degree, but also attract the surrounding citizens to eat and shop, and promote or make up for the high-quality commercial vacancies.

4.4

Shinagawa Station JR

4.4.1

Introduction

The East Island in 1833 was one of the five main roads of the Edo period, connecting the Edo Nihon Bridge and the Kyoto Sanjo Bridge. Among the 53 stations on the Tokaido, Shinagawa is the first of the 53 stations and is the gateway to Tokaido. In 1872, Shinagawa Station was completed. In the same year, the Shinagawa- Yokohama (now Sakuragicho Station) railway was opened to traffic. When the truck is open, the east side of the line is the sea area. After the Meiji era, the reclamation of the sea formed the current Gangnam area. In 1994, Shinagawa Station did not have access to things, and the traffic was very inconvenient. In 1995, the city of Shinagawa started construction, aiming at activating social areas and improving the urban street environment. As a pioneer of redevelopment projects, it was also the traction of the overall development of the Shinagawa area.

In 1998, the Shinagawa Inter City project was completed with a land area of 34,387 square meters. The three buildings, A, B, and C, form the most significant business center in Japan with offices, businesses, and restaurants. With the concept of "the garden of creation and communication," the A building and the curve of the external air corridor are perfectly integrated, and it has become a landmark building in the south mouth of Shinagawa Port. At the same time, the establishment of the free passage of east and west has strengthened the connection between the east and west sides of Shinagawa Station.

Shinagawa Shinkansen Shinagawa New Station promoted the rise of Shinagawa. It is one of Tokyo's two stations with Shinkansen parking and is the hub of the Keikyu Line. Changes began to take place in the late 1980s, and the Japanese government began to reduce the accumulated debt of the national railway and stimulate the economy through urban development. In this context, the National Railways Company proposed to relocate the functions of the railway station and support the large-scale transformation of land use properties.

Shinagawa Station (Shinagawa Station) is located in Takayama 3-chrome and Gangnam 2-home in the port area of Tokyo, Japan. It is the East Japan Railway (JR East Japan), the Tokai Railway (JR Tokai), the Japanese cargo railway (JR cargo), and Beijing. The railway station where the property operators such as the Hamaru Electric Railway (Kyoto) are stationed is a transportation hub in the southern part of Tokyo. As one of the busiest subway stations in Tokyo, it has brought together nine subway lines and railway lines. In 2015, the average daily passenger flow exceeded 1 million.

The arrival of the 2020 Olympic Games will usher in a sensation in Tokyo for the next decade. With the current public and private investment levels and government support, famous commercial, residential and infrastructure projects will continue to be rebuilt in 2027. More than 45 skyscrapers are under construction while overhauling new public facilities and transportation infrastructure for existing world-class roads, train stations, and airports. Shinagawa is one of the busiest subway stations in Tokyo. A brand new station will redevelop around the existing station area and will become a critical CBD in the future.

The new station is located 1km north of Shinagawa Station and 1.3km south of Tamachi Station. It is close to Haneda Airport and designed by Kengo Kuma. The redevelopment project will redevelop about 13 hectares of the surrounding site of the surrounding vehicle base, including seven new buildings, mainly residential apartments and office buildings. The project aims to build an international exchange base and is designated by the Japanese government as the Asian headquarters to encourage overseas. The company establishes regional offices and R&D centers here. The project construction began in February 2017 and is expected to be partially open in 2020 and fully operational in 2024.
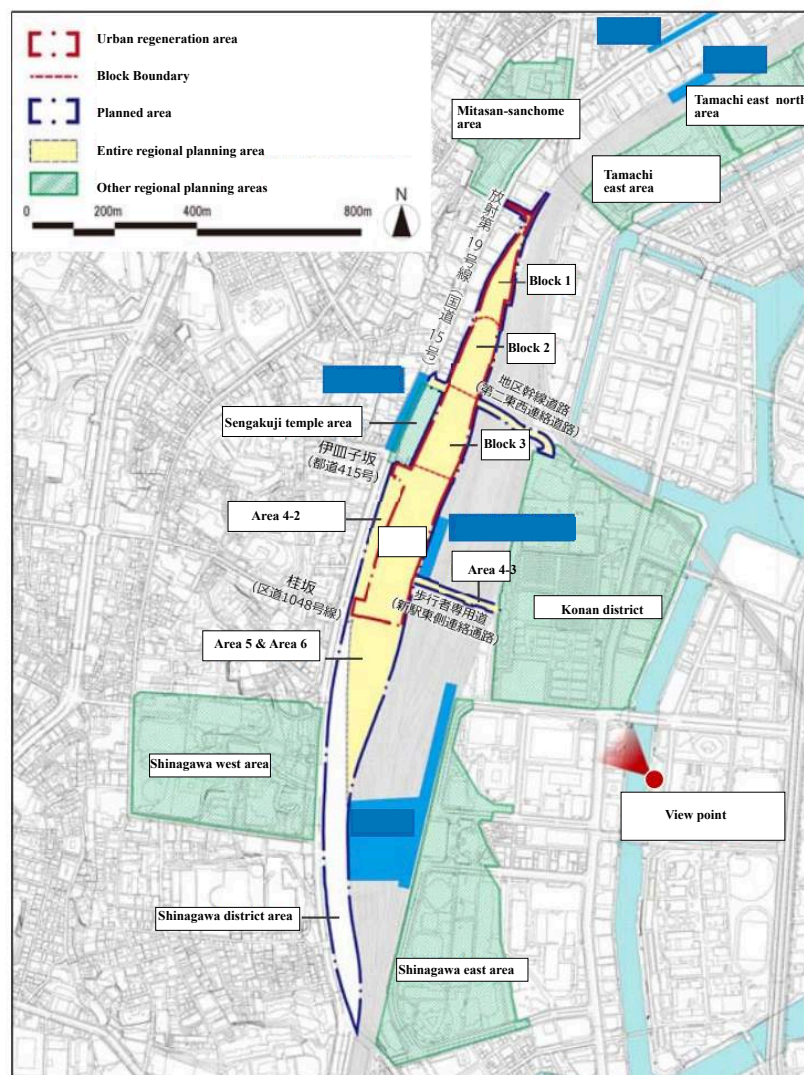
4.4.2

Strategy and actions

JR East plans to temporarily open a new train station between Tamachi and Shinagawa Station in 2020. Also, through collaboration with surrounding communities, JR East aims to develop a town that is internationally attractive.

To determine the city's infrastructure and other elements that need to be developed in advance and look to the future. To obtain the first certification of the project, as the National Strategic Special Zone of the Tokyo Metropolitan Area, JR East will advance the procedures, including the review of Ward and the National Strategic Special Zone Commission, the Tokyo Metropolitan Government and the Minato City Planning Commission.

JR East will also develop a small town that will enable innovative and internationally attractive companies and people to collect and create new businesses and cultures through a variety of exchanges.

1. Establish urban infrastructure combined with the world and the region

(1)Develop a multi-story plaza in front of the new station, which will be the face of an international business exchange base.

• New Station Pedestrian Square (about 6,500 square meters) as the starting point of the pedestrian network in the new station, connecting the new station with the town as a whole, maintaining the pedestrian square and becoming part of the international business exchange base.

• New Station Traffic Plaza (about 3,500 square meters) continues and carries regional traffic functions to connect the new station and surrounding areas.

(2)Create an exchange space connecting the two stations and the entire town in an integrated manner.

• When connecting Shinagawa Station, Shinbashi Station, Sengakuji Station, maintaining open

space, the deck network-centered pedestrian network compensates for the shortage of pedestrian space and plaza on National Highway No. 15.

a. By keeping a public space and a pedestrian network associated with the reconstruction of the Xianshisi Station area, the traffic node function/stop function in front of the Sengakuji station is maintained at the ground and deck levels as a whole. **b.** Form a prosperous space associated with architectural features and actively use it to take advantage of activities and regional activities throughout the city.

c. During regular times, it will become a living space in a quiet green area that will be used as a temporary living space for residents when disaster strikes.

(3)Base maintenance connected to surrounding areas such as Shibaura Konan and Takanawa

• Maintenance of airborne roads across the railway land (new station east side communication channel), keeping the new station and the sidewalk of Shibaura Konan area.

• Keep the pedestrian access to the greenway leading to the No. 15 National Road and Wadamachi Mita area.

• Maintain open space like an entrance to the Takanawa area.

2. Introduce various urban functions suitable for international business exchange bases

(1)Develop, nurture and dispatch services to create culture and business

• Try to create new value by developing infrastructure with cultural development, communication, and scheduling functions.

• Introduce conference and commercial support facilities that support international families.

• Prepare and develop international standard accommodation facilities that meet short-term accommodation needs, such as business and sightseeing.

(2)Develop various residential tasks that meet the needs of foreigners

• Maintenance life support function, etc.

• conferences, etc.

• Develop international-class residential facilities for foreign enterprise workers.

3. Strengthen the ability to respond to disasters and create a leading environmental city supported by C40

(1)Strengthen regional disaster prevention capacity and build energy network

• The maintenance of the temporary support facilities (approximately 10,000 people), the temporary reserved space is secured, and the disaster support function in each block is ensured.

• Ensure business continuity in the event of a disaster by establishing a self- heat utilization and food waste.

(2)Effective use of unused energy and reducing the environmental load

• Promote active use of remaining energy through energy recoveries, such as sewage

• We aim at the third stage of the Tokyo Building Environmental Planning System.

Strategies related to landscape

A vibrant and bustling city and companies from all over the world gathered and expressed new business and culture, and created "changes" from different exchanges.

1. As a group suitable for new international cities form a vibrant and iconic urban landscape.

• The flow in the entire area is formed by the flow of the top of the high-rise to the open space and the connection of the middle and lower parts.

• Reduce the pressure on the surrounding urban area by ensuring wind between the wind farm and the adjacent sections of the high-rise building where the winding road and the line of sight fall off.

2. Connect cities and regions and face open spaces gathered by different groups of people.

• About the new station pedestrian plaza, the free space of the town, and the open space integrated with the neighborhood park,

• Connect towns and areas to form a public space, green, line of sight, and vitality.

3. A variety of vivid and communicative births, creating a continually changing street space.

You can use the decks and sidewalks on the ground to create landscapes, feel the water, green plants, and use various activities as street features.

4.4.3

Results and impact

The 500 billion yen (about 4.4 billion US dollars) Shinagawa development includes several high-rise buildings ranging from 164 to 173 meters high, including a 45-story, 860-unit apartment building, including about 200 rental apartments for foreigners. An international school. The apartments range in size from 50 to 200 square meters (538 to 2,152 square feet). Also, there will be a commercial building that plans to attract an international branded hotel with 200 rooms, a 5,000 square meter conference hall and an 8,000 square meter exhibition center.

Since 2000, the reconstruction of the railway station has become one of the essential new urban renewal projects being carried out in major cities in Japan. The station and adjacent rail properties are undergoing physical modifications to accommodate new municipal functions and enhance the passenger travel experience. Due to the multi- level connection to the station and their proximity, the surrounding community is also involved. Therefore, the role of the railway station in the city is different from that of the transportation hub, becoming a cultural symbol, a social communication hub, and a commercial center.

4.4.4

Experience and inspiration

1. Site selection prioritizes existing stations

The experience of the Shinkansen shows that access to the high-speed rail station to the city's original railway station is the first choice to strengthen the siphoning effect of high-speed rail. The development of the new station requires a lot of time and resources. The role of the high-speed rail station for the city is more like a catalyst than a "growth engine." Even in the period of rapid urbanization in Japan, only the Shin-Osaka Station and the Shin-Yokohama Station have been cultivated for at least 30 years. By comparing the land prices around Osaka Station and Shin-Osaka Station in 2008, it shows that compared with the original railway station of the city, the new station is still in the stage of strengthening development, and the concentration is weak.

2. Strengthen policies and market guidance for the development of high-speed rail station areas

The core of the system is to guide the development of the high-speed railway station area. The focus is to differentiate the development of the high-speed railway station area in large, medium and small cities, and to abandon the rapid growth of new cities and new districts with high-speed rail, and to build high-speed railway stations with the "business core" development model. Means. Strengthen the market's guidance for the development of high-speed railway station area, that is, actively introduce the regional commercial development and operation mode of the high-speed railway station, find the right direction, and use the advantages of the enterprise to accurately grasp the market demand, induce more efficient travel, and improve the high-speed rail to the city. The development of the role, the establishment of a differentiated high-speed rail service circle.

3. Actively promote the development of the station city

The integrated development mode of the station city helps to strengthen the siphoning effect, and it is also one of the essential ways to shorten the time of the initial development stage of the high-speed rail and effectively link the upgrade/update development stage.

The integrated development of the station city is an integrated development mode of public transportation and land. The installation of residential, office, commercial facilities, and public facilities along public transit is an effective means to realize this kind of public transportation oriented city development (below). The Japan Shinkansen large and medium-sized stations, represented by Shinagawa Station, have achieved the event of a highly sophisticated and agglomerated station city with the station building as the core, which significantly improved the

efficiency, comfort, convenience and symbolism of the high-speed rail station area. At the same time, it has driven the overall development of the high-speed rail station area.

To realize the integrated development of the station city, we must first break through the existing regulations, relax the conditions and restrictions on land use classification and planning, and improve the land compatibility. At the same time, we must start from the fire regulations and other aspects to clarify the management rights of buildings and sites. , remove the obstacles to the development of the station complex. Secondly, it is necessary to construct corresponding institutional mechanisms, to promote the construction and operation of high-speed railway stations and the benefits of land appreciation in the future with market-oriented mechanisms, to promote the linkage between development and maintenance, installation and revenue, to enhance the enthusiasm of builders and operators, and to effectively promote site use — integrated development with the surrounding land.

4.5

Atlanta Belt line

4.5.1

Introduction

The capital of Georgia, the city of Atlanta, USA, hosted the 1996 Olympic Games and is also known as one of the top ten wealthiest places in the United States. When it comes to Atlanta, you can think of Martin Luther King and Coca-Cola, but there are also ongoing Atlanta Loop projects. With a population of more than 5 million in the Atlanta area and about 500,000 in the city center, Atlanta's population density is very low compared to the population density of other cities in the United States, which has become the main reason for restricting the development of Atlanta. Atlanta has no coasts and ports. It is a typical, inland city.

Koch's Birdseye View of Atlanta   Atlanta, Georgia

Atlanta has become an important railway hub under the construction of American railways in the 19th century. With the development of transportation, the emergence of automobiles has brought about changes in transportation modes. People have gradually adapted to the automobile-led urban development model. The economy has grown for a long time, but it has also brought about new urban diseases.

The Atlanta Loop was built from abandoned railway tracks made in the early 19th century, with stacking lanes, traffic lines, and parks. In 1999, the project's founder, Ryan, completed his graduation design in the same year and completed his graduation design thesis: the Atlanta Loop. He studied and analyzed how the city's transportation infrastructure affects the development of the city. It is learned that Atlanta has a particular circular railway track that was gradually formed by the previous industrial development. Later, as the industrial area moved to the vicinity of the expressway, the railway was abandoned, but the old railroads and old industrial areas were retained. Ryan's idea is to connect the railways left by the city into a 35-kilometer loop, transform it into a modern rail transit loop, and process 45 communities along the line, with a total area of 2,000 hectares. Later, Ryan's idea got the attention of the Atlanta regional government. The transportation department believes that this simple idea can drive the traffic development of the entire city and be used by thousands of residents. The economic development department has also found that this is an excellent development opportunity and will bring many business opportunities. From the birth of the establishment in 1999, after about four or five years, the project has changed from a graduation design to a realistic plan.

As one of the most economically active urban areas in the southeastern United States, Atlanta faces problems such as the inadequate supply of public facilities, environmental pollution, social isolation, and lack of new impetus for economic development. Urban redevelopment can better expand space, attract businesses, and increase new jobs. The Atlanta Loop Renaissance Project was launched in 2007 and was the most significant urban redevelopment and design project in the United States at the time and is expected to be completed in 2030.

4.5.2

Strategy and actions

"Making Atlanta a global beacon of equality, inclusion and sustainable urban life." "The Loop is one of Atlanta's rare projects with great potential" – the Atlanta Loop Reconstruction Program. For many people, the Atlanta Loop Project is an infrastructure project that is an critical way to change and expand our path towards sustainable futures. For some people, it is an essential means of economic development and transportation. But the core of the final project lies in people, paying attention to people's lives and conveniences. People should be considered when constructing infrastructure in the project, otherwise, no matter how long the track or concrete is laid, it will fail.

The goal of the Atlanta Loop is fairness, inclusiveness, and sustainability, and an infrastructure is an essential tool for achieving these goals. Based on the idea that transportation is fair, revitalize old railways, develop new transport, connect people with various resources, and promote the development of the entire region.

Atlanta's Beltline and the Atlanta Department of Planning and Community Development have divided the project into five parts, ten sub-areas, and developed different master plans. The project will build parks, establish rail and slow-moving roads along the 35.5km abandoned railway track area around Atlanta, and re-develop commercial and residential buildings while paying attention to public needs. The planning covers three aspects: land restoration and redevelopment, facility upgrading, and housing construction. The specific targets include a park area of 8 500 000 m2, a multi-functional road 53 km and a rail transit 35 km. The housing, office, retail, and industrial redevelopment projects involve a land area of 26 000 m2 and planned addition of nearly 30,000 jobs. Funded by the Tax Allocation District (TAD) program, it is expected to be completed in 25 years.

4.5.3

Results and impact

The implementation of the project will effectively stimulate the development of the surrounding area, not only attract more office and residential development projects but also promote the development of theater and cultural life. About 3,000 hectares of underutilized land along the ring will be effectively exploited for public and private use. The Atlanta Loop Project is not only a ring road for the city but also an excellent opportunity to change our thinking about the existence of this city and our expectation for culture.

The federal, state, municipal, and private donations fund the project, with a project budget of approximately $3 billion, which will form a ring around the Midtown Atlanta and downtown, creating infrastructure to increase liquidity, including 22 Miles of walking trails, 33 miles of traffic tracks, 1,300 hectares of parks, 5,600 affordable homes, and 1,100 hectares of industrial brownfields will be restored. By the end of 2017, $500 million has been invested in building the public infrastructure of the Atlanta Loop, including 11 miles of full trails and 300 acres of converted parking lots, generating $4.1 billion in economic development and creating 11,200 permanent Jobs and nearly 30,000 jobs. More than 14,000 new residential units were built, including more than 2,500 residential units within walking distance of the Atlanta Loop.

The project provides a transformative public infrastructure that better enhances mobility and provides a venue for cultural development, creating a more productive environment through job creation, inclusive transport systems, affordable housing, and vibrant public spaces — social and economic resilience in Atlanta. At the same time, it will bring Atlanta's booming film and music industry, and the bicycle culture is better linked to more and more transportation and transportation systems.

4.5.4

Experience and inspiration

Through the Atlanta Loop Project, it can be known that some cities have a large number of abandoned railways and facilities, and comprehensive urban renewal is one of the ideas of urban development.

The Atlanta BeltLine uses an abandoned railway that surrounds the city and the original abandoned and undeveloped land to develop it into one of the city's most comprehensive transportation and economic development projects ever. The project transforms the railway loop connecting the city's 45 blocks into a 35km transport line and a 53km trail, including 536hm2 of parks and green spaces. Upon completion, the project will repair more than 445 hm2 of brownfield, increase 40% of urban green space, and create a large number of jobs for urban residents.

It will have a profound impact on Atlanta's cities and residents by updating the city's transportation infrastructure, reconnecting and combining communities, providing a slow-moving system, restoring urban environmentally fragile areas, and promoting economic development.

Therefore, how to integrate the railway land with the surrounding urban villages, warehouses, green belts, and abandoned property, and build an urban space with green space as the core and combining commercial services, public facilities, sports and leisure functions, which will be comprehensive. The most effective way of urban renewal, effectively connecting the surrounding metropolitan areas, significantly improving the living environment and quality of the neighboring residents, and forming a green corridor connecting the greenways in the area, providing a friendly slow traffic environment for the region, thus perfecting Urban green space structure to build a healthier and more ecological city.

5.
From Global - Italy - to Milan urban regeneration

5.1

From case study research to the regeneration opportunities in Milan

People's living are increasingly affected by urban issues. The continuing expansions of cities for a long time have caused irreversible damage to the natural environment, accompanied by the increasing issue of pollution. The issues of housing, traffic, highly unbalanced density, and other various social problems in cities are even more inconsequential, and a series of chain reactions affect people's survival. Nowadays, people live in a world of multipolarity, globalization, diversity and information. The international situation has changed and a subtle change may cause a butterfly effect. Industrial cities, driven by resource consuming, have rapidly lost their advantages and began to decline in the past 20 years. In fact, over the years the city has begun to look for new development opportunities. Cities are using data and technology to make themselves smarter, more effective.

In recent years, the regeneration approach has been increasingly adopted all over the world in facing the urban issues caused by rapid and disordered expansion, and the decline of industrial cities. In the study of the regeneration globally, the impact of official decision making on society and economy has been noticed. At the same time, people pay more attention to how these urban regeneration projects can effectively transform the initial negative situation into what we expect to see in practice.

In the previous chapters, we studied the development of urban regeneration theory in different periods, and the implementation of specific design cases, urban restructuring cases and public space redefinition cases. The regeneration offers new activities into the region to provide new industries and employment opportunities, and to resolve the recession and subsequent problems in some areas due to the decline of the original industry. Not only modern economic globalization and free markets have increased the flexibility of the regeneration policy, but also the high public participation and the complete regulation in the information age, the people-oriented starting point, rational guideline and the concept of sustainable development. The government collaborates closely with public and enterprises with private entities participating and undertaking part of public service functions, such as the establishment of public-private partnerships company. All of these factors have contributed to the implementation of urban generation projects.

In this chapter, we will first answer how Milan used this as an opportunity to carry out urban regeneration by the general survey of Milan's abandoned railway yards after de-

industrialization. Secondly, we will summarize the general guideline of the urban regeneration project by collecting existing documents and competition project requirements.

5.2

The development of Milan

Milan, as a European Metropolitan City, has experienced many changes over the past centuries. Milan is considered a leading alpha global city, with strengths in the field of the art, commerce, design, education, entertainment, fashion, finance, healthcare, media, services, research and tourism. Milan served as capital of the Western Roman Empire from 286 to 402 and the Duchy of Milan during the medieval period and early modern age. Today the city is still the Europe's main transportation and industrial center. As far as local GDP, it is the third largest economy in Europe after Paris and London. It is also the fastest growing economy and one of the non-capital wealthiest cities in Europe.

Wiki During the World War II, Milan was attacked by bombs. After the war, as the capital of Lombardy, Milan became the engine of post-war reconstruction in Italy and the main force driving economic prosperity. It witnessed the growth and transformation of the city, into which flooded a large number of immigrants. From the unification of the Italian Republic in 1861 to 1974, the population of Milan increased to 1.7 million inhabitants. However, since the population peaked in the 1970s, the number of people in Milan has continued to decrease, mainly due to the sole industry in the past 30 years. Like many other European cities, Milan has a low birth rate and a rapidly increasing aging phenomenon.
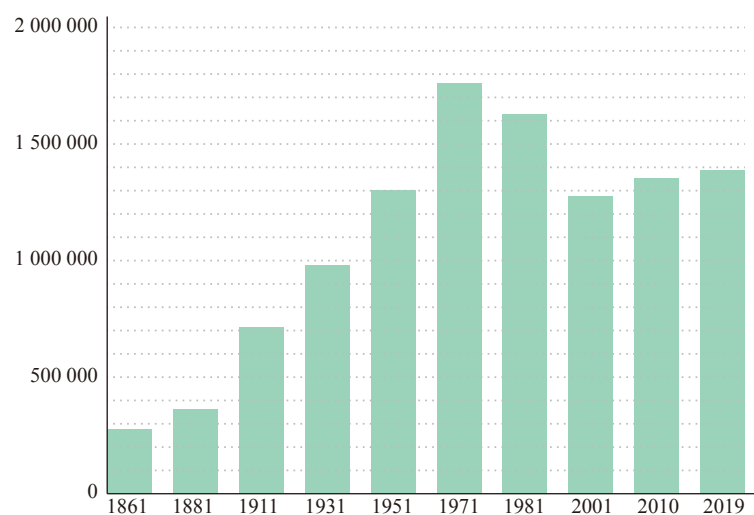
Throughout the 1980s and 1990s, as in Italy and elsewhere, Milan's urbanization process seemed to be in crisis. Even the construction industry faces serious difficulties: although many housing problems remain critical, many apartments have not yet been sold. Trade Unions acquired a greater ability to represent and organize national manifestations to request better

public transport and public housing, leading town planners to declare: 'reforms walk on the legs of workers'. A brief history of Italian town planning after 1945 Giorgio Piccinato. At the same time, the new economic geography appeared. The overall industrial development in northern Italy has become slow, while the northeast and central regions have begun to take the lead. Under the new model, the tertiary industry, and small and medium-sized enterprises have developed rapidly, and they are also increasingly inclined to develop in foreign markets. In Milan, once the important industrial sector has fundamentally reduced the scale. The stagnation of industrial activities directly leads to a large amount of idle industrial space in the city, and the abandoned railway yard is also huge. Most of the original railways in the Milan area are used as warehouses, and the railway system assumes most of the transportation service functions. Today, these railway systems are conserved partly and used as passenger transportation service.

5.2.1

Railway system overview in Milan

Due to the importance of the city, Milan has always been a very important transportation base. As early as the 19th century, since almost all the railway lines with goods and passengers that connect the northern Italian cities inevitably passed through Milan, several train stations in Milan could unload and load. Since 1840, dozens of railway companies have begun to build railway lines in Milan, and the situation has been in chaos around 1880. The state decided to conduct a unified intervention: between 1880 and 1905, the railway lines owned by private companies were nationalized, and the railway system became a public service system. The land in these areas was purchased by the state.

In the mid-1980s, a new privatization process began. In 1985, Ferrovie dello Stato was changed from a national institution to an independent public agency with legal personality and financial autonomy. Then the new company was established in 1992, and the share of capital can be obtained privately. All assets, including railway land, are classified as the private property of the new company. However, as noted above, the state has already paid for railway yards in 1905 and subsequent decades. Therefore, the State, as the owner of the land, has full authority to use and modify the function and use of the land.
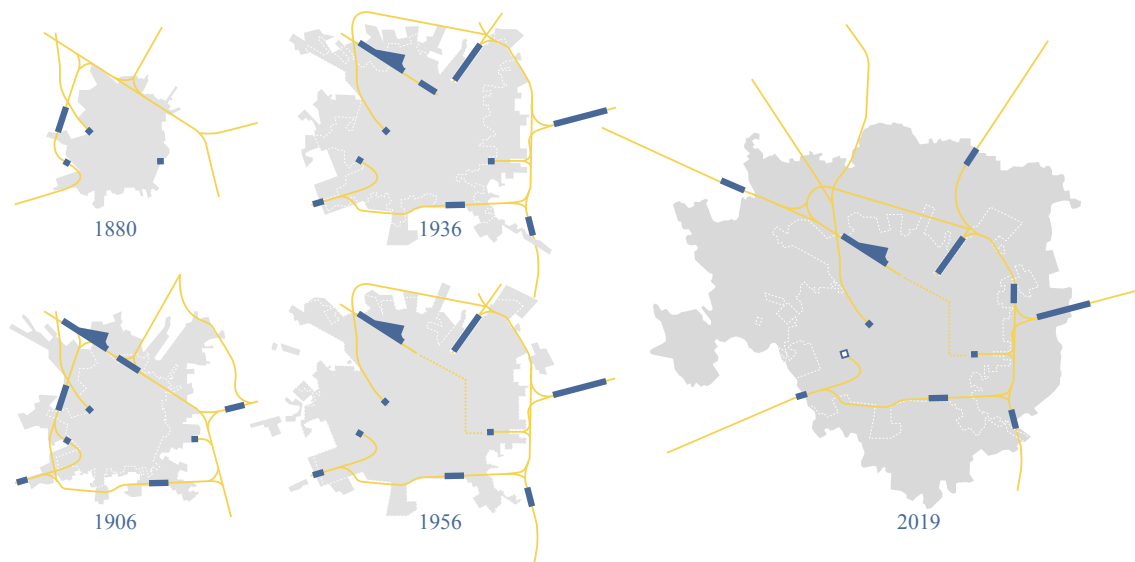
Construction

The railway played such an important role in urban life. In 1912, Milan began one of the most ambitious urban projects: transferring most of the railway lines out of the inner city to ensure the connection of new residential and industrial areas. The existing central station was demolished, and the new central railway station was built as well as freight stations such as Lambrate, Farini, Greco and Rogoredo. By the 1930s, the railway network in Milan had developed almost the same as today's routes, and Milan became the railway capital of northern Italy. Today, there are 23 stations in use in the city managed by Ferrovie Nord and RFI (Rete Ferroviaria Italiana).

5.2.2

Abandoned & underused railway yards

There are two main reasons for the gradual decline of the railway in Milan. The first is that since the 1970s, Milan has gradually lost its main features of industrial cities with the urban transformation to the rapid development of the tertiary industry. Therefore, raw materials and industrial finished products are no longer frequently transported. Many industrial manufacturing companies have closed their factories in Milan to save costs. Second, road transport instead of rail transport has become the main mode of transport in Italy and Europe. According to Eurostat's report, from 2000 to 2016, the share of rail transport in the domestic market was stable at around 13%. The combination of these two factors clearly shows that the abandonment of many freight railways in Milan is inevitable. Today, only the warehouse area of the Segrete train station is still in use, and the other freight areas of all railway stations are closed and unusable, often referred to as abandoned areas of the city.
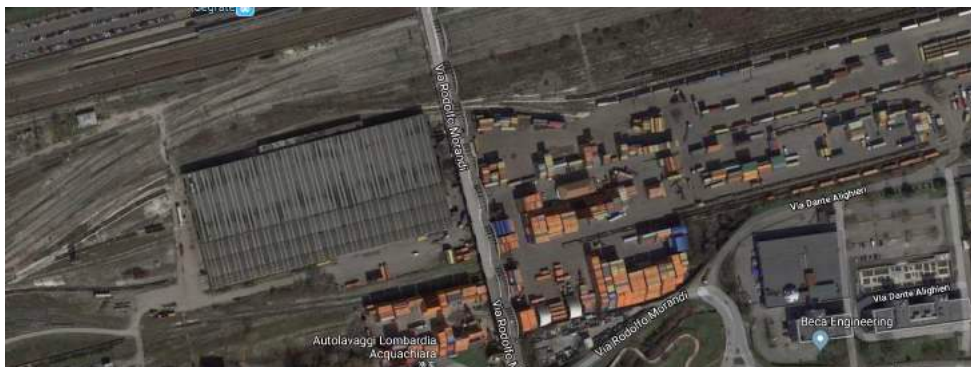
Novegro di Segrate - container warehouse in use
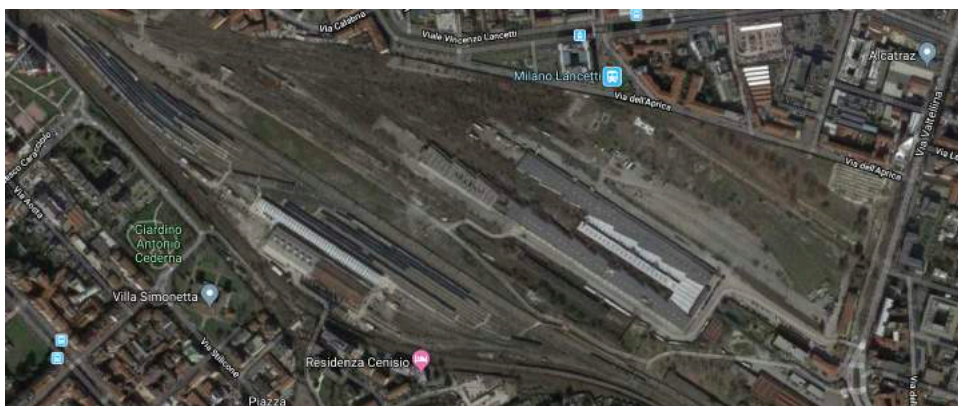
Scalo Farini - underused container warehouse and ex-customer

Scalo Greco Pirelli - underused container warehouse

Effect

Throughout the history of railway construction in Milan, the connection between the city and the railway has been very close. Railways are usually built in the blank areas around the city when the industrialization of each city begins. As the most important infrastructure in the industrial city era, railways are directly related to cargo transportation and population movement and promote rapid economic growth. On the one hand, the development of railway infrastructure adapts to the development of the city. At the beginning of the construction, both public transportation and cargo transportation are often taken into account. Therefore, one side of the railway is the land for the traveler and the other side is the freight area. On the other hand, on the contrary, the railway infrastructure has also affected the development of Milan's urban layout. With the continuous expansion of the city, the railway station that was already in the outer circle of the city has gradually been urbanized, and the railways divide the city into pieces. The sides of the rails are not directly accessible until underground and elevated passages are established, and large areas of the ground used for the warehouse are also discarded.

With the decline of industrial cities, especially after the expansion of urban land, coupled with the replacement of traditional freight transport by a variety of new freight methods, the decline of railway transport industry and the waste of railway almost become an irreversible trend.
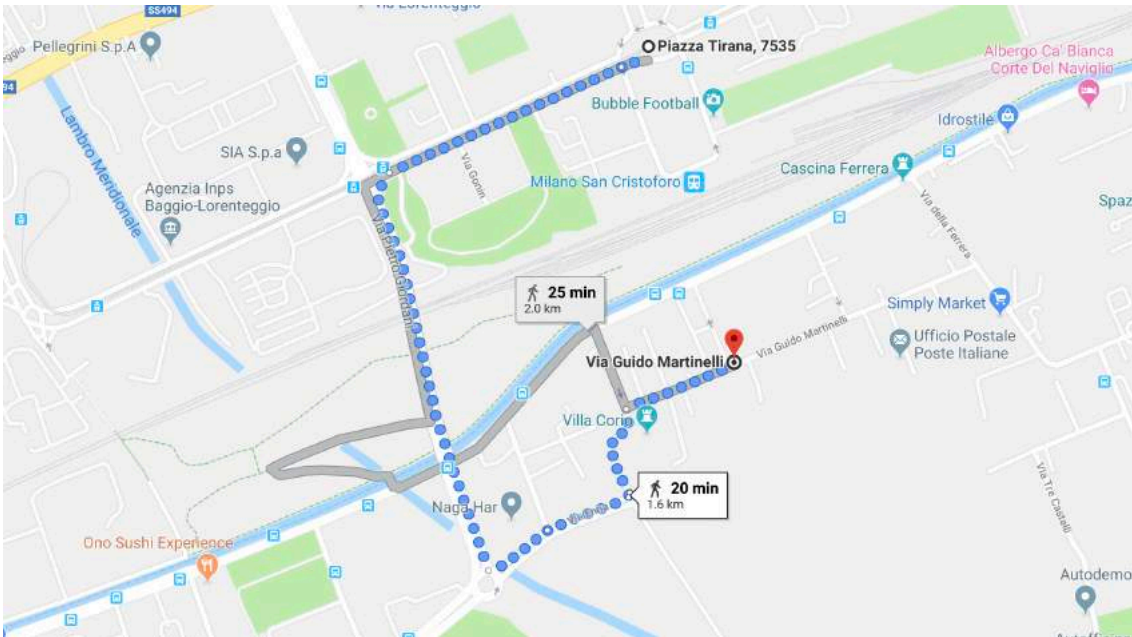
The north and south parts of the San Cristoforo station are severely separated by railway yard and canal. People from the northern residential areas need to walk at least 20 minutes if they want to reach the southern park.
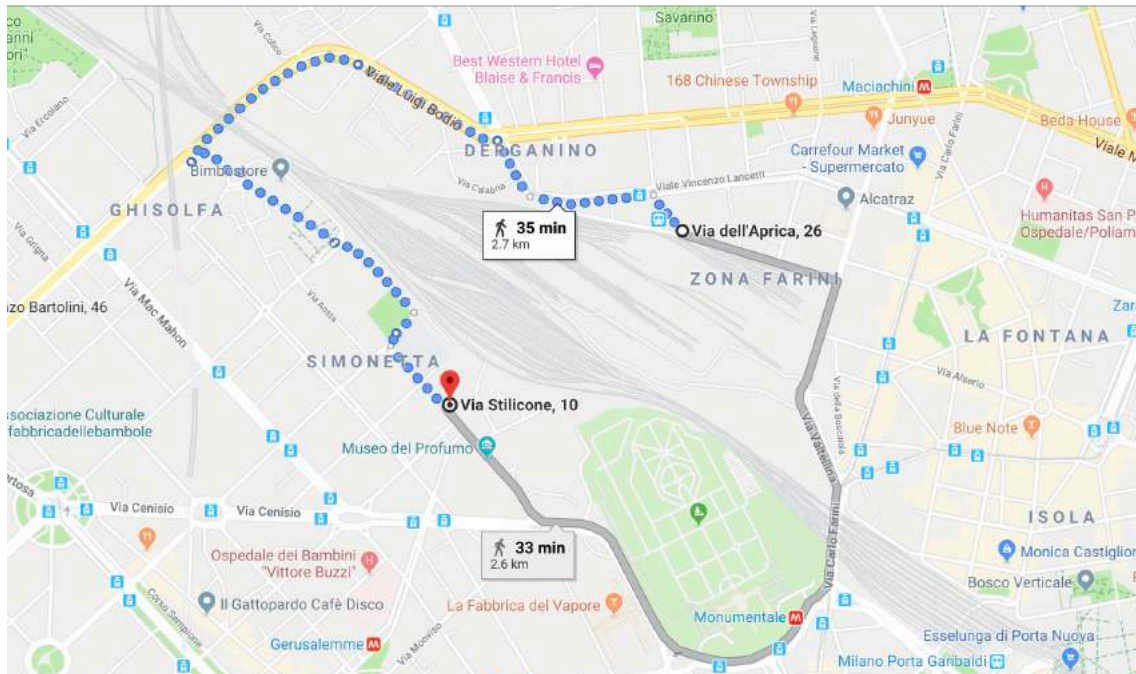
More serious situations happen here, scalo Farini and Monumentale cemetery serve as the two largest urban areas, making the urban fabric discontinuous.
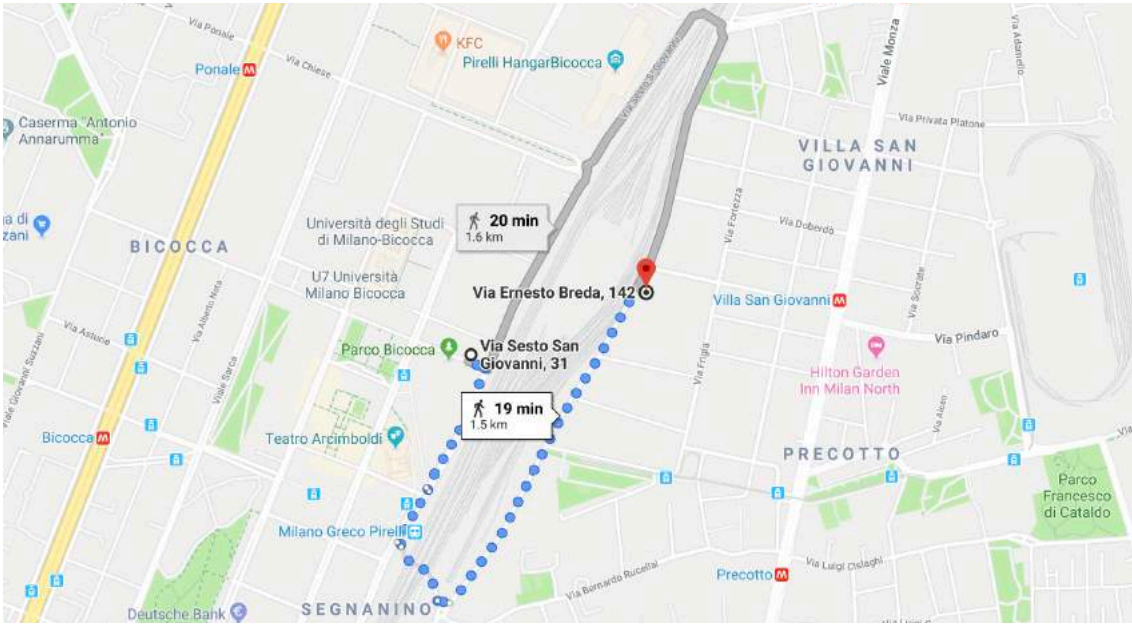
The same thing happens here, the new campus on the left side of Greco Pirelli station is completely isolated from the historic block on the right.
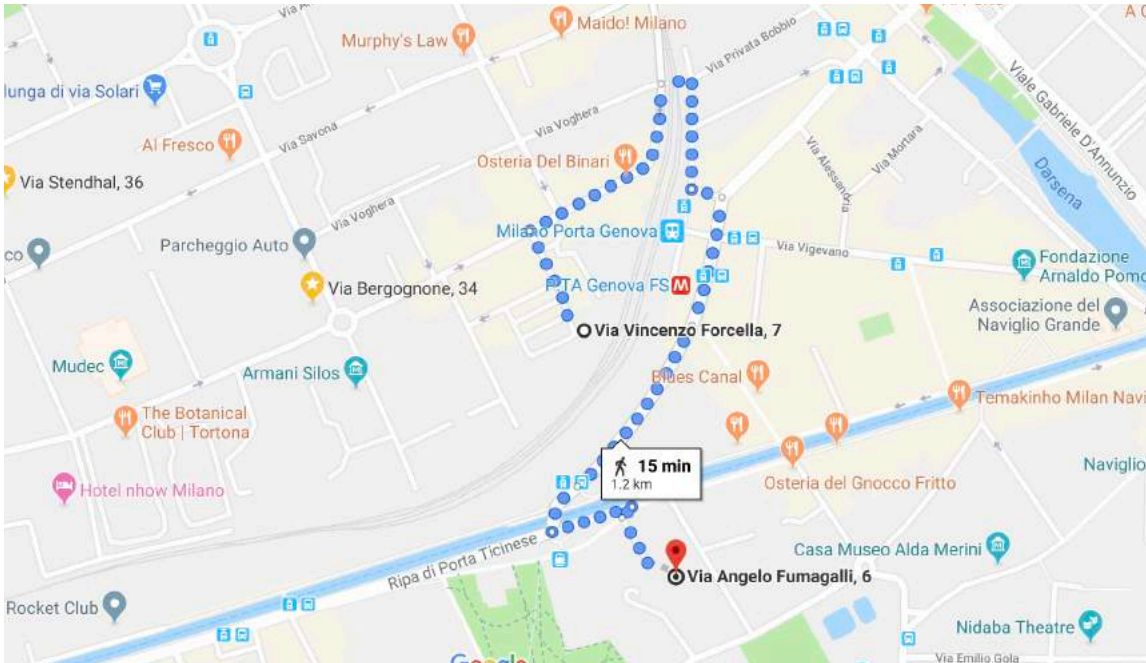
Porta Genova is a freight-based train station in the heart of Milan, that has been completely abandoned now.

5.2.3

Regeneration, an approach to resolving the problem of abandoned railway yards and an opportunity for urban revitalization of Milan

The openness of the station to the public remains an important presence of vitality and commercial value. On the back, this is the darkness of the dark, making full use of these decaying areas. These underutilized railroad renewals have enabled Milan's image, livability and productivity to be realized. To solve the urban recession, these cities and other cities around the world have designed complex urban renewal processes. The public sector fully implements a few urban renewal projects. The demand for large amounts of financial resources is a factor. Even if the government can provide the necessary resources for the regeneration of urban land entirely independently, it faces the difficulty of ensuring the sustainability of the recycling work whether private sector participation is one of the factors determining the success of underutilized urban land regeneration.

In the case of Milan's renewal of the abandoned railway system, since these abandoned railway areas are owned by the state-owned company Ferrovie dello Stato, which manages the Italian railway traffic, it has been controlling a company called FS Sistemi Urbani for many years to deal with "not suitable." Real estate of railway operations. Its general manager, Carlo De Vito, said of the railway and city issues: "La città si muove, la ferrovia segue le indicazioni." Since the 1990s, FS has acquired land from the country at zero cost. At present, these areas seem to have been abandoned and useless. It is meaningless to leave them, but it is impossible to directly convert large-scale commercial buildings and change the nature of land use because these areas are still used for railway use according to the plan.

Therefore, the municipality and the railway company decided to cooperate: the municipality is committed to changing the intended use of these areas to allow FS to build residential and commercial buildings on it. In exchange, Ferrovie sells part of these areas to the public and the funds recovered are used to invest in strengthening the regeneration of the railway yards. Of course, the benefits that the municipality can get from the new building are also guaranteed. The state restricts FS's commercial transformation of land:

all redevelopment areas include the need to retain more than half of the area as a public service space or park. Wallpaper, a design and lifestyle magazine that has been regarded as an industry authority by designers and architects, has invited famous designers or artists to form a jury each year to select the best cities, best public buildings, designers of the year, etc. 11 Design Awards.

Among them, the announcement of the city of the year is particularly exciting. Milan was voted the best city in 2019. But just a few years ago, Germany's "Der Spiegel" said in 2013 that the richest city in Italy has been in a recession for three consecutive years. But now Milan is seeing an exciting renaissance, all recent projects are seeing the cityscape evolve to combine its traditional grandeur with a contemporary architectural language. That is because the Expo in 2015 will boost the economy. On the other hand, it is also the focus of its investment in construction in recent years and the renewed development of urban abandoned space and urban open space. Since 2005, with the opportunity of bidding for the 2015 World Expo and post-World Expo planning, Milan has practiced and explored urban renewal in terms of regional imbalances and problems that have plagued the development of Milan.

These non-residential abandoned areas in the city of Milan may cause potential damage to the area, society, and economy and may pose a threat to health and social security and the urban environment. Updates in these areas have public use and universal significance.

Most of the medium and large cities in Europe served by the railway. In certain circumstances, the functional conflict between cities and railways has led to a series of major urban transformations.

President of Italian market research firm ScenariImmobiliari Mario Breglia believes that "international investors have begun to return to Italy, especially in Milan. Speculative investors will arrive first, and they generally have the most sensitive sense of smell and see a longer-term future." Demographics also show that the urban population is falling out of the trough and is gradually picking up. Milan has a vibrant urban development plan in the next few years. Milan has formed a centrifugal and decentralized feature in the expansion of the big cities of the last century. Therefore, re-development of scattered areas and abandoned areas is the fundamental way to solve urban problems. Functionalizing these abandoned areas can truly create investment opportunities and increase the attractiveness of the city.

Today, these independent and abandoned railway areas also represent a discontinuous urban structure, and the renewal and intervention of the railway will directly repair these areas while bringing vitality to the surrounding areas. In recent years, there have been profound changes in Milan and there are more opportunities. Looking back at the different historical stages of Milan's urban and architectural development, after 150 years of industrial development, from "grey" to "green," we have a responsibility to reconnect the city through regeneration.

A new European strategy calls for the creation of "green infrastructure" in cities, living with cities and emphasizing the importance of green. Future cities are inseparable from all forms of

environmental quality requirements, from infrastructure to transportation, from building technology to sustainable development.

5.2.4

The evolution of the agreement

In the middle of 2000, the Municipality of Milan and the National Railway Group decide to sign a framework of agreement for approving the decision of associating the urban transformation of the abandoned railway areas or in process of abandonment with the strengthening and redeveloping the milanese railway system. The agreement recognizes the redevelopment of the no longer functional railway use areas and the consequent creation of the economic capital gains can become an important occasion for enhancing the nodes of milan and improving the accessibility between the city and the surrounding areas. The municipality is committed to proceeding through a start of a series of negotiated programming, which is provided in the regional legislation (L.R. 12/2005).

The AdP (Accordo di Programma) was formalized in 2007, which provides the participation of the Lombradia Region, the post, the state property department, and the public real estate fund as the owners of the adjacent areas in the urban transformation. The following variant approved in 2009 anticipates the choice of drawing up the Pgt, which is short for Piano di Governo del Territorio and a new general planning tool approved in 2011, with some significant differences from the proposed regulations for the transformation. The interested area amounts totally equal to 1.290.384 sqm, involving 190.500 sqm of defined area as "for railway used " not in transformation. The Variant of 2009 provides the Slp (superficie lorda di pavimento) area is equal to 845.000 sqm with mixed functions, corrisponding the Slp/St (superficie territorial) index equal to about 0.75 sqm/sqm, which calculates a theoretical inhabitants about 15.000 unites with arrangement of at least 654.000 sqm of service area.

The AdP required the Railway to use a competitive way to guarantee a good quality of the project and a functional flexibility between free use and general interests use, and include a significant share (28% of total) of social residence in varied forms. The transportation dimension constitutes a core element of the agreement. It forecasts the increment of the railway transport capacity of 40.000 passengers per hour for each direction, the improvement of the accessibility both in the city center and the urban polarities, and the launch of the Circle Line project (from Certosa to San Cristofono in a clockwise direction).

The Pgt was approved in 2011. However its content was never published. The seven railway yards are classified as Ambiti di Trasformazione Urbana (ATU, ambit of urban transformation) with some modifications of perimeter of the areas, in particular a diverse attribution of building parameters respect to the AdP mentioned before. The intervention area became 1.306.256 sqm

with a total number of 876.578 sqm of gross floor area, which can be increased until 1.012.580 sqm of gross floor area. The average territorial index is equal to 0.79 sqm/sqm. The Pgt provides an obligatory use of about 20% of the gross floor area for social housing, conventional and subsidized building for rent amounting 223.000 sqm. The provision of the entire green area is 757.000 sqm. The Greco-Breda area has a 30% of the territorial area for green space.

Since the Pgt was in force in December 2012, the municipal administration restarted the construction of the AdP that was update with new choices of the Pgt. In the Pgt the more relevant aspect regards the recognition of the infrastructural nature of the railway yards, as a consequence, without a stipulation of the agreement no one can claim any kind of construction right in which the maintenance mode is allowed. For this reason the Pgt did not assign any building index for each single railway yard, but make some principles to applicate on transformations: deriving the real benefits for the city and sharing the capital gains with the railways to guarantee the connections between stations and stops, and carry out the indispensable soil reclamation; creating benefits for the local community through the construction of parks and facilities for general interests; activating an unitary procedure to avoid the risk of ownership slipt and the consequent fraying of the projects and the reciprocal exchanges and guarantees; opening a dialog with the city and its active components.

The final text of Adp (approved in 2006) completes the previsions of Pgt, defining the buildability of each single railway yard in terms of gross floor area and their vocations. The main quantitative data are:

- 1.250.000 sqm of total area
- 674.460 sqm of gross floor area with an average index gross floor area / territorial area of 0.65 sqm/sqm
- 155.644 sqm of social housing (23% of total gross floor area)
- 545.000 sqm of new public green area

There is an obvious reduction of 18% and 34% of buildable gross floor area compared to the AdP in 2009 and the Pgt in 2011. From the urban planning implementation point of view, the agreement provides each ambit will be assigned an implementation plan for the whole area, following the procedures of VAS and VIA, and providing an promotion of design competitions for parks and public facilities. The agreement has a ten-year duration with a possibility of extension and the implementation plan must be started in 5 years. Regarding the railway interventions, the agreement provides projects for the refunctionality of the railway circle in the prospective of strengthening the local transport. However, the agreement was not ratified by the

city council of Milan.

In 2016 the City Council approved a deliberation of orientation, in which were identified seven railway yards Farini, Romana, Porta Genova, Lambrate, Greco Breda, Rogoredo and San Cristoforo, and the public objectives of the new bargaining between the Region and the Railway company: enhancing the railway node of Milan for service of all metropolitan area, increasing the green area with an provision of a big park at Farini railway yard dedicated to the free time for families, realizing a cycling- pedestrian route on the abandoned line at Chiaravalle, designing a circle line from San Cristoforo to Stephenson, increasing the share of social housing in each railway yard, using temporarily the spaces as a tool to give back citizens the spaces now underused.
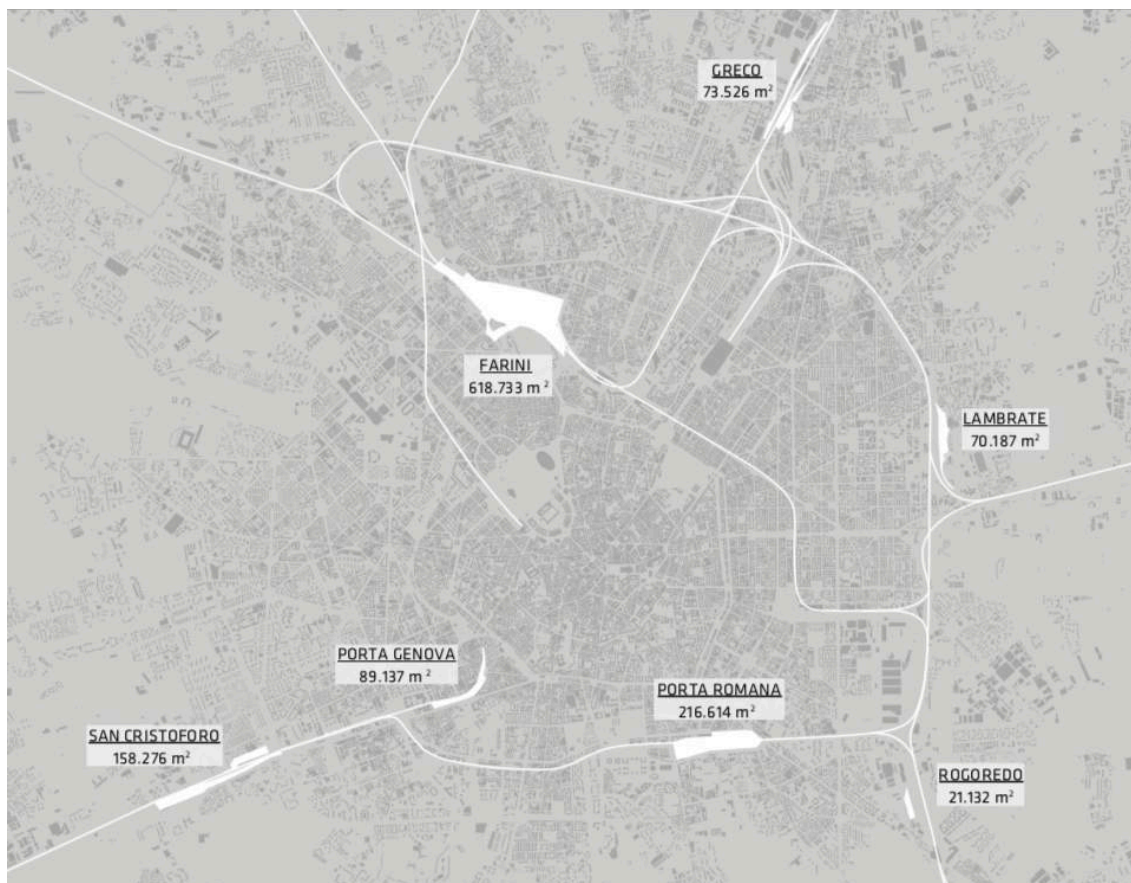
On July 13, 2017, the City Council approved the AdP signed by the Milan Municipal Government, the Lombardy Region, the Ferrovie dello Stato Italiane and the Rete Ferroviaria Italiana, FS Sistemi Urbani and Savills Investment Management Sgr(the owner of parts of scalo Farini) for the regeneration of these seven abandoned train stations. Green, Circle Line and Social Housing are key points of the agreement, and the program also elaborates guidelines from 18 different topics.

5.2.5

Competition, workshop and exhibition

A competition project targeting "Dagli scali, la nuova Città" has been in place since 2017 with the aim of updating and renovating the seven train stations of more than one million square meters in the city center of Milan. This renovation project is one of the most important urban renewal projects in Europe in the coming years. The aim is to update the railway system and build Milan into the city of cultures, the city of connections, the city of the living, the city of green and the city of resources. Most of the seven abandoned railway sites will be converted into conjoined parks, gardens, woods, oases and orchards for public use. A small portion of the remaining area will be used to build higher-density residential areas, as well as some of Milan's missing venues: in particular, housing and student hotels for young professionals, in addition to cultural services and living facilities (Library, clinic, kindergarten), social and market housing.

In the early stage of the Milan design cycle in 2017, five international architectural firms jointly conducted a three-day workshop, and together they proposed a proposal to transform Milan's dilapidated railway into a thriving new community, followed by a seven- day design week. Open to the public. The project, called 'Scali Milano,' was sponsored by FS Sistemi Urbani and the City of Milan, sponsored by Regione Lombardia, and invited MAD ARCHITECTS, STEFANO BOERI ARCHITETTI, MECANOO, MIRALLES TAGLIABUE EMBT, and CINO ZUCCHI ARCHITETTI to develop five different Visions respectively. At the same time, these seven locations will not only continue to serve as the future transportation hub of Milan but will also be connected through existing track routes to form an overall ecosystem.

FIVE projects

CINO ZUCCHI ARCHITETTI

Seven hospitable places for the new city

Green is no longer just standard or service, but the tool to design the city. The term 'brolo' indicates a wild meadow and 'broletto' was originally the lawn of the first municipal building. In the circle of the new Broli, therefore, there are new services and new open spaces of high environmental quality, green spaces and paths that innervate the still existing agricultural territory. Scalo Farini becomes a large park with pedestrian walkways that cross the railway, Porta Romana a sizeable sloping lawn open to the Prada Foundation and a market square between the railway station and the bus terminus, Lambrate a giant green crescent.

MIRALLES TAGLIABUE EMBT

Miracoli a Milano

The basic principles are common to all 7 scali: water will be the connecting element, even if each area will have its own identity and its name. Farini will therefore be the Water port (the existing Navigli will allow to design new canals), Porta Genova that of creativity, welcoming activities related to the Navigli, the Darsena and the Tortona district. San Cristoforo will be the scalo of agriculture, with a large botanical garden, Greco-Breda will be an attractive and playful center (the scalo of Light), Porta Romana the areas of innovation, with young companies and start-ups, Rogoredo the areas dei giovani and Lambrate, finally, that of Design, with a symbolic building.

MECANOO

MECANOO Project

The railway yard will be seen as multi-modal hubs, where more means of transport meet point (from trains to bikes, from trams to car sharing), make them the less attractive private car in the medium and long term, freeing up (in perspective) millions of square meters of parking lots. The idea is also to transform the area around the airports into areas closed to urban traffic. The buildings inside the airports become distinctive signs, iconic landmarks of the airports themselves.

MAD ARCHITECTS

The City of connections - Memory and future

This project envisages a sustainable mobility fabric, with cycle paths, city routes, tree-lined rows, and limited traffic areas, up to long-distance infrastructure transport networks. The idea is to connect the networks of mobility so far disconnected, integrating them with pedestrian crossings, roads and especially public transport.

NR.	Topic	Context
1	**General Strategic Vision**	Definition of the vocation of the areas guaranteeing general strategic vision and response to local needs
2	**Enhance the quantity and quality of natural environment**	Increasing the amount of green with the aim of creating a continuous system of ecological value
3	**Enhance the quantity and quality of natural environment**	Green usable and equipped: a new large park in Farini and a naturalistic system in San Cristoforo
4	**Services**	Mix of services and public functions that respond to the prospects of economic and social development of the city
5	**Sustainable and intelligent**	Forecast of sustainable neighborhoods equipped with intelligent technologies and with a private road traffic flow
6	**Housing**	Increase in forecasts relating to subsidized housing, social housing and temporary residence
7	**Social**	Social mix and with priority to families with minimum incomes, single income groups, young people, students and workers
8	**Transport**	Circle Line Railway from San Cristoforo to Stephenson to connect functions of strategic interest
9	**Transport**	Creation of new interchange stations with local public transport on a metropolitan scale
10	**Transport**	Improvement of the railway infrastructure with particular attention to the issue of noise pollution
11	**Services**	Promotion of temporary uses to return immediate and accessible, accessible and safe areas to citizenship
12	**General Strategic Vision**	Set up authorization processes and obligations that constrain the construction of urbanization works
13	**General Strategic Vision**	Guarantee the public direction of the process by coordinating the interventions with the strategies of the planning documents
14	**General Strategic Vision**	Guarantee the availability of additional resources with respect to the charges for urban redevelopment measures
15	**General Strategic Vision**	Provide for the use of bankruptcy proceedings for the Masterplans of the main areas, the most relevant buildings and parks
16	**General Strategic Vision**	Follow up a public debate process by developing a comparison with citizens and public and private stakeholders
17	**General Strategic Vision**	Evaluate the current offer and the need for metropolitan urban functions and intervention priorities
18	**General Strategic Vision**	Guarantee quick timelines that enable the regeneration process of the areas, now degraded and unused

STEFANO BOERI ARCHITETTI

A green river

The idea is to create a continuous system of parks, woods, oases, orchards and public gardens linked by a new metro line (the M6), green corridors and cycle paths built along the tracks and with three green metropolitan towers. In the remaining 10% there will be 'urban edges' with residences and study spaces/laboratories for young people, cultural services and assistance to the citizen. Among the hypotheses: the Grande Brera, the citadel of the Municipality, a mosque, the HQ of Ema.

5.3

The guideline of regenerate the railway yard —— Milan's 2030 City Plan

On March 5, 2019, the City Council adopted an updated the city plan - Piano di Governo del Territorio (PGT) for the next 10 years. The PGT is an urban planning tool introduced by the Lombardy Region, it has become the tool of urban planning at the municipal level, with the aim of defining the territorial planning. "This plan will give Milan a clear direction towards 2030 and brings development. It sets ambitious goals for urban regeneration and to recover or demolish abandoned buildings." Pierfrancesco Maran, Councilor for Urban Planning of Milan. It has been nearly a decade since the last PGT document was drafted. The population of Milan has returned to growth since 2008. In particular the new phase of development, the younger classes are growing, with an increase of residents between 19 and 24 years (+ 21.7%): this trend shows the consolidation of the role of the city in the attraction of young people. By 2030, the number of elderly over the 85 will increase by 12,000, and the number of young people between the ages of 19 and 34 will increase by 50,000. The same will increase the number of foreign immigrants.
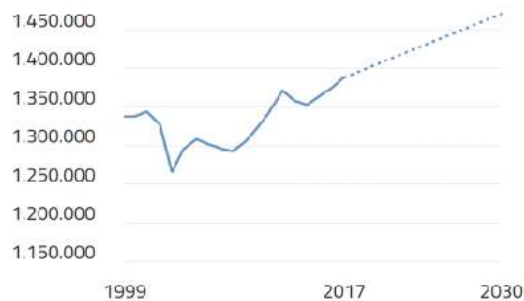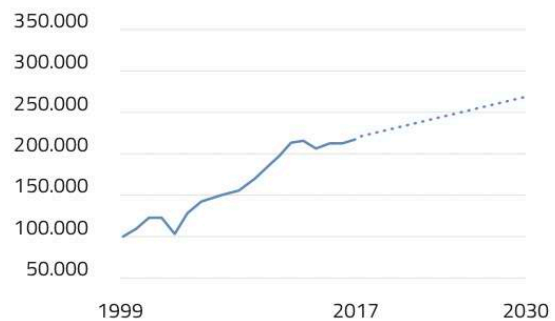
Based on these phenomena of population growth, the new PGT states that urban development for the next 10 years must be suitable for everyone, not to leave anyone; must be relevant to all areas, not just some; must be sustainable and improve the quality of the Milanese life. In this context, 5 goals were proposed:

1. Build a metropolis and a global city

2. Build a city full of opportunities

3. Build a green, livable, resilient city

4. Name different areas of the city in 88 names

5. Regenerate the city

CINO ZUCCHI ARCHITETTI	**Seven hospitable places for the new city**	Green is no longer just standard or service, but the tool to design the city. The term 'brolo' indicates a wild meadow and 'broletto' was originally the lawn of the first municipal building. In the circle of the new Broli, therefore, there are new services and new open spaces of high environmental quality, green spaces and paths that innervate the still existing agricultural territory. Scalo Farini becomes a large park with pedestrian walkways that cross the railway, Porta Romana a sizeable sloping lawn open to the Prada Foundation and a market square between the railway station and the bus terminus, Lambrate a giant green crescent.
MIRALLES TAGLIABUE EMBT	**Miracoli a Milano**	The basic principles are common to all 7 scali: water will be the connecting element, even if each area will have its own identity and its name. Farini will therefore be the Water port (the existing Navigli will allow to design new canals), Porta Genova that of creativity, welcoming activities related to the Navigli, the Darsena and the Tortona district. San Cristoforo will be the scalo of agriculture, with a large botanical garden, Greco-Breda will be an attractive and playful center (the scalo of Light), Porta Romana the areas of innovation, with young companies and start-ups, Rogoredo the areas dei giovani and Lambrate, finally, that of Design, with a symbolic building.
MECANOO	**MECANOO Project**	The railway yard will be seen as multi-modal hubs, where more means of transport meet point (from trains to bikes, from trams to car sharing), make them the less attractive private car in the medium and long term, freeing up (in perspective) millions of square meters of parking lots. The idea is also to transform the area around the airports into areas closed to urban traffic. The buildings inside the airports become distinctive signs, iconic landmarks of the airports themselves.
MAD ARCHITECTS	**The City of connections - Memory and future**	This project envisages a sustainable mobility fabric, with cycle paths, city routes, tree-lined rows, and limited traffic areas, up to long-distance infrastructure transport networks. The idea is to connect the networks of mobility so far disconnected, integrating them with pedestrian crossings, roads and especially public transport.
STEFANO BOERI ARCHITETTI	**A green river**	The idea is to create a continuous system of parks, woods, oases, orchards and public gardens linked by a new metro line (the M6), green corridors and cycle paths built along the tracks and with three green metropolitan towers. In the remaining 10% there will be 'urban edges' with residences and study spaces/laboratories for young people, cultural services and assistance to the citizen. Among the hypotheses: the Grande Brera, the citadel of the Municipality, a mosque, the HQ of Ema.

Working towards the railway yards of 2030 at the metropolitan level

While the details of how to regenerated these 1.250.000 sqm areas in the next 10 years' time are not known, some trends are already clear from the 2030 PGT.

- A connection metropolis and a global city

The transformation of the railway yard areas, and connected the system, is a fundamental opportunity to give new impetus to the definition of a strategic vision of 2030. Through the railway, the settlements located in the periphery district out of the historical city center - now only served by metro and other public transportation, will contribute to the creation of a new sustainable mobility system.

The development of Milan 2030's urban form has always gone hand in hand with that of the public transport infrastructure on rail. The building capacity of the Milan of the future intends to be functional to the level of accessibility, which wants the greatest possible number of people to live and work a short distance from a train station or of the metro, to reduce dependence on private mobility.

The "historical" structure of the Milan's railway circle could be put in place to perform this new function through a densification of the existing stations. The functions of the seven train stations mentioned above have become an early freight station, and have only retained the function of transportation. In this case, more service functions will be required. The station will become a complex function area, the PGT 2030 also mentions to re-use the Circle-Line in order to re-build the railway belt for connecting these individual service areas.

The railway cycle-line can be rethought not as a separating element but as a means of access and connection. Reconnecting pedestrian paths, cycle paths, roads, the public space system, also could connect the surrounding urban context, represents an opportunity to define a new relationship between the city and its physical infrastructure.

- A city full of opportunities

All the opportunities come from the challenge of changing. After the 2015 World Expo, due to the success of the great event and the emergence of large number of visitors, Milan became a "host city" and tourism became the main economic business. Also culture is helping the city's strategic repositioning, Milan is being nominated as an UNESCO creative city for literature. All the big transformation of the city towards 2030 is inseparable from this theme, the PGT 2030 identified the urban empty areas and seven railway yards, by installing them public or private

function, making them become the attractive and recognizable area. In turn, lead the urban decline areas regenerated.

These services will be installed in the seven railway yards, must be predominantly public and accessible. Among the possible attractive features present in the PGT 2030: new institutional and administrative offices, logistic structures to support cultural production, modern public libraries, hospital facilities, university campus and spaces linked to business incubation, large sports facilities, deposits for sustainable mobility, new urban parks.

- A green, livable and resilient city
The PGT 2030 starts a process of rethinking the design of public spaces in a resilient perspective, which will find greater detail in regulations and guidelines of the Administration.
In order to save soil, these railway yards provides a huge ecological opportunity for the regeneration, which has been exploited for industrial, and these soils will be "recovered" and returned in green areas. The potential of this opportunity for change can easily be understood, and the possible impact on urban livability, already starting from the transitional phases.

The opportunity in an overall design can take into account the continuity identified by the railway line to transform itself in continuous ecological infrastructural system.

Spazi del Parco metropolitano
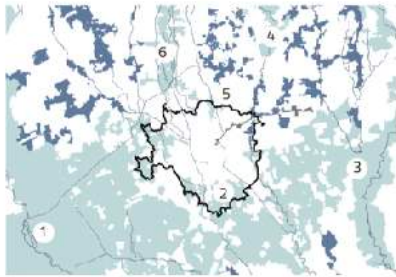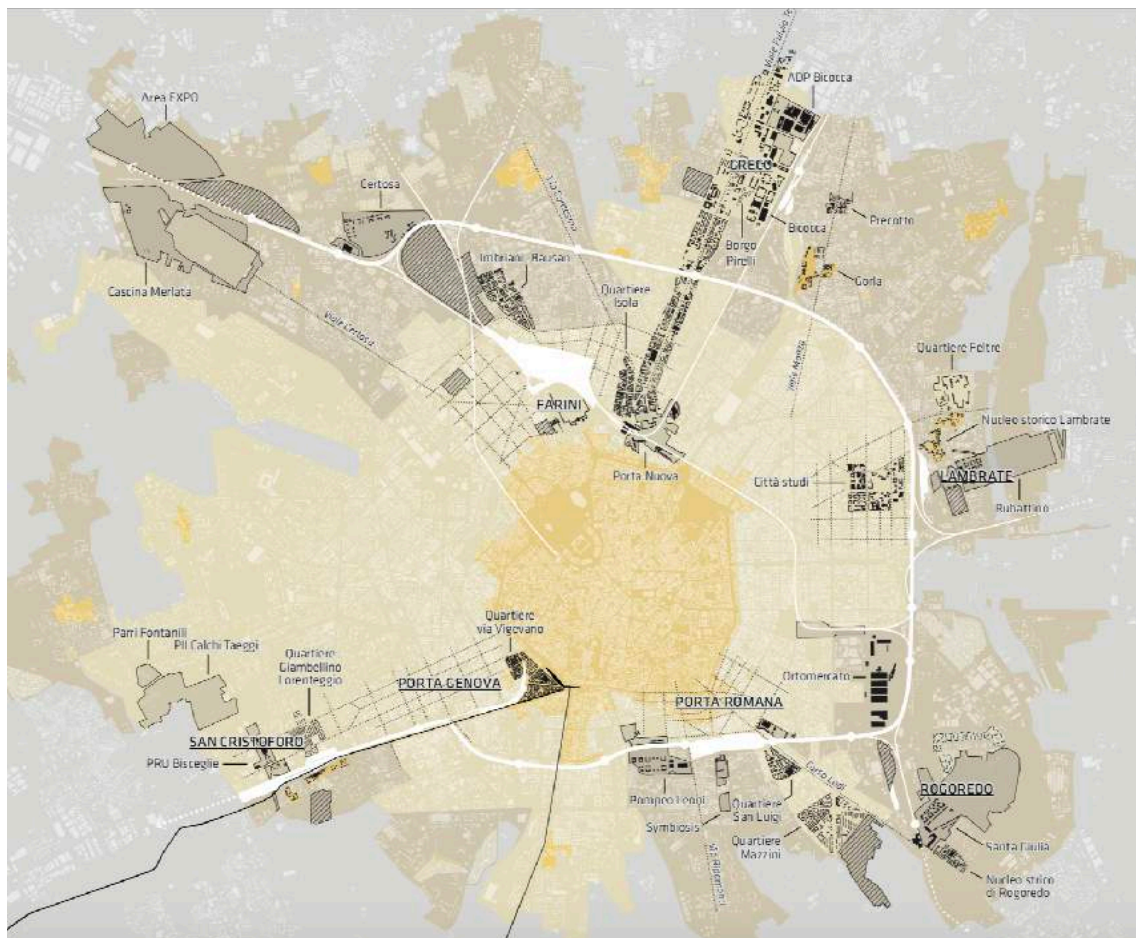
- Regenerate the city

In addition to such physical connection, the PGT 2030 opens up to the metropolitan area, defining strategies and identifying some broader design spheres:
From the 2015 post-Expo plan, the axis from the old expo site to the Farini railway yard, it is planned to be the center of knowledge and innovation in northwestern Milan.

The regeneration of North-East axis, between Milan and Monza, including some of the developing areas like the regeneration of Greco Breda railway yard.
Enhancement of the South-East as a gateway to the city, using Rogoredo and Porta Romana railway yard as the commercial and logistical services areas.

The consolidation of green connections between Martesana and Parco Nord with environmental regeneration processes, and prevention of the hydrogeological system of Lambro, thinking about Lambrate railway yard and its impact on the natural environment. The construction of a large metropolitan park, regeneration of the urban fabric along the axis of southwest canal, regenerate the San Cristoforo and Porta Genova railway yard.
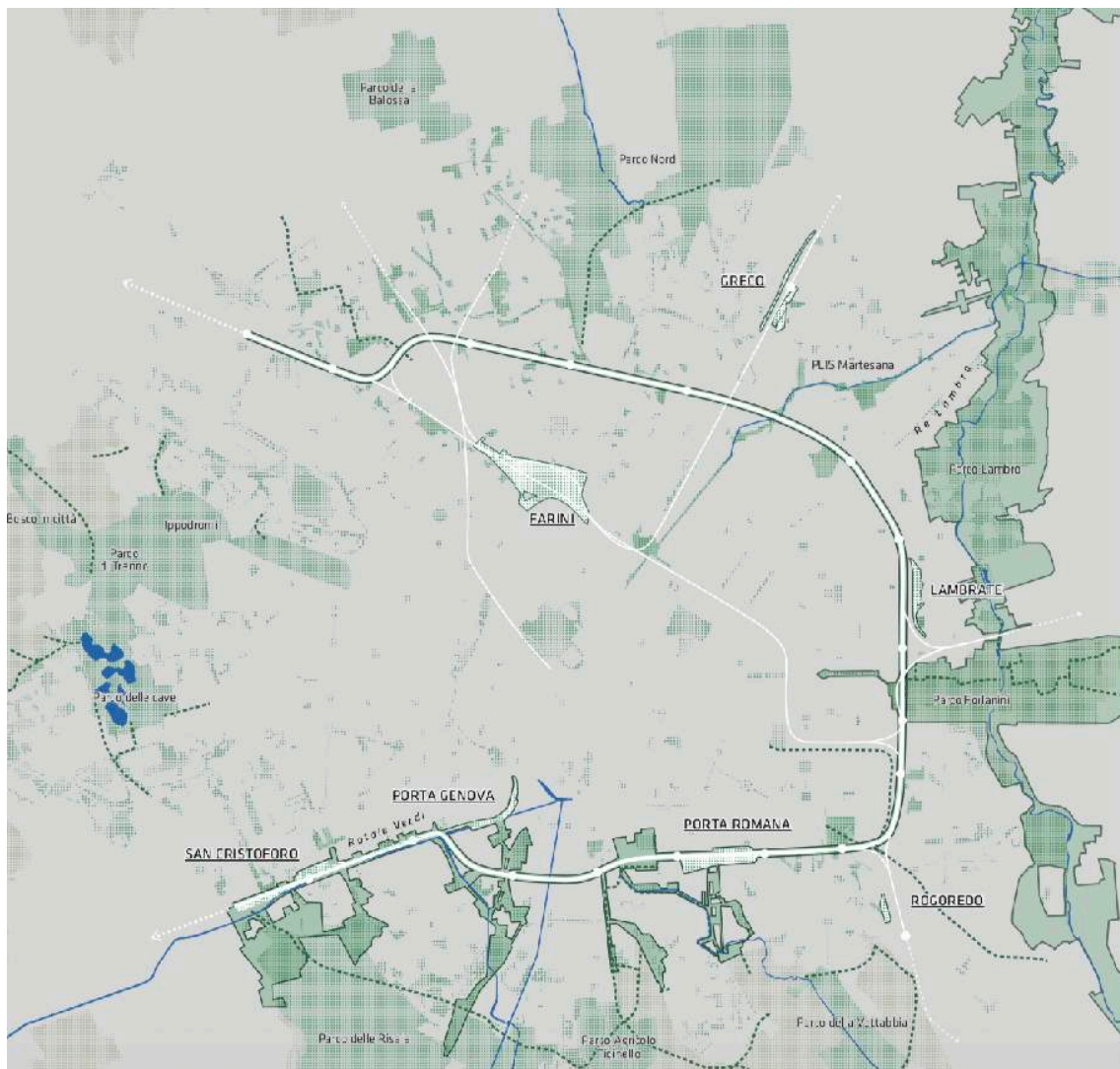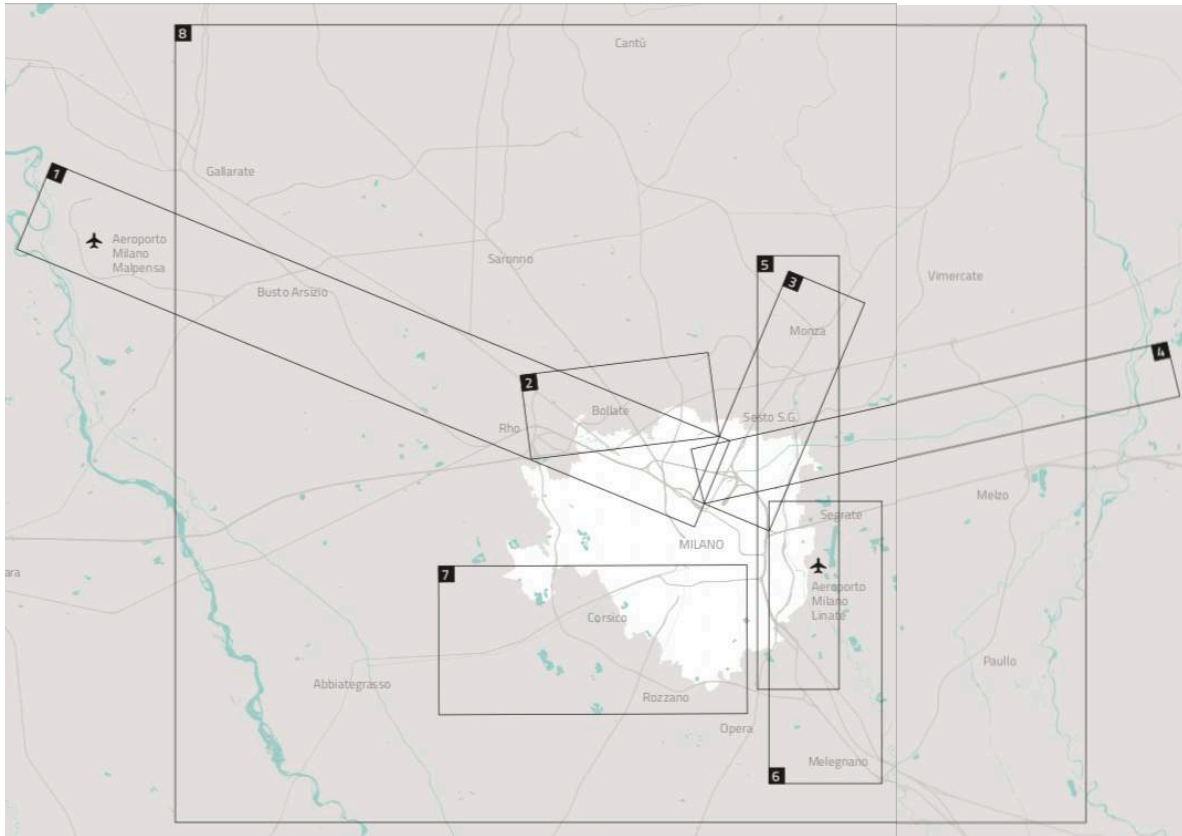
It is precisely because the reuse of a single railway station does not solve the problem and does not support innovative development. Therefore, these seven areas need to be considered as a whole.

The seven railways are part of the infrastructure system due to their size and location within the city, they can be an essential part of an effective urban strategy. A strategy that promotes sustainable transportation and public transportation through railways, supports social and production innovation, accepts outstanding functions, promotes new ecologically sustainable economic activities and new employment opportunities, and promotes social cohesion by promoting urban regeneration in decline areas, improving air quality and urban soil, creating new public areas, parks and services for citizens of all ages, even creating the new job position for Milanese.

Greco's architecture and urban layout can be seen as the origin of a small village "borgo," several ancient "cascine" (Lombardy typical country houses) retaining their original appearance and restored to modern standards while maintaining the original Some have an overall style.

6.
Analysis

6.1

Background of Greco-Breda

6.1.1

Greco

During the Middle Ages, Greco was an independent municipality; in Alessandro Manzoni's book, the betrothed, this place was called a small group of cascine. In 1753, Greco merged with Legnano. Subsequently, in 1863, the municipality was named "Greco Milanese." In 1923, Greco and other 12 municipalities were merged into Milan, and the boundaries of Greco changed accordingly. For example, Greco Pirelli has this name because it was built in 1910 and is located within the border of Milan's Greco comune; now it is part of the Bicocca region, not the Greco region.

6.1.2

Precotto

Precotto is the second district of the administrative division of Milan, Italy, and the administrative region is located in the northeast of the city center. Before 1920, Precotto was an autonomous municipality; until 1920, it merged with the adjacent Gorla comune into "Gorlaprecotto." In 1923, Gorlaprecotto was incorporated into Milan.

Some scholars believe that the word Precotto may come from 'pree' and 'cott' in Lombard, meaning "scorched grass," while others believe it comes from Praecautum, which is said to be the name of an old hotel in Milan on Monza.
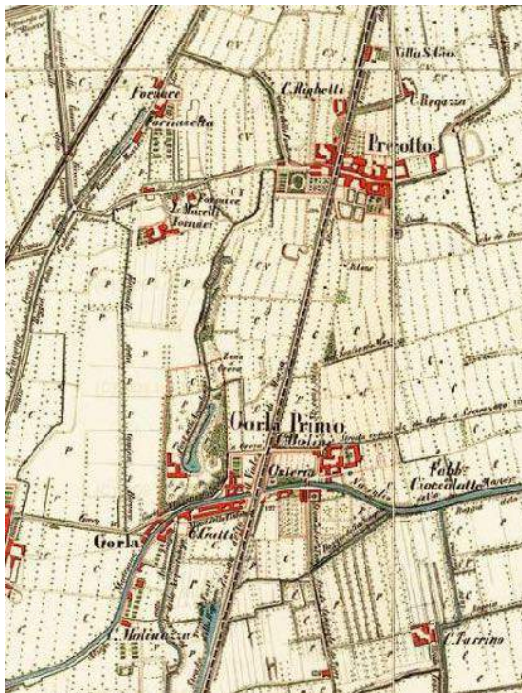
The Precotto community is a small residential center that connects the Milan region, including Pieve di Bruzzano, and borders Greco, Gorla, Crescenzage, Villa San Giovanni.

Viale Monza is the first road connecting Milan and Monza, especially Villa Reale. The road opened in 1825 and is the main road connecting the two cities, starting from Porta Nuova and passing Greco along Naviglio della Martesana. The three stations that cross the M1 metro line in the region, the second railway line built in Italy to the west of the Monza railway, and the precotto (Int.deposito) that now used as a subway station and tram stop.

6.1.2

Bicocca

Bicocca belongs to the ninth district of Milan, Italy. In the 19th century, due to the rapid industrialization process, the Bicocca region was affected and gradually absorbed into the urban agglomerations of Milan. It has been an autonomous commune until 1841 when Bicocca became a small part of the city of Niguarda and Greco Milanese, divided into Bicocca di Niguarda and Bicocca di Greco. In 1923, when the building was expanded in the area, it was incorporated into the city of Milan. Bicocca means "small castle in a high place," the name of the villa from the Arcimboldi family in 1450 and one of the landmarks in the Bicocca area.

In the first half of the 20th century, Bicocca was the center of an important industrial area and a long-established community. The "Borgo Pirelli" residential area ("Pirelli Town") was initially developed for thousands of workers employed at the Pirelli factory. The core of the industrial zone that Bicocca quickly established between Greco and Sesto San Giovanni represents the symbol of industrialization in Lombard for decades and is the primary driver of the national economy. With the gradual expansion of Milan, the city's northern villages have gradually integrated into the urban fabric and built a series of industrial institutions that have long featured Bicocca. The first facilities established by Bicocca are Pirelli, Ansaldobreda, and Wagons-Lits. The Falck steelworks near Sesto is also a well-known factory in which Pirelli maintains a leading position in the region.

The deindustrialization of the Bicocca area began in the 1970s. In 1985, Pirelli launched a project to rebuild the area. The resulting "Progetto Bicocca" (Bicocca project) affected an area of 960.000 square meters and was the most significant urban renewal project in Italian history and the second European project after Berlin.

The project's outstanding results were the construction of a large university district (known as the University of Milan Bicocca) and Teatro Degli Arcimboldi, a large theatre that was also used to host the Scala exhibition, while the historic Scala Theatre is underway. Repair. The project is also home to the CNR (National Research Council) and Istituto Neurologico Besta (a major neurological hospital). The Milan headquarters of Pirelli, Siemens, Deutsche Bank, REUTERS, Fastweb, Johnson & Johnson and Hachette-Rusconi are now in Bicocca.

Progetto Bicocca——Gregotti Associati International

Located in the northeastern part of Milan's central city, the Bicoc industrial area is located on the T-shaped external traffic axis of the metropolitan area of Milan and is the focal point of the Lombard industrial axis.

In 1906, Pirelli decided to select a site, purchase land and invest in the construction of the Bika industrial zone, covering an area of 75 square hectares. Mainly engaged in rubber products, machinery, chemicals, metallurgical and other heavy chemical industries, and gradually developed into Milan's most important heavy industry. enclave.

In 1984, it was closed by Coca-Cola and began to transform in 1985. The goal is to transform heavy industry into a technology city for high-tech companies and laboratory incubators.
The city's transformation projects are seen by Lombard's governments as the key to Milan's urban renewal and image reshaping.

The government of Lombardy, Milan and Milan signed an agreement with Pirelli. Pirelli, as the property owner and major investor, led the transformation process, investing approximately €1.5 billion and commissioning project design and management directly at Gregotti. design team. Until 2007, Bica's heavy industrial area was remodeled to become a high-quality "suburban city

center" that blended functions and facilities such as offices, finance, higher education, high-end residential, cultural entertainment and green environments.

In April 1985, Pirelli announced an international competition for the pre-reconstruction industrial zone: the concept project is based on the preservation of the historical features of the region, by re-division of different functional zones, connecting the surrounding areas of the factory to the surrounding urban areas. The world's 20 most important urban construction companies participated in the competition, and Leopoldo Pirelli announced in 1988 that the winner was Gregotti Associati. The project began with the ceding of the sports centre in Milan, and the first area of the rebuilt Bicocca district was the so-called "Albania" community.

The project includes the creation of a "multi-functional, integrated technology center" for Pirelli, where the cooling tower will be incorporated into the group's new headquarters, the HQ1 building. The building is a 10-story, 50 x 50 m cube that was completed in August 2003 and was restructured in 2009 with a second building (HQ2).

The famous Pirelli Tower, designed by Gio Ponti, opened in Pirelli in 1960 - the headquarters of the group moved to Bicocca. Since 1999, it has been the location of the tire development centre in the heart of the region, which has been and will continue to be synonymous with Pirelli.

Casone building, Borgo Pirelli, 2013

Pro Patria grandstand, 1947

With the opening of the University of Bicoc, the project continued in the early 1990s (Grande Bicocca). In addition to the School of Environmental Sciences, the campus now includes economics, sociology, educational science, law, medicine, and psychology.

Pirelli Headquarters, 2003 & 2016
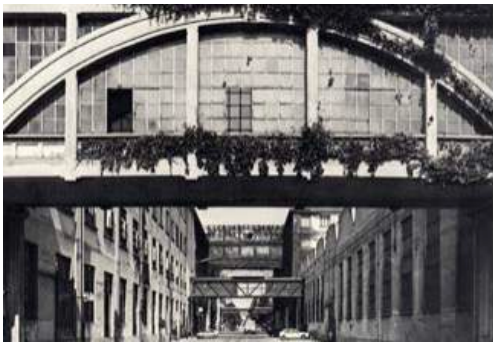
Internal roadways within the Pirelli plant at Milano Bicocca, 1986

The Collina dei Ciliegi, 2013

6.2

Location and surrounding area

2.5KM FROM
MILAN NORTH PARK

500M FROM
BICOCCA VILLAGE
COMMERCIAL CENTER

100M FROM
BICOCCA UNIVERSITY CAMPUS

1.5KM FROM
ATU AREA
EX CASERME MAMELI

3KM FROM
NIGURADA HOSPITAL

STATION GRECO-PIRELLI AREA

2KM DISTANCE

2KM FROM
ADRIANO

4.5KM FROM
FARINI RAILWAY YARD

3KM FROM
MILAN CENTER STATION

4.5KM FROM
LAMBRATE RAILWAY YARD

8KM FROM
MILAN CITY CENTER

CINISELLO BALSAMO

CORMANO

SESTO S

4KM FROM
SESTO SAN GIOVANNI
"THE CITY OF HEALTH
AND RESEARCH"

3KM DISTANCE

4KM DISTANCE

8KM DISTANCE

NEIGHBOURHOOD

4KM FROM
LAMBRO PARK

	Greco-Pirelli Railway Yard Area
	Transformation Area
	Metropolitan Park
	Significant Area
	Equidistant range
M	Metro Station
S	Train Station

The relationship with the city
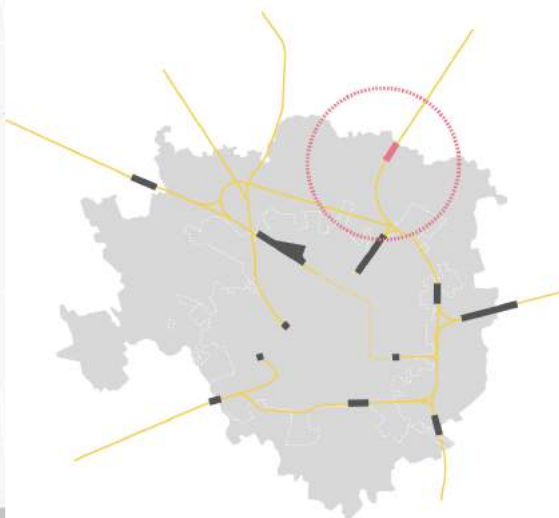
General information about Greco-Pirelli
transformation area

Total Area	73.526mq
Land area	62.189mq
Instrumental surface	11.337mq
Existing viability	0mq
Gross floor area(Slp)	24.000mq
Green equipped area	37.313mq

Abandoned cargo parking area

Illegally occupied urban garden
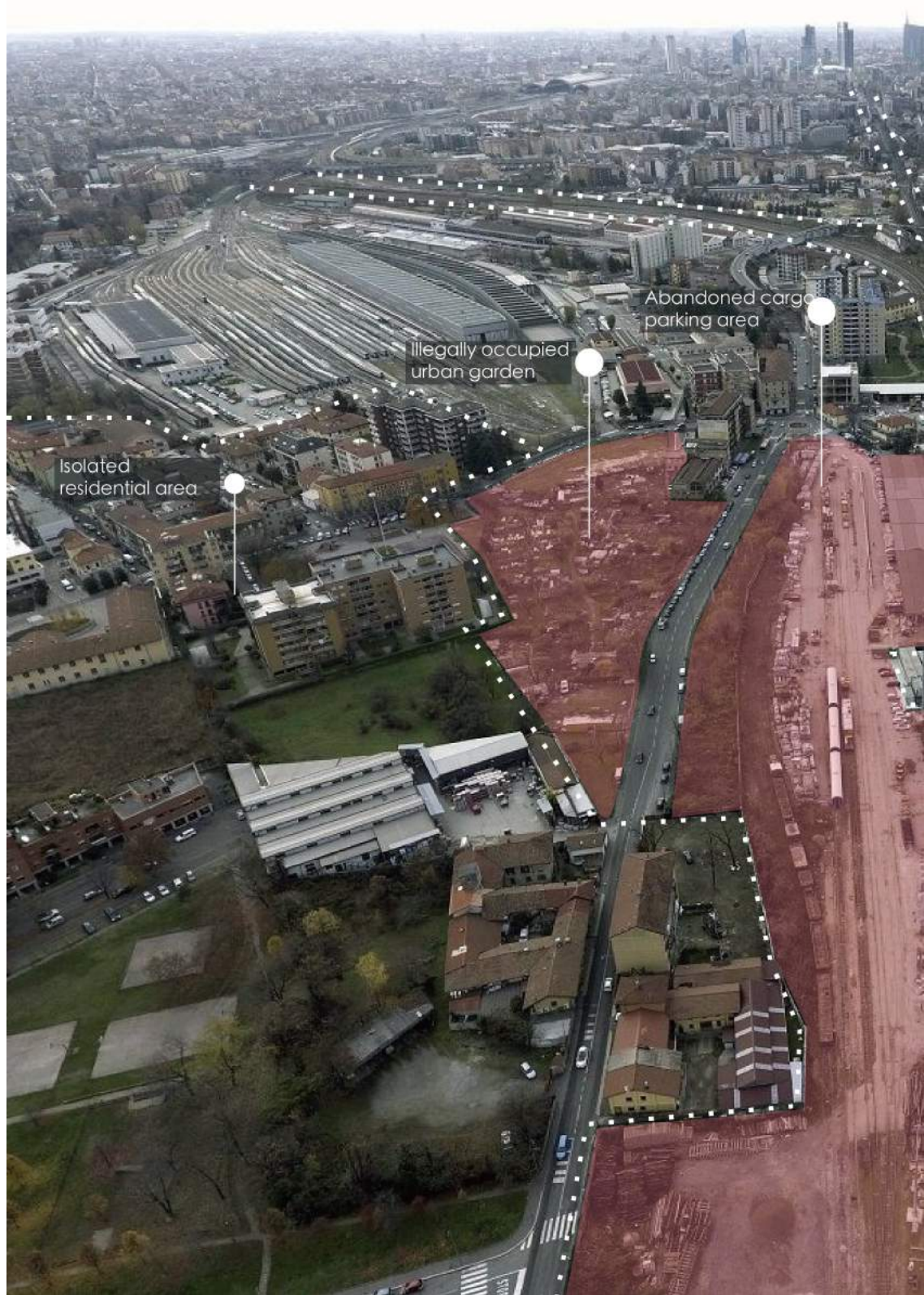
Isolated residential area

Modern
university campus

Irregular growing
green areas

6.3

Analysis of official document——Reinventing cities

6.3.1

Introduction

International tenders initiated by the C40 City Network, Milan participated in the participation of 18 other cities, including five project sites in the Milan area, including the abandoned Greco Breda train station.

The award-winning project L'INNESTO, architects Barreca & La Varra, ARUP Italia Srl participated in the design. As the first zero-carbon "housing society" project in Italy, INNESTO is a new opportunity for Milan to show its sustainable development strategy. INNESTO proposes an innovative district heating system (4GDH) that is powered by renewable energy and combines the design and construction techniques of near-zero energy buildings to establish a 30-year goal of reducing carbon dioxide emissions. In addition, use bioremediation technology to re-beautify the landscape, create natural vegetable gardens, nurseries, roofs, and build a heart of agriculture. The project provides citizens with barrier-free mobile needs and a comprehensive and sustainable mobility approach that promotes the positive mobility of public transport.

Based on the zero-carbon goal, INNESTO put forward a bold idea about a private zero-carbon fund, using the fund's establishment and implementing a city-wide solution to better reduce carbon dioxide emissions and the circular economy.

Greco Breda used to be a freight station for storing freight trains and a warehouse with logistics functions. Until the 1990s, concentrated logistics activities led to limited development of urban railways, and thus became a valuable brownfield resource that can be used to shape the future development of Milan's cities. As part of Milan's strategic redevelopment plan, the entire project involves seven underutilized railway stations. Although Greco Breda is smaller than the other six stations, its strategic and valuable opportunities can create a new door in the city. The "hinge" function is used between the center, surrounding communities and metropolitan areas.

The project site consists of three main plots: the former rail yard next to the Greco-Pirelli station, the green area and the narrow strip on the east side of Via Breda, and an abandoned track in the Bicocca area to the west. Excellent location opposite Greco Pirelli train station and just six minutes from Garibaldi. As the first zero-emission residential area in Italy, greening accounts for up to 72%, and most of the houses are for rent. The total construction area is 24,000 square meters, and 21,000 social housing units are expected to bring about 1,500 new residents. On the one hand, the project seeks to establish a quality pedestrian connection between Bicocca and Precotto, to better strengthen inter-regional links through existing and planned railways and foundation roads;

Nuova departs along the green corridor of Monza, Martesana. Create inclusive communities and zero-emission social housing with shared spaces and agricultural center collaboration.

6.3.2

Advantages

This is a strategic and valuable opportunity to re-develop a new "gateway" to create a "hinged" role in the city centre, surrounding communities and metropolitan areas, Greco Pirelli (currently upgraded to three) The new railway underpass) can be one of the busiest suburban public transport hubs in cities and metropolitan areas.

The redevelopment of the site can greatly reduce vehicle traffic congestion, promote the use of sustainable transportation, overcome railway barriers, and better establish pedestrian and bicycle connections with stations and related destinations, while establishing Bicocca and Precotto. A quality pedestrian connection between the existing and planned railway underpasses is better connected.

At the same time, the first zero-emission community was established and is an inclusive, collaborative and sustainable community that has been very good at repairing the surrounding community.

6.3.2.3

Disadvantages

6.3.3.1

Population

We can divide 4 large groups of people who play an important role in the area of Greco Pirelli

1. Habitants: this group represents the majority. It refers to the people who lives in the area and so develop in this their daily activities.

2. Students: this profile is for the people that moves in the area because they attend any of the educational offers in Città Studi.

3. School employees: refers to all the people who works at the universities.

4. Service employees: workers in the area, offering diverse services.

Level of participation

STUDENTS

AGE
18-25 (average)

PRESENCE
9 am – 8 pm

USAGE OF PUBLIC SPACE
● ● ● ● ○

SPACES
schools, public spaces, services

HABITANTS

AGE
all ages, mayority +31 years

PRESENCE
whole day

USAGE OF PUBLIC SPACE
● ● ● ○ ○

SPACES
livings, public space, services

SCHOOL EMPLOYEES

AGE
40-60 years (mayority)

PRESENCE
9 am – 1 pm / 2 pm - 8 pm

USAGE OF PUBLIC SPACE
● ○ ○ ○ ○

SPACES
school, services

SERVICE EMPLOYEES

AGE
25-50 YEARS (average)

PRESENCE
11 am - 7 pm

USAGE OF PUBLIC SPACE
● ● ○ ○ ○

SPACES
service spaces, public spaces

Obviously, these users are the end users of the new Greco Pirelli area. Unfortunately, we have not seen specific measures for these users in new PGT and winning project.

Observation area / time

08:00

13:00

18:00

21:00

students   school employees   habitants   service employees   Density of population
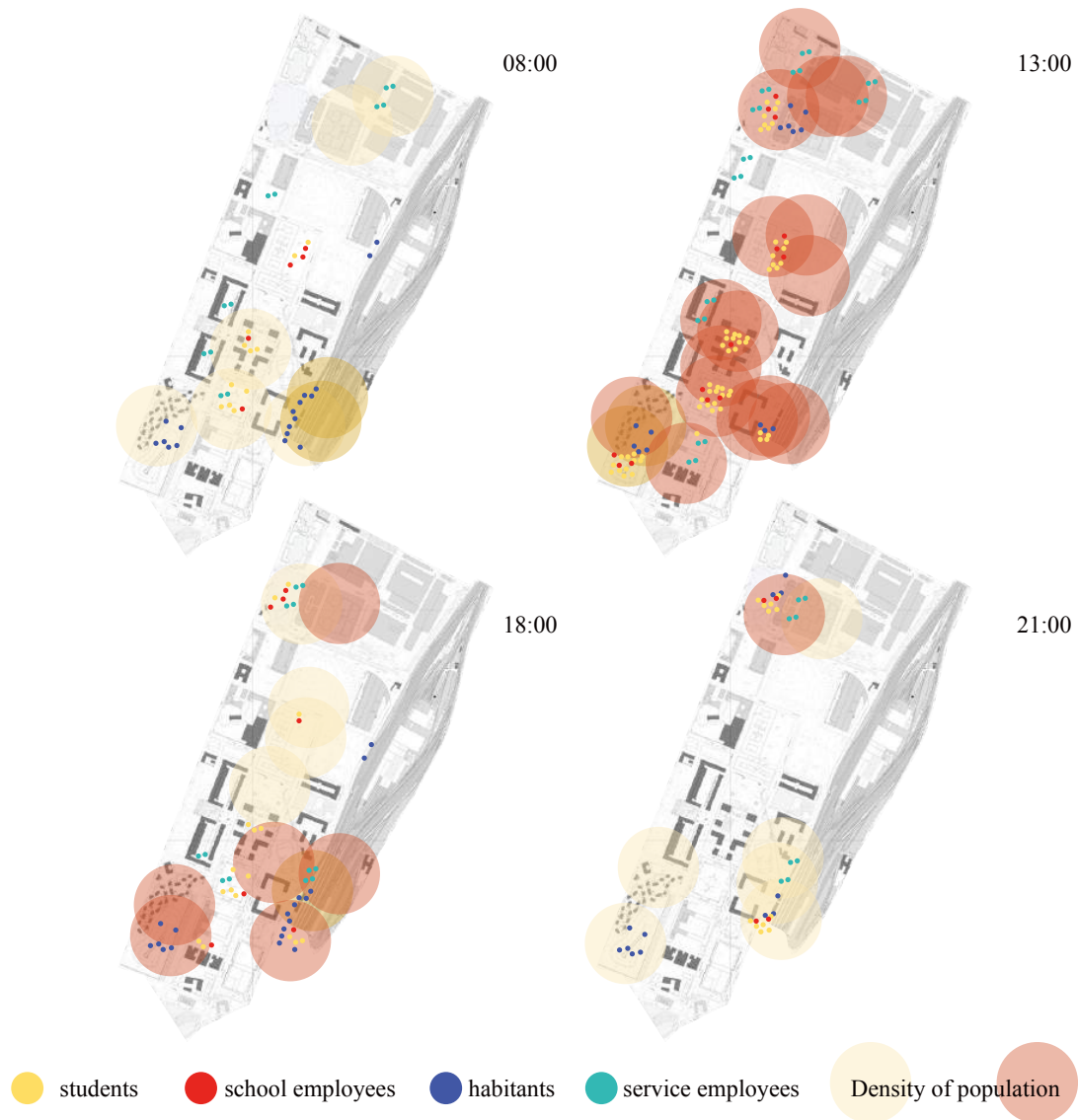
These graphics represent the movement of people at the observation areas* in 4 different times of the day, using points to represent the presence of each profile category; with this simple analysis is possible to notice the way people uses the spaces during a normal weekday.

This is made by observation and small surveys.

It's really noticeable how the area is more dispersed with the different profiles at midday, and really left after 9 p.m.

And the southern part of the campus will have a larger fluss on the working day than in the northern commercial center, while the commercial center will reach the peak of the fluss on the weekend.

6.3.3.3
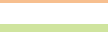
Zoning Land use
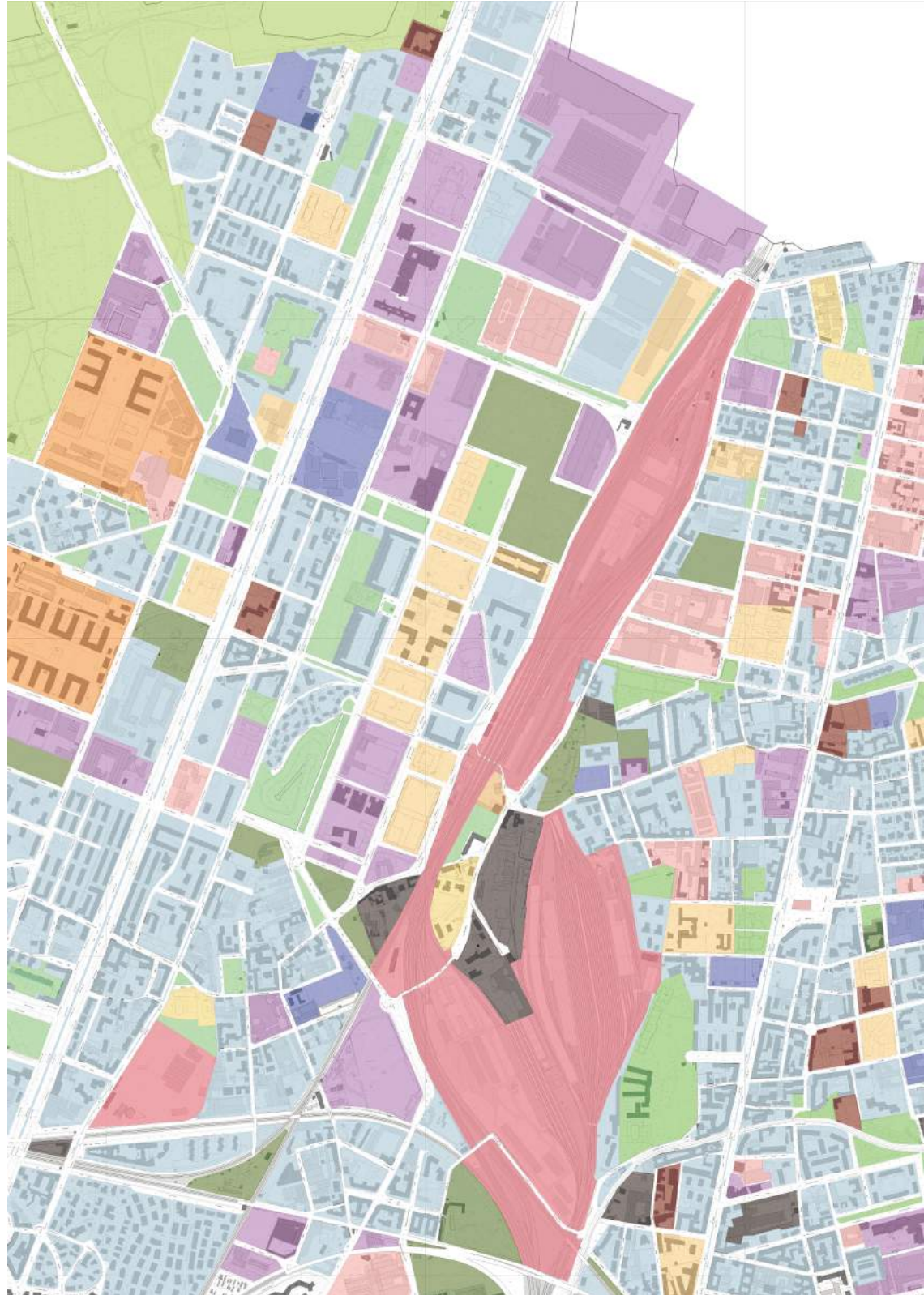
We believe that to make a part of the city regenerate, it should start from a larger scope and then narrow down to the role of each single element.

Therefore, our research scope is not limited to the Greco Pirelli Station and its surrounding. From the previous analysis, we have found that although the new PGT starts from a large framework, it defines the development of the entire underutilized railway yard in the next ten years as not pursuing economic value, and expanding the green area from the perspective of sustainable development. In particular the new winning project for Greco Pirelli is in line with another guiding development goal to build social housing. The combination of these two points gives the intuitive conclusion that the future Greco Pirelli train station area can be reused for sure. But such re-use can bring an overall revival to Milan's northeastern borders will be a problem. Also there seems to be no favorable change for the residents who live here now. Even we don't know if the project will bring other new users for living, for working or for studying.

- Residential area
- School & Univercity
- Commercial area
- Religion area
- Service and office
- Sport
- Urban park
- Wired green area
- Industrial and infrastructual
- Caserma
- Regional park
- Railway

6.3.3.4

Infrastructure and accessibility

As a physical barrier, the railroad divides the area into two parts. In the new PGT document, the existing incompletely utilized railways in the Milan city were highlighted, and the goal of building a route around the town was mentioned. But apart from this, there is no specific measure to improve the division of these cities. Therefore, in the case of Greco Pirelli, we can see that the accessibility in the south is very high, and many projects are designed according to the north-south direction. The east-west accessibility is relatively low, and there is no project to improve.

Metro line

Bus line

Railway

Tram

Junction

6.3.3.5

Green area and open space

The distribution of open spaces and green spaces is very fragmented in this area. From the research, we can see that there are a large number of wasteland still to be used. And the PGT mentioned that 70% of the land in the railway area needs to be converted into green space. Therefore, we believe that it is more important to consider how to reuse these areas and to be more closely linked while increasing the coverage of green space.

Religion area

Sport

Urban park

Wired green area

Caserma

Regional park

6.3.3.6

Typology

Typology of the building is a starting point for every urban and architectural design.

We investigate the type of building around the station Milan Greco Pirelli and we define five main sets: row, block of ats, block, linear and lant buildings(see incoming figures a), b), c), d)). We should keep this in account when design the form of the new buildings in order to have a regular structure and to not upset the existing relationship between buildings in the neighborhood.

The row is one of the oldest and most important structural elements in cities and settlements. It joins together individual plots of land and buildings along a straight, angular or curved line, formed and accessed by the street.

Like the row, the city block (or block of buildings) is one of the oldest and most important elements of urban design.

Most modern factories have large warehouses or warehouse-like facilities that contain heavy equipment used for assembly line production. Large factories tend to be located with access to multiple modes of transportation, with some having rail, highway and water loading and unloading facilities.
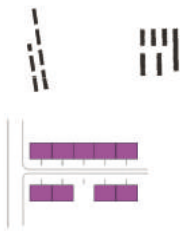
Linear, freestanding urban elements that are deliberately oriented away from the street space to achieve "hygienic" advantages such as the best possible exposure to light and ventilation.

As mentioned in the new PGT, the scalo of the Milan Greco Pirelli area is small, but since the completion of the Biccoca project, the university campus has moved to here, and this area has become the most essential historical city transformation case in the metropolitan area in recent years. However, due to its unique slender shape and location, the partially reconstructed area is also a narrow land, some places even below the width of the road. The typologies of the building on both sides of the railway are very different. One side is a traditional residential area, and the other is a modern architecture. The entire area lacks inevitable connections. We feel that long-term living in this state, it is challenging for residents to create a sense of belonging.

Contemporary typology of residential building in Biccoca area

BICCOCA
NEIGHBOURHOOD

VILLA SAN GIOVANNI
NEIGHBOURHOOD
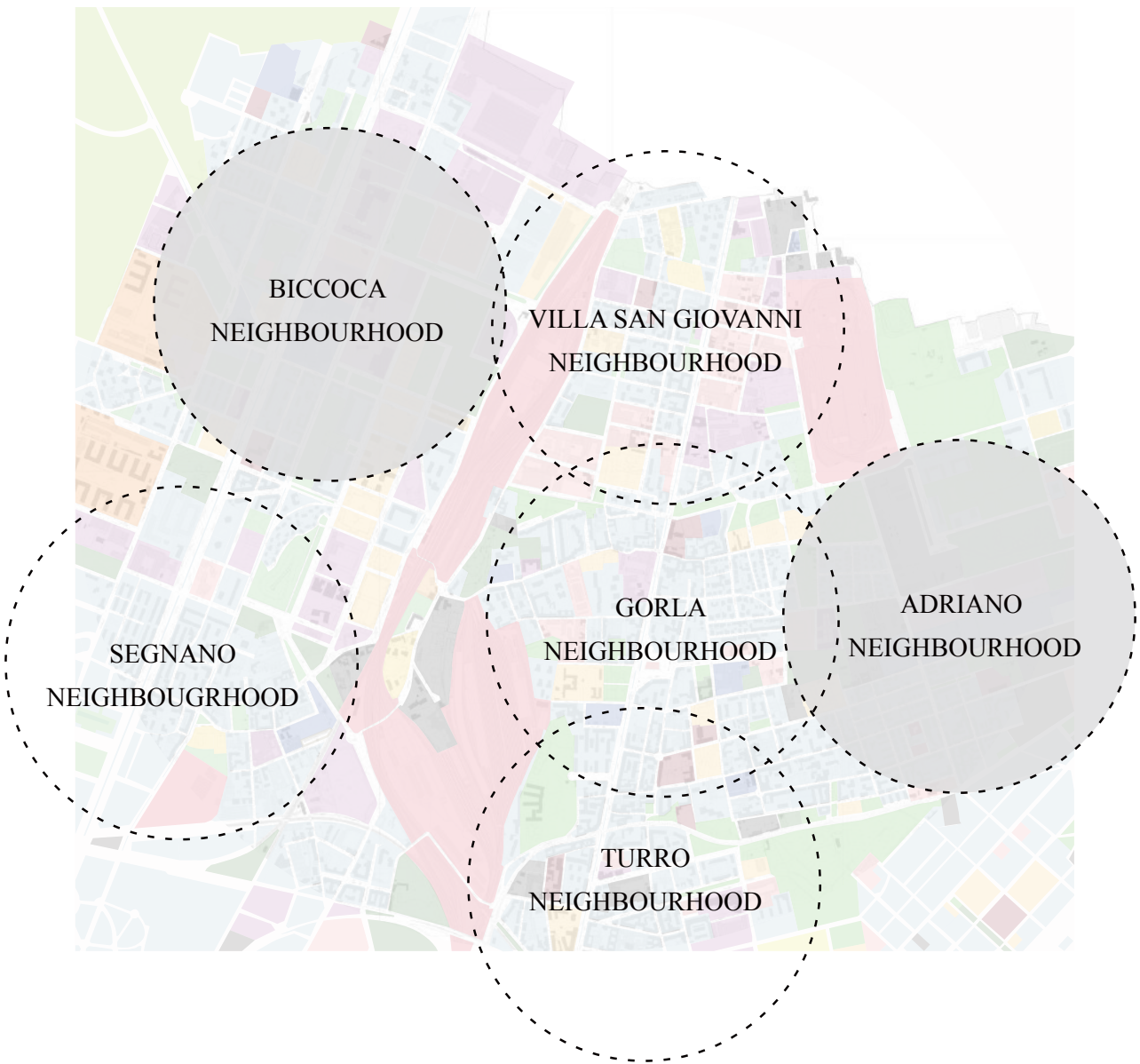
SEGNANO
NEIGHBOUGRHOOD

GORLA
NEIGHBOURHOOD

ADRIANO
NEIGHBOURHOOD

TURRO
NEIGHBOURHOOD

VILLA SAN GIOVANNI NEIGHBOURHOOD	SEGNANO NEIGHBOUGRHOOD	TURRO NEIGHBOURHOOD	GORLA NEIGHBOURHOOD

Type of residential

Type of market/commercial

BICCOCA NEIGHBOURHOOD

Type of residential

Type of market/commercial

ADRIANO NEIGHBOURHOOD

Type of residential

Type of market/commercial

30% of the area need to be used for constructing Social Housing, and this minimum share of the total volumes destined to guarantee the social mix.

So the winning project for Greco Pirelli "Reinventing Cities", plan to build the first Zero Carbon "Housing Sociale" project in Italy, and try to become the showroom of Milan's new sustainability strategies. The Studio proposes the development of an innovative 4th generation district heating system, powered by renewable sources. The design of Nearly Zero Energy Buildings is coupled with a pre-assembled construction technology and an optimal mix of bio-sourced materials. The aim is to reduce CO_2 emissions and reduce waste, allowing the structure to be disassembled and 100% recycled. Soil excavation is minimized and treated on site applying bioremediation techniques to be re-used for landscaping. Vegetable gardens, a nursery garden, natural based roofs, and edible landscapes will create an agricultural heart. A comprehensive sustainable mobility approach provides citizens with full accessibility of mobility needs. The project promotes active mobility, public transport, sharing systems and a drastic reduction of private vehicle use through reduced availability of parking areas.

Rendering of winning project "Reiventing Cities"

We believe that the global trend of sustainable development has led most modern construction projects to move closer to this direction. But in the specific case of Greco Pirelli: First of all, it was once a busy transportation area. For various reasons, it was eventually abandoned, and the surrounding areas were divided. The plan proposes to establish a zero-emission pilot community here.

Then, who will choose to live here, workers, students or ordinary office workers, or the elderly? What are the reasons why these people choose to live here? Will they want to experience a low-carbon life? Still, hope to get relatively complete community service with cheap rent? Secondly, the special slender form of the area mentioned in the preceding requires that the design of the building needs to conform to this form. At the same time, the narrowness of the road will become a huge problem. The project itself does not provide enough parking lots, and the surrounding area cannot offer similar services. Should there be specific measures to solve the congestion problem?

Daniele rossi foto: the only underpass in the zone of station

7.
Strategy

7.1

The concept

The Objective

Develop project proposals to implement the sustainability model of the area in different opportunities, bring into play the conceptual function of urban renewal, and restore and recertify the area.

A Vision

Consolidate the identity and relationship between residents and urban spatial users: compact, integrated, connected, according to the mixed principles of land use and the principles that support the key characteristics of sustainable communities.

A Timeframe

The area is very large and the related facilities will not move at the same time, so the strategy must ensure that the specific actions of different periods and functions are implemented separately, so as to better realize the regional transformation.
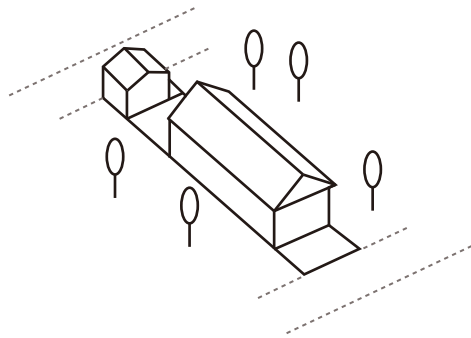
The Concept

The aim is to transform the public and private sectors, community activities and multidisciplinary professionals, to establish new and sustainable relationships between urban residents and urban Spaces, and to enhance the value of urban land. Public services will continue to attract people and activate demand for services around the area, creating different types of commercial and residential facilities for residents and students. It is based on principles that support the key characteristics of sustainable neighbors and cities: economy, integrity, connectivity, society and environment.
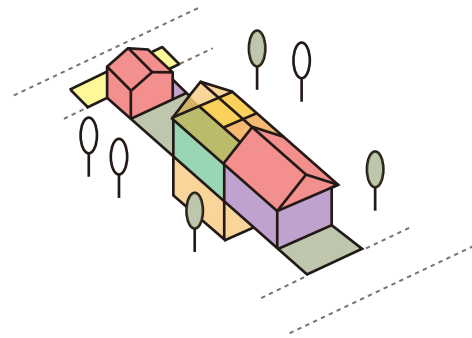
Current function and Proposal function

For historic buildings that are not maintained or abandoned, short-term temporary use and long-term mixed use strategies are used to improve the utilization rate of the building, thus activating the area and neighborhood where the building is located.
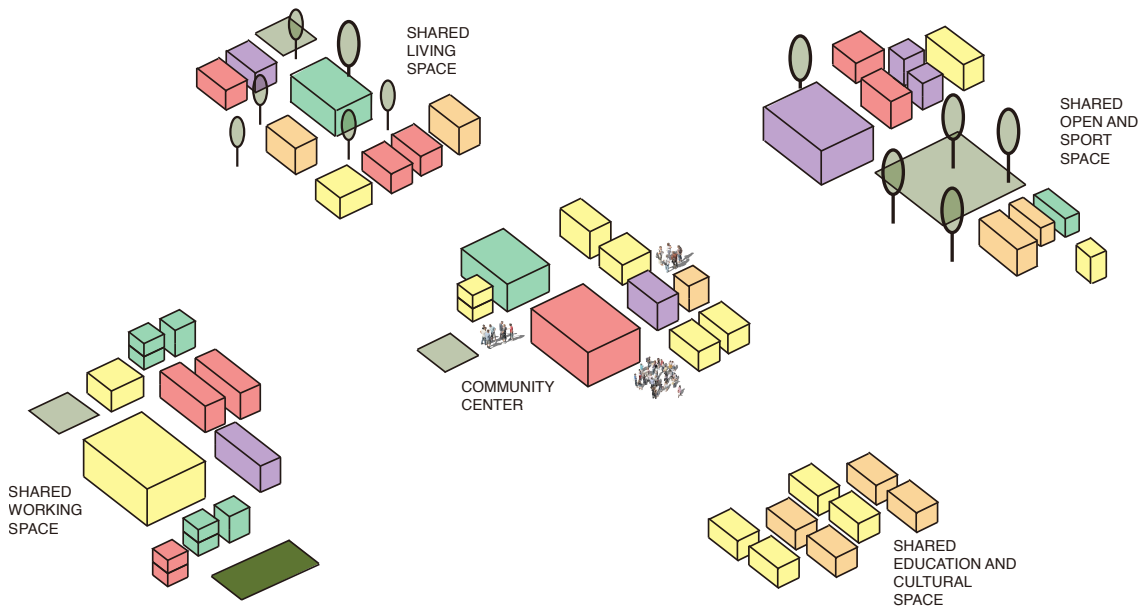
Current

Mono-functional

Multi-functional

Proposal

SHARED LIVING SPACE

SHARED OPEN AND SPORT SPACE

COMMUNITY CENTER

SHARED WORKING SPACE

SHARED EDUCATION AND CULTURAL SPACE

Current User Composition

Through short - and long-term measures to increase population diversity, enrich population composition and attract more residents, students, school employees and service workers to the region.
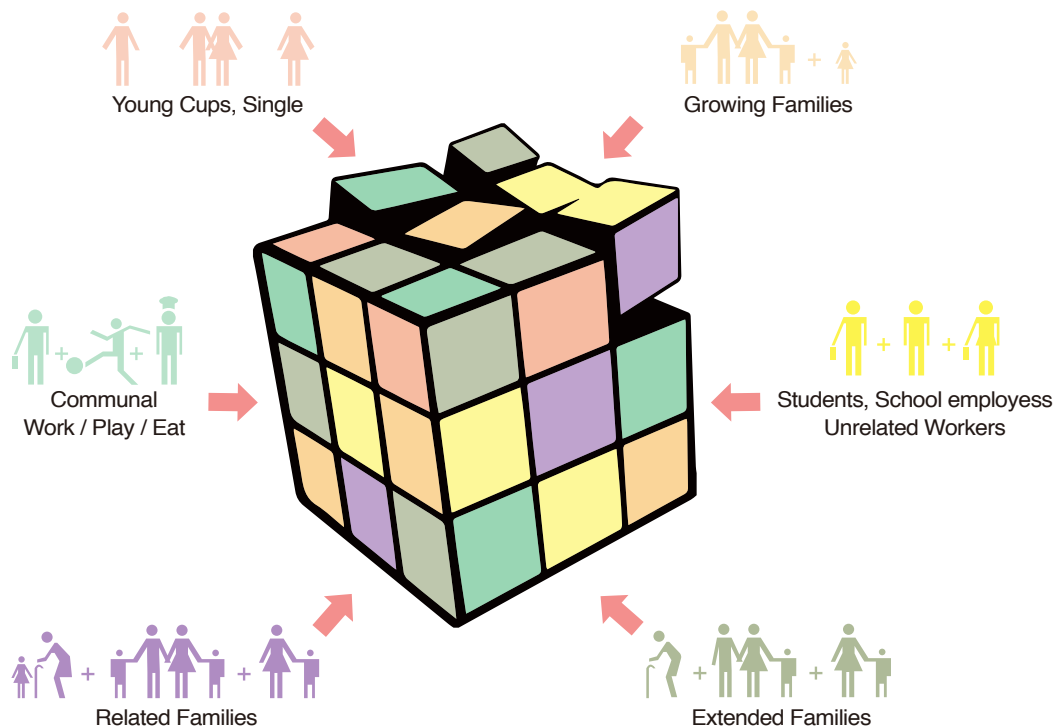
Current

Habitants   **Students**   **School employees**   **Service employees**

Proposal

Young Cups, Single

Growing Families

Communal
Work / Play / Eat

Students, School employess
Unrelated Workers

Related Families

Extended Families

More young people, growing families, related families and extended families could activate area and brings more benefits such as economic development, social problem solved and so on. Meanwhile, people from outside would like come to here for working, playing, eating and having there leisure time in such kind of diversity place.

Short term

The temporary use of vacant space is an urban practice designed to revitalize empty space in urban areas, especially abandoned areas and decaying buildings. Many of the Spaces are left unused by the owners because they currently have no plans for the space, no funds for renovation or further construction, or cannot sell or rent the space at the price they want, all for a variety of reasons that prevent them from being fully used.

So, instead of letting an empty space sit, provide a temporary space to use, but that usually means being taxed by the city. This allows different community members to gain space for their social, cultural or other needs on often more favorable terms. Owners often require less than normal leases: on the one hand, they do not need to spend time and money to maintain these Spaces, and can cancel their use in less time. Temporary users, on the other hand, can use the space freely or symmetrically and often maintain it themselves.

Why temporary use?

1. The historical buildings are declining day by day, and the historical education area lacks vitality.

2. Currently no funds are available for renovation or further construction and cannot be immediately sold or leased.

3. In this case, temporary use will be a short-term win-win solution. It will give us more time to prepare for a long-term project.

We decided to address the temporary reuse of abandoned space in some areas of Greco in the short term. We are going to solve the problem of reuse of abandoned space through a program developed by the TEMPORIUSO association. The association has been working since 2008 to promote temporary reuse of unused space in Italy and elsewhere.

The idea is to reactivate the existing buildings and unused Spaces on public or private property by launching projects related to the world of culture and associations, crafts and small businesses. Providing students with temporary accommodation and low-cost travel has lowered rates for temporary use contracts.

There are SEVEN steps following our ideas:
1. Mapping abandoned and underused spaces
2. Mapping the demands of people
3. Cycles of reuse and local and urban resources
4. "Abandonment" cards and temporary architectures for reactivation
5. Calls for proposals
6. Star-Up
7. Temporary reuse public policies

7.3

Long term

7.3.1

Strategy Principle

First, we set up six principles of strategy to support the long-term strategy below. They are:

1. Integrated population
2. Functional diversification
3. Sustainable environment
4. Accessible campus
5. Convenient neighborhood
6. Vibrant community

Integrated population

Take advantage of those who are active during work hours, ensure that Greco meets all participating groups, create mixed-use areas, and integrate different users.

The goal is to create attractive areas, by attracting new players, to change the demographics of the field, to better integrate the population, to have diversity and diversity to make it more important.

Functional diversification

The Greco region has great educational and cultural potential, and the location of Biccoca university provides excellent conditions for this potential. Single function is therefore a challenge to this principle.

The principles aim to ensure that Greco has a strong regional identity in education, while integrating other functions to create new mixed-culture centers. Make sure the area invites people to visit, stay and interact. Increase the variety of USES.

We hope to bring more jobs to Greco, Shared areas and housing through integrated development and integrated development strategies.

Sustainable environment

Good use of existing green space is a great opportunity for potential development, to improve poorly connected, unused, and not truly open to the public green space, to create a quality mix between the learning and living areas, and to create an environmentally responsible community.

The principle is aimed at improving regional environmental quality, developing green interconnected areas, and long-term maintenance is very conducive to the maintenance and improvement of environmental quality.

Accessible campus

Greco regional distribution with high coverage of the subway station, have relatively convenient public transportation system, but the imbalance of traffic problems, so by the principle of strategy focuses on optimizing the use of the infrastructure, improve the regional accessibility, based on public transport and walking to build a strong relationship between systems.

Convenient neighborhood

Use some existing public Spaces in the area to create more services and reorganize the space, so as to solve the open space that is not completely open to the public, connect the open Spaces as a whole, and make them usable Spaces instead of just existing there.

Vibrant community

Greco has the demand for temporary use, but at the same time, it faces the problem of fewer activities. With the increasing demand for green ecological life, the expansion of the scope of "green development" activities also promotes social interaction. Greco can be made more dynamic by organizing a series of educational and cultural events and developing more targeted invitations for use.

7.3.2

Actions

Based on these six principles and the regional disadvantages we analyzed above, we propose the following long-term strategies. In general, there are SIX points from the same perspective.

1. Population
2. Observation area / time
3. Land use
4. Infrastructure and accessibility
5. Green area and open space
6. Mixed use based on the SIX principles

Population

By adding retail, entertainment, leisure and other basic service facilities, different life service facilities can be provided for different users. Tobacco shops, restaurants and bars can be added to attract more young people. More bookstores and clothing stores will be established to allow different groups to participate in regional life. Public service departments, such as community convenience centers and information consulting points, can also be appropriately added to increase the diversification of business activities in the region, so as to improve the experience of different users.

Observation area / time

Based on the strategy of population integration, the population density and flow of people are increased by improving the use of functions, so as to achieve the purpose of activating the area, and ensure at least 20 hours of active time every day, and strive to create a 24-hour active area.

Land use

In terms of land use, the focus of the strategy is to create a community market to provide services for residents, students and office workers in the community.

Infrastructure and accessibility

Due to the location of Greco station, it forms the hinge, which brings obstacles to some extent. Therefore, in terms of road facilities and accessibility, we consider improving east-west linkages and reducing east-west traffic barriers, so as to improve accessibility and make the whole region more accessible.Green area and open space

Green area

Based on the existing green space in the Greco area, running paths and greenways will be built for residents to use. Through this behavior, we can improve the participation and interest of residents' life, strengthen the connection between green Spaces, and provide convenience for the use of green Spaces.

Mixed use based on the SIX principles

|	Neighborhood scale	Block scale
Integrated population	construction of a digital app in order to give more information easily(news, traffic info, class info, events info etc).	1.Mix of participation groups. i.e.students and the local-resident, new rental housing for them. 2.Attract new actors, bring more activities.
Functional diversification	Maintain the educational identity, and add multifunctional place	1.Iconic building that will set Greco apart and pull people to the area through design and function. 2.New municipal office.
Sustainable environment	relocate parking area occupying the green areas	1.ensure that all new infrastructure meets green building standards. 2.new environmental conservation policy.
Accessible campus	1. Clearly define the loop path 2. Modify the public transport system to reach more areas and facilitate mobility in el greco 3. Alternative means of transportation, such as Bikemi, car sharing or shuttle bus	1. Create more walkways by creating walled areas 2. Improve access to buildings for people with disabilities 3. Establish emergency routes
Convenient neighborhood	1. Create a timeline of AD hoc events/markets to create a vibrant and functional public domain. 2. Reorganize existing space. 3. Public Spaces with wifi connections and seating areas attract users and encourage interaction.	Move parking underground to reduce illegal parking and create more space.
Vibrant community	1. Neighborhood activities bring the neighborhood together. 2.Society street.	1. Open theater 2. Workshop neigborhood 3. Community center

The principle of mixed use is the inevitable requirement of contemporary urban planning. Suitable for public Spaces, towns, commercial and commercial centers, sports complexes, parks, streets and individual buildings. It represents a mixture of function and purpose to create a vibrant and vibrant space throughout the day. The principle of mixed use provides overlapping activities, dynamic atmosphere and convenient conditions for different user groups throughout the year by integrating functions and facilities of urban space.

Why mixed use?

1. Now this area is active from 9:00 to 21:00 on weekdays (Bicocca, Greco station), otherwise this area would have lost almost all lives.
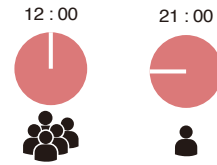
2. To maintain local vitality, attract new users even on weekends (not college terms).
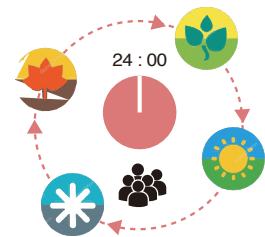
3. Long-term development plan. With this in mind, mixed use can be a valuable tool for dealing with abandoned situations and promoting a development approach that has a positive impact on future levels.

7.4

Conclusion

The whole article ends here. The whole text runs through one of the most important big questions: **Is the transformation of abandoned railway stations an opportunity for urban renewal in Milan?** From this question, in the following article we introduce FIVE questions step by step. First of all, we intervened in the concept of urban regeneration, which is the theoretical basis for solving big problems. Therefore, at the beginning of the second chapter, the first question was raised: **What is urban regeneration?** After some understanding and explanation of urban regeneration, we have established a certain theoretical framework and considered the second question: **Does Italy have profitable urban regeneration related projects?** Therefore, in Chapter 3 we have explained the projects related to urban regeneration since the Second World War. Later, we thought about the third question. **In addition to Italy, is there any case of urban regeneration through urban renewal?** Especially for railway projects? In the fourth chapter, we answered this question and selected urban renewal projects of different countries and types on a global scale. Through the above thinking and analysis, how should we take advantage of such a good opportunity? **What kind of guideline did Milan propose for this?** In the next chapter, we present the fourth question above and research and analyze it. Based on the previous content, we chose Greco Pirelli as the analysis site, trying to propose **whether the guideline proposed by Milan is suitable for the seven railways in Milan?** We have analyzed and answered this question in Chapter 6. There are many advantages and disadvantages. In the following strategies, we have considered some of our own solutions, not just the perspective of re-use, but more. Considering the overall renewal and development of the city, people-oriented, from the long-term, short-term development of our own perspective.

Looking back at the whole article, at the end of the article, back to the first main question, the answer is yes. However, we believe that while meeting the PGT principles, we must also follow the strategic plan. Then the abandoned railway station transformation will become an excellent opportunity for Milan city regeneration.

The opinions expressed above are solely personal.

8.
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