tissue was allowed to demolish for the railroad and other major communications network. On account of the growth of capitalism and entrepreneurial bourgeoisie, some zones in historic center were used for housing to accommodate the bourgeoisie. When it comes to the 21st century, new administrative and commercial activities were located into historic center, the gentrification process progressively evict the existing population and bourgeois classes moved into the center for its affluent facilities, evident feature and high living quality.

2.7.1.2 Evolution of the historic center

The enlargement of historic center, as a radiating pole, is always in an integrated and rational way which makes uses of cognitive features precisely. From the initial Castrum grid roads with regular land parceling, leading into regular architecture types, to the subsequent radial streets expansion with continuous arcades,, leading to irregular architecture types, the structure of the historic center is not always subject to functions modifications. In this way, even if marked by different styles, such as renaissance, baroque etc., it keeps integrity and unitarity. Stating from this premise, the conservation plan increases the value of historic center by preserving the whole physical space structure and historic buildings.

Ancient settlements appeared as early as the Bronze Age. Iberian Ligurian normalized 4000 years ago; Umbria activated here around 900 BC; Etruscan appeared one century later. Their hint can be found in various archaeological remains, household goods and huts. Owing to the communication need between Milan and Rimini, the transversal main road Via Emilia emerged, the settlement has two parts. Then Roman Castrum set the origin of the city. The Castrum, used to be a military defensive power, constructed walls and streets in lattice form. Even agriculture land was divided into grids. The city enlarged around the Castrum since 200 BC. In the Middle Age, Bologna city became a trade center between the Roman-Byzantine Ravenna and the Barbarian world. The Roman main road was widened, and other streets link to other settlements formed around the Castrum like a fan. Hence its communication hub role was strengthened. The ea

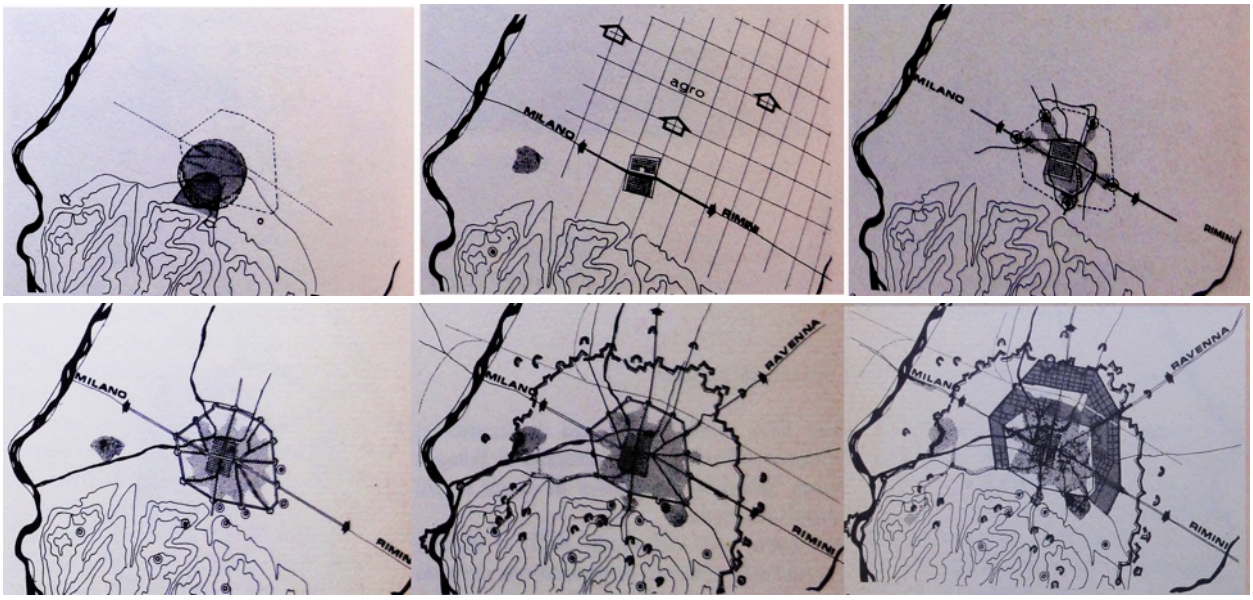


Figure 2-32:Top left: Early settlements of Etruscan; middle: Roman Castrum since 200 BC; right: Medieval Age city, 11th century. Bottom left: Renaissance city in 14-18 century; middle: 19th century and fortifications of 1869; right: the plan of 1889

Ravenna with Rimini and west roads joined Castelfranco and agriculture areas. In 12 century, Bologna experienced first enlargement. City wall was rebuilt for defending and some settlements emerged in hills. The typical tower type appeared in this period. During 12th century, because of the crisis of manorial economy, many landowners flock into the city and built fortified houses with towers. It had become a cultural center in 13th century, especially after the establishment of the world oldest university, the University of Bologna. In the early of 13th century, the population increased greatly due to natural growth. Bologna had between 50,000 and 60,000 inhabitants making it the fifth largest city in Europe. The city expanded beyond city walls, and villages located around main roads developed quickly. In 1380, the municipality proposed to build a new city wall. It covers vast areas with lawns, orchards to meet the future centuries' expansion needs. Bologna stagnated from the Renaissance to the Kingdom of Italy, both economically and specially. The city spontaneously broke into three parts. The south part were residential area at the foot of the hills; the center was commercial area and accommodated all kinds of works; and in the north area within the wall, craft, laundry and mills industry assembled, see figure 2-32. In 19th century, especially since the unification of Italy, Bologna grew in a slow pace but steadily. The growth located in the free areas within the perimeter of the wall. Thanks to the unification of the domestic market, Bologna began the transition from farming economy to industrial economy. Suited at natural node for commutation between north and south, several regional railways between main cities, such as Milan (1859), Ancona (1861), Florence (1864), and Rome (1866) promotes its growth, Though it had not exploited the full potential ability of the railway in that period. The commercial growth gave birth to the regional development, into 11 municipalities units.

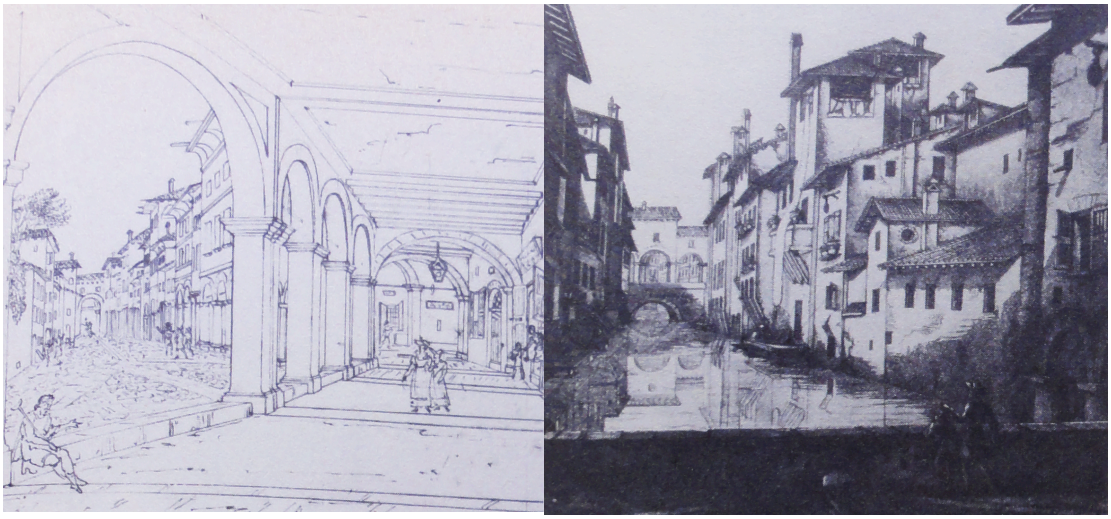


Figure 2-33: Left: Via Giuseppe Petroni, 16th century; right, Channel Moline, 1830;

Facing to growth pressure, the commune ordered to compile the plan of historic center of Bologna 1889 to fix development direction. It was variant of the PRG (Piano Regolatore Generale, Master Plan). It initially covered the whole area within the ring road, which was the site of the 14th century's city wall. Specific technical standards were made to historic center. At that time, there are 450-hectare lands, 890,000 inhabitants and 40,000 workers in the tertiary industry. The master plan was applied to maintain the whole historic center so basically it chose to expand in the outer areas, see figure 2-34.

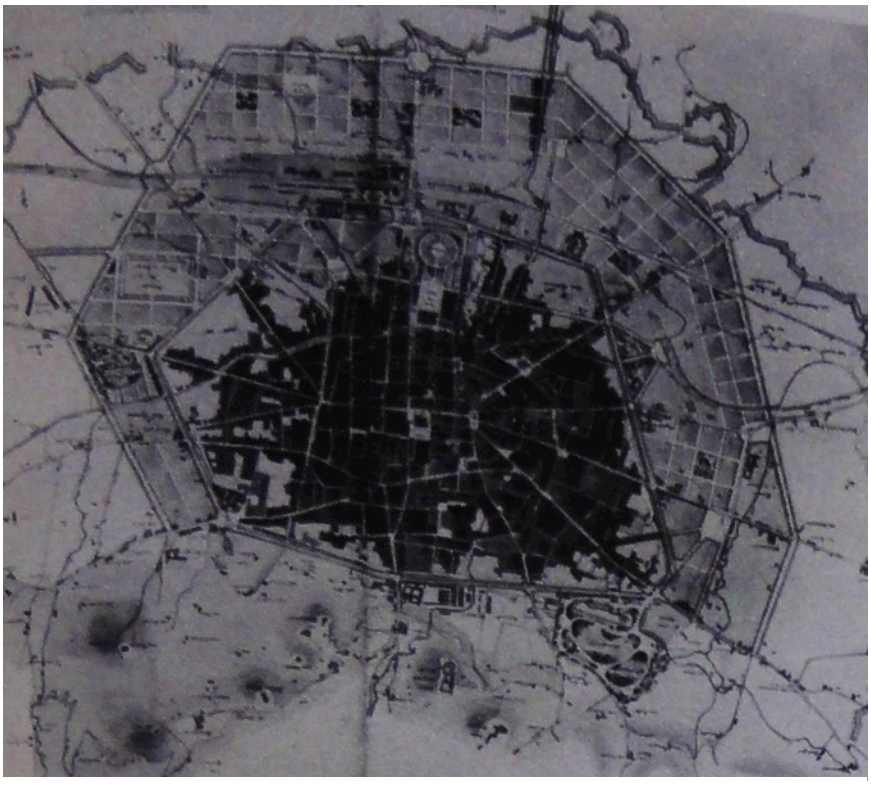


Figure 2-34:The master planning, 1889.

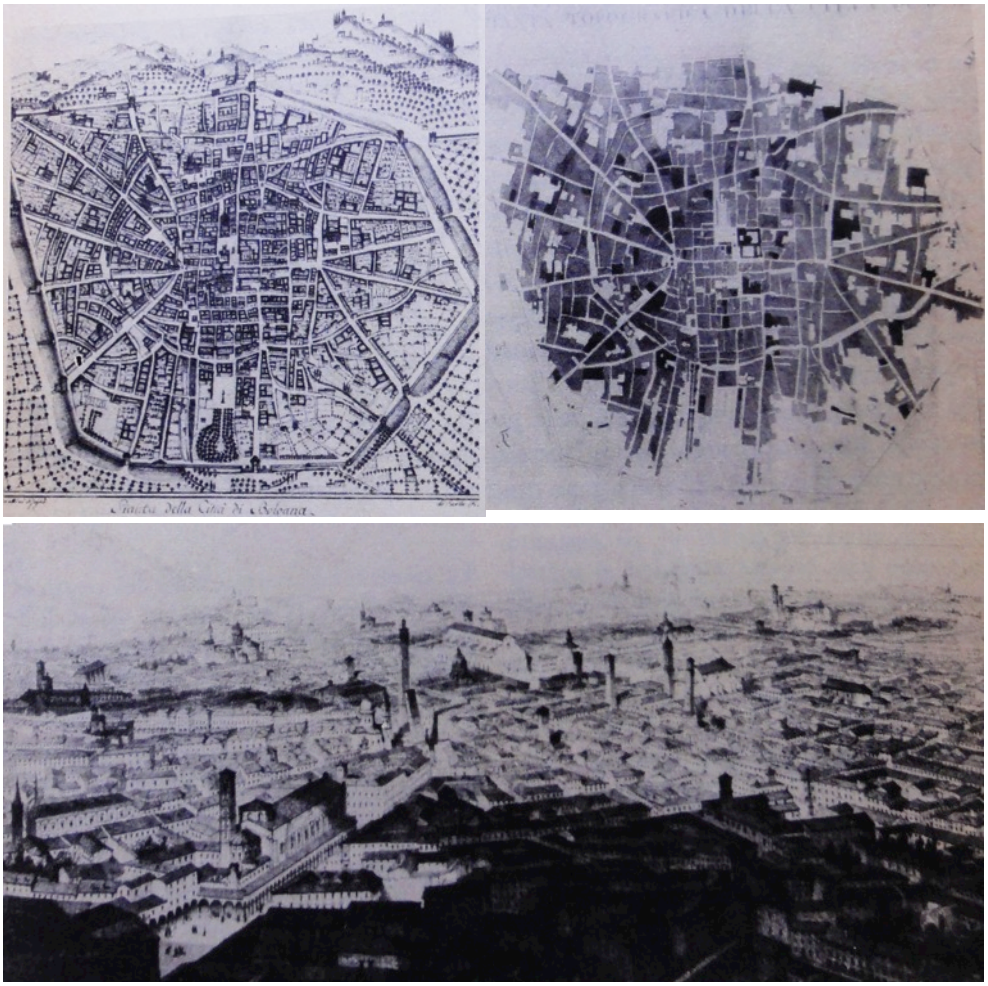


Figure 2-35: Top left: 16th century Bologna; Top right: mid-16th century land-use; Bottom: 16th century bird view of historic center of Bologna.

Generally, morphology expands in a radial way for centuries. Radial main roads plus gratitude secondary roads make the city a compact pattern, see figure 2-35. In space new erection or regeneration, land parceling exerts a tremendous influence on architecture types. Roman Castrum with grid road net brought strictly rectangular, square or elongated rectangular plot division. Later irregular aggregation parceling in the radiate expansion appeared on account of the radial traffic networks. Two kinds of architecture types match with space structures. Luckily, space expands in an integrated way with these various types.

The whole area within the former city walls was defined as “historic center” based on historic and artistic aspects, architectural values and homogeneous social-cultural characteristics. The historic center is seen as an urban unit but not just a buildings collection. The fabric characteristics should deal with in an integrated way, which has touched in the Master Plan 1889. Every building within the historic center is in the list to be preserved termless, forbidding any demolition and arbitrary reconstruction. Until 1932, the construction mainly was beyond the historic area. Then this expansion accelerated was accompanied with economic boom. From figure 2-36, it is clear that expansion mainly was along with the main traffic lines.

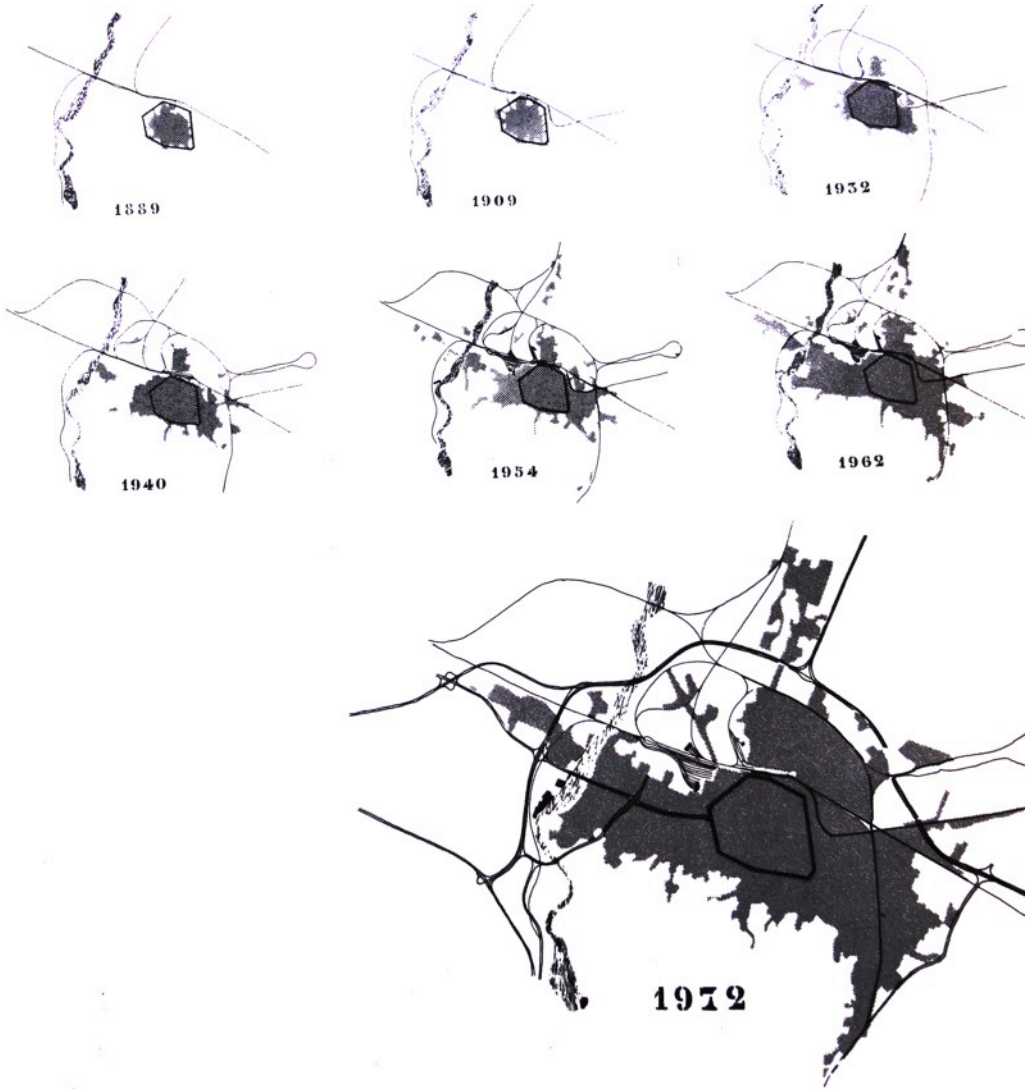


Figure 2-36: morphology evolution of Bologna

The role of the ideological characters and the economic structure in the transformation of the historic center are the key factors which brought great influences to space formation and transformation. In the study of the morphology evolution, there have been four attacks to the historic center in history accompanied by the change of productive forces, see figure 2-37.

Whenever productive forces influenced social structure hence changed the space structure. Especially in the process of industrialization, the power of capital brings heterization of the space structure on one hand, and causes space expansion on the other, as the first attack to the fabric. Historic integrity experienced the first heterization phase because of the station and railway construction from 1861 to 1898 that caused large demolition inner historic area. Before the planning 1889, systematic demolition was implemented since 1860 to 1875 in historic center. The demolition in Farini Street, Garibaldi Street, Indipendenza Street and Cavour Piazza provided references for the future plan. In this way, many streets were widened and modified. Some medieval towers were destroyed and the commercial center disappeared. After the location of the station at Port Galliera, there was need connection between main residential areas with it. There were amounting public facilities shortage and the needs of teasing traffic. Bologna municipality asked its 'Audible and Art office' to make a master plan. The master plan chose concentric expansion to east, north and west areas. The road net is like a grid net without clear hierarchy distribution. The plan designed out concentric parallel to the city walls. It did not assign any function zones; consequently there was no specifying structure

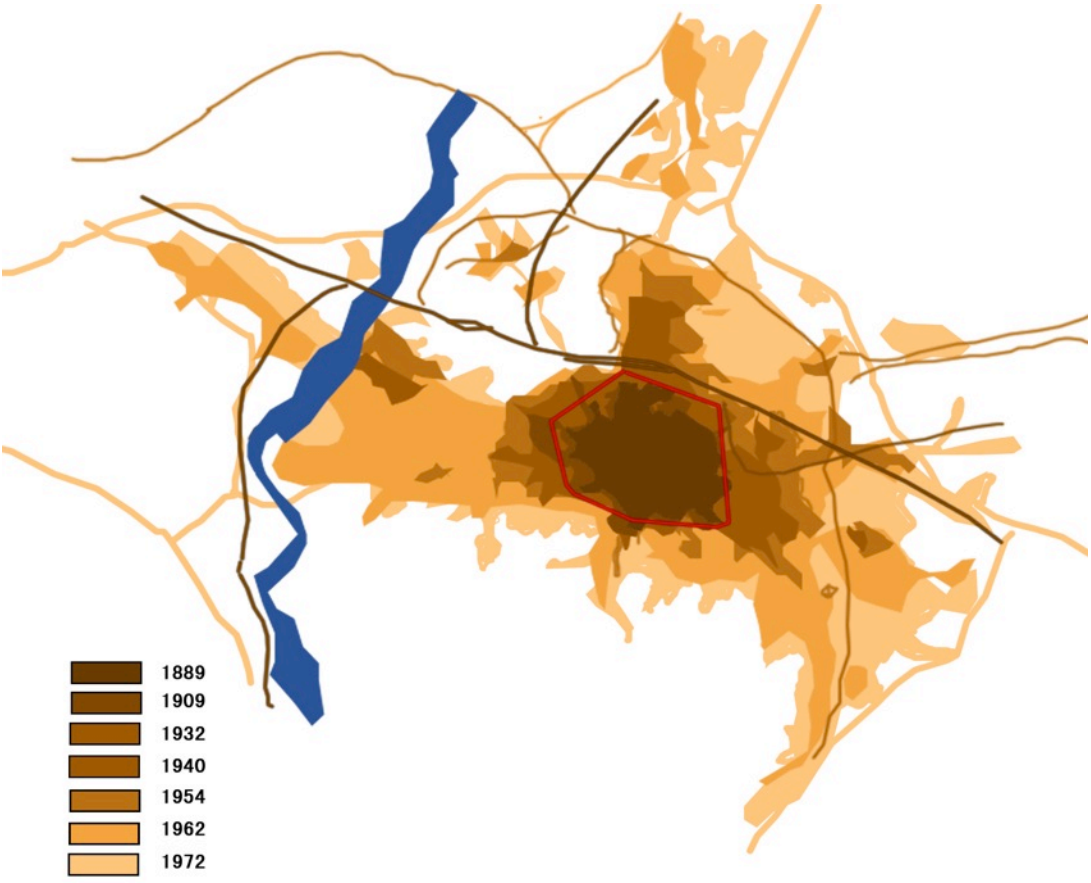


Figure 2-37: morphology expansion of Bologna

in the expansion areas. Its defect includes neglect of the terrain and not considering the historic structure, leading to the second attack. The master plan 1889 just was implemented piecemeal and inefficiently. The outer ring road was not brought out, and the development direction is quite coincident with reality in future. The industrialization made the city grow disorderly so as the city lost a part of the unity characteristics.

With regard to the conservation of historic center, it is necessary to distinguish its transformation in detail. Beside its spontaneous character, it gains its homogeneity and unitarity in its long construction. Radial expansion created radial streets with elegant and extensive porticoes, forming distinctive public space. Public parks and gardens were located organically connecting with private courtyards by main roads and pedestrians in arcade way. Furthermore, main public squares, scattered piazzas and green parks, private gardens and continuous arcades bring out a thrilling space counterpoint effect. Plus, scattered towers bring out a vivid spatial feature. Though the historic center has experienced renewal, widening, regeneration, the structure of the Bologna historic center is not always subject to the functions modification, keeping its homogeneous space quality. Finally, it keeps integral morphology and unitary form, see figure 2-38.

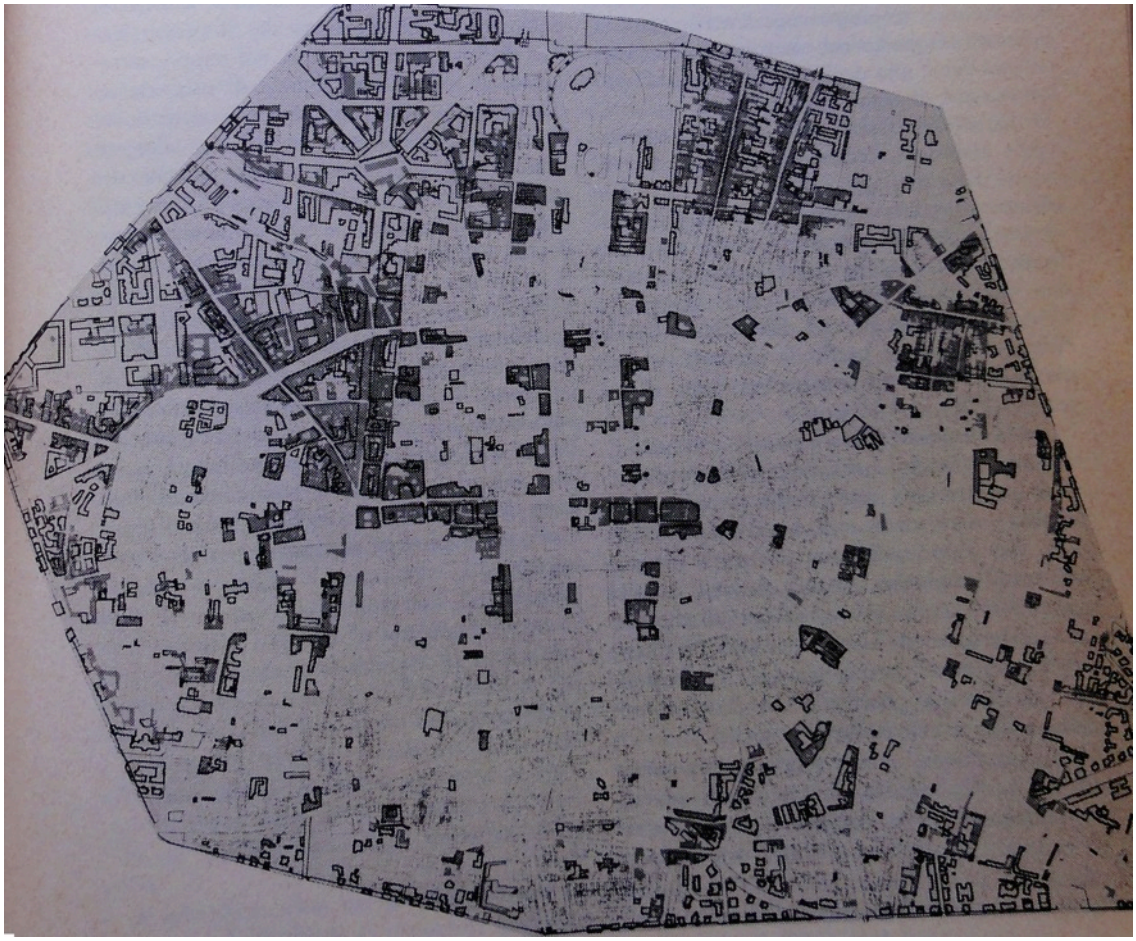


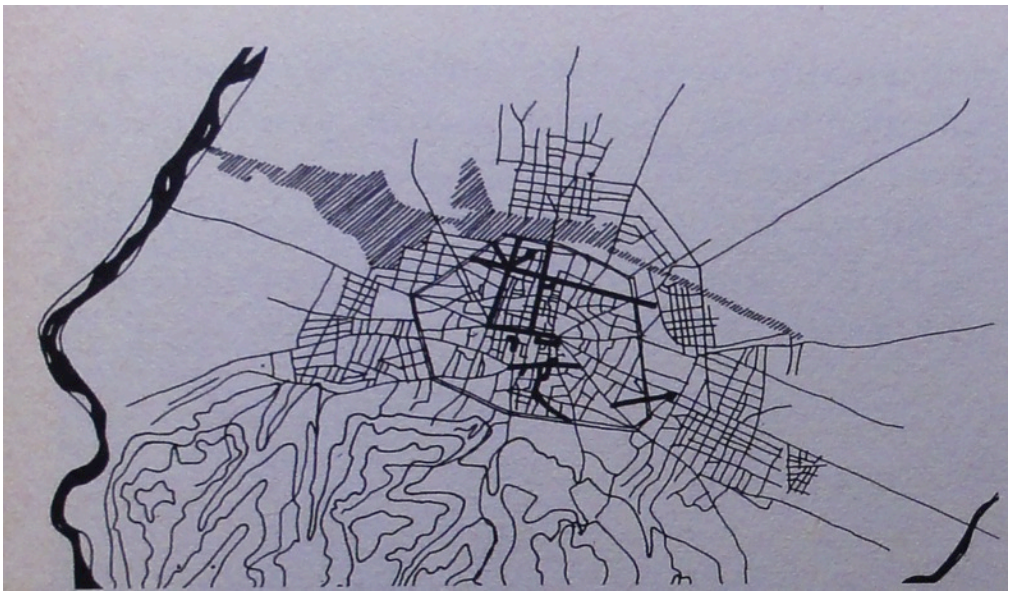
Figure 2-38: Transformation from 1901 to 1964

■ demolition buildings, □ new construction buildings

Then the capitalist economic structure brought the second phase transformation to the historic center deeply since 1898 to 1918. The market pull power attracted farmers indulges into center which made the expansion to loss its homogeneity. Then the social structure changed accelerated the heterization pace too. As the commercial function and other services functions, housing area of workers were expelled to accommodate new administrative tasks and commercials. For example, the demolition along the Street Marconi, Martiri Square and Street Irnerio, and the demolition of the district of S. Giacomo in order to realize “the university city” aim.

When it came to the master plan 1948, the municipality initially started to focus on protecting the historic center. Since 1950s, the city had become a post-industrial society with services and tertiary activities accompanying the expansion. As middle class moved out, social relationship changed greatly.

The third attack produced serious and longtime destruction to existing fabric. ‘Master Plan 1969’ tried to modify this trend through recovering social classes transition. The city organization has been experiencing decentralization and historic center becomes a special area facing to mounting socio-economic pressure. The fourth attack is a kind of counterattack to the protection action with good wishes but contrary results. The willful modification in the name of conservation may completely change the class’s ratio. The change of the classes ratio in the whole community is the forth attack to the historic center. From the above presence of the evolution, the integrity of historic center is perceived by the limits of walls, the dwelling houses fabric consistence and new public facilities forms. When the city wall was demolished into boulevards, the structure changed seriously.



2-39: The demolition in early 20th century

2.7.1.3 Planning Evolution

Before the World War II, there were two previous master plans: Piano Marconi 1889 and 1937 plan. Basically, both of them serve for development, neglecting historical morphology conservation and allowing small-scale demolition within the historic center.

Against experiencing reconstruction, uncontrollable growth with economic growth and large people migration background, traditional spontaneous expansion and regeneration caused great chaos to urban development. Plus, space-planning authorities was too weak to manage space construction behaviors. Until 1942, the first national planning legislation emerged, entrusted local administrations the power of land use control. But local governments were impotent to govern land speculation, because it offered great profits. Owing to lack of fiscal and financial autonomy, land-oriented speculation brought great destruction to existing fabric. Formal documents, such as the plans, blue prints were short of authority so that they could not shape and control the growth and development. The national planning legislation was too rough to constrain the expansion and historic irrational regeneration. More, urban finance was depending on the parceling and development of urban land.

At the beginning of postwar era, Bologna adopted the same development strategies as other cities, allowing enormous residential expansion in periphery, demolition in historic center, and expansion in agricultural areas. The Reconstruction Plan of 1948 (Piano di Recostruzione) proposed reconstruction in areas destroyed by the war without consideration of imperative needs of the historic areas, like public services and communication. The Master plan (Piano Regolatore Generale) of 1955 adopted this development strategy. Large-scale private and public housing construction were located in suburban areas owing to low cost of periphery lands to meet the living requirement. The overall expansion took little consideration to the historic center, causing imbalance development. Luckily, it brought comparative small destruction to existing fabric. Though there was arbitrary demolition, few new constructions were built in the historic areas as there were lack of public service and physical decay. The historic center was dealt with indifference, in a freezing way.

The city tried to rebalance the disequilibrium of development between center and periphery, to redress the imbalance of public goods distribution, from complex metropolitan structure perspective at a higher regional municipality's level. The metropolitan plan (Piano Intercomunale Bolognese) approved in 1968, performed innovative land and growth policy covering 17 municipalities and 390 square miles, including 700,000 inhabitants, while 500,000 were in Bologna area. In 1951, there were 340,000 inhabitants, and now it reaches to 382,460. The historic center which is 350 acres (141.64 ha) accommodates about one third of them, i.e. 80,000 habitants. This plan aimed to enhance the major features of the Bologna area. It adopted a polycentric structure of the whole region and tried to reshape the communication system and using effective land control tools. Most importantly, to the functional transformation of historic center was casted great attention. Historic center was seen as a functional and physical unit that should perform a unique role. The physical and social structure would be preserved, and the living conditions would be improved.

After the communist party took the majority of the council, they made recognition of the imbalance development and the need of social function of planning. Planning began to

perform innovative social function since 1960s. The master plan 1960 initially proposed to constrain the land speculation and real estate market. Public housing, as a social welfare is used to improve living quality of working classed and low income groups. It played an un-contemplated role in controlling unordered space expansion. The Commune abandoned all the regulations permitting demolitions in the historic center to protect historic heritages. The government proposed there was a need of an original proposal for the center's conservation and development. The plan incorporated all the above intentions into three public policies: public housing program, services location program and a new land control system.

At the outset, the municipality firstly decided to prompt the undeveloped areas of historic center. The municipality used legislation as a guarantee for public housing plan (Piano di Edilizia Economica e Popolare, PEEP) at the beginning of 1960s. Public services, such as schools, cultural and social centers, took account in large part of these free lands while the public house needed large quantity lands. The undeveloped lands cannot meet the great need of houses. Though a large amount of public houses were built, there were not enough lands for accommodating most low-income class. Then governors and planners shift their attention to the existing houses within historic center.

Historic houses serving for social housing exerted a revolutionary change of city's development model. The existing historic center, which were neglect for long time gained its new role in urban development. In this way, Bologna administration and planning professionals innovatively banded public housing with historic center. This innovation brought several gains. Firstly, historic houses would involve into the whole city development. This rebalance would prevent the migrant of the native people of historic areas to slow down the declining. Secondly, historic center conservation would be enhanced. Thirdly, the location advantage and affluent facilities could be made good use again. Fourthly, it would save lands to provide more space for low-income working class. Fifthly, the great amount of existing house could prevent the housing speculation.

The object of the conservation plan is to carry out a real rescue of the past facing the acceleratory disappearance of history and cultural crisis. It is the nature of planning to carry out study of historic structure and morphology. This analysis of the current condition, to know the past evolution and future trend is an essential premise for solving urban problems. Historic conservation should base on understanding of the permanence and immutability of value and on an operational methods. Unfortunately, current planning often aims to make the spontaneous growth historic structure into a kind of pure and romantic structure. The master plan 1969 tried to conserve the whole shape without reconfiguration of historic center, through precise typological action which made it efficient and operative.

Master Plan 1969 has gained great reputation in conservation methods exploit with high international acknowledge. The success of the conservation of Bologna has two levels. In short, firstly, it innovatively created several techniques in protection. In this plan, the

buildings were classified not only according to the historic and environmental quality, but also according to a typology-orientation tool, including the structure, courts, depth, organism connection, etc. Furthermore, a series of complex public policies articulated with management and use of these historic buildings pointedly were advanced, based on a set of precise rules and regulations to control construction properly. Public administration and public participation performed well in its application. The master plan was adopted by the municipal in July 21, 1969, approved by the province in November 20, 1969, and by the central government in June 10, 1970. The method change can be seen in table 2-2.

	Initiate method	**Modified method**
Strength	Low prices land	Full facilities
Develop strategy	Periphery, out of Historic center	Undeveloped area, in Historic center
Contents	Resident	Resident
	Social housing in the periphery	Social housing mixed in the city core
		Public facilities
Results	Urban expansion	Inner Development
	High price	Low rent
	Lack of service	Increase of services
	Expulsion of native	Priority to native
	Poor quality	Good quality

Table 2-2: modification of development strategy in Bologna

2.7.1.4 Social organization in conservation

In the Bologna political stage the Left Communist party holds the majority in the city council so keeping a powerful support for master the conservation plan. Another feature is the decentralization of politic power that tags the planning decision mechanism and citizen participation model and sets the foundation for public supervision and involvement of the public.

The municipality transferred advisory and decision power to the Neighborhood Councils during 1950s. Neighborhood Councils (Consigli di Quartiere) is a major player in policies forming and decision-making about local matters. There are 18 Neighborhood Councils which represent around 40000 inhabitants. On the outset, the members of the neighborhood were assigned by the City Council according to party's strength. And then members are elected directly. The councils perform as a fundamental actor in the municipal policy. Particularly, there are 3 functions related with planning: firstly, the economic function, the council discusses and makes the approval of city's budget and all the public expenditures for social services; secondly, the commercial management, neighborhoods commercial activities, such as events schedules, new permits are under its management. Lastly, public management, public services such as childcare centers, elementary schools running and maintenance, local libraries, cultural and educational activities are under their control. Through the management of public neighborhood events, local programs can be implemented efficiently by this very participative structure.

Any constructions and plans cannot be acted without the permit granted by the Neighborhood Council. They play a critical role in the formation and evaluation processes of the master plan, the housing programs, and especially the plan for the intervention of the historic center. One of its main duties is to perform plans and local housing. It aims to gain balance development and harmony in their administrative area. It tries to constraint the real estate profit resulting in irrational construction. Aimed at the public interests, it provides democracy support for the technical intervention in historic center.

2.7.1.5 Conservation innovative aspects

As one of the most efficient intervention of historic center in Italy, the effort in Bologna represents a major achievement of the conservation planning. Its key contribution has exerted great influence to international historic conservation movement.

Since 1950s, problems of historic center began attracted professionals' and government's concern. Bologna changed the existing methods of demolishing within historic center, and forming a innovate reuse of historic center recognition. Firstly, an inventory of historical heritages including monuments, minor structure, and the architectural and urban fabric was compiled. Then, Professor Leonardo Benevolo, one of the most prominent Italian planners and architecture historians was assigned to compile the intervention plan. He firstly studied basic status quo of the historic components thoroughly. He formulated a typo-oriented methodology and guideline for the detailed physical space intervention. He proposed a set of regulations to innerve the original architectural form, characteristics, and a group of public policies for management, incorporating historic buildings and local citizens to the modern life. The method of typology is the first great innovation and the key cause for the success of conservation. This operative methodology not only modified the rude attitude of demolition, and also enriched the prior methods only preserving exterior appearance.

With the enhancement of consciousness of problems of the historic center, preservation became a major issue in Neighborhood Councils. And there emerged recognition along with the technical innovation. They expand the conservation subjects from single buildings to the whole living environment, further more they care about adaptive uses and management of the space. Just like "for whom are we going to restore and preserve this historic heritage", they concern the working class interest in the conservation. As there are livable environment in historic center where are full of public facilities and convenient communication, the class composition in the center decreased. Because of the lower income groups were expulsed and replaced by the higher and middle income classes so as the space became gentrification. The council first proposed, "conserving the people like conserving the houses". They aimed at protect the social equity and public interest. Preserving the native inhabitants is to preserve the daily activities, so as to keep the original cultural characteristics and social relationship of the city, which is seen as the second phase of planning. In this way, the physical conservation performed cultural conservation. An intention to protect the interests of the working class cooperative with feasible technique methods makes an integral conservation of the social, cultural,

economic, and artistic features. It becomes a comprehensive public policy which is consistent with the cultural economics.

Public housing program into historic center conservation is the third great innovation. The Economic and Popular Housing Plan in Historic Center 1973 (Piano per l'Edilizia Economica e Popolare/ Centro Storico) granted housing reform power to the municipalities in 1971. It establishes a program of public intervention in conservation, providing great policy and financial support. In this way, the speculative aims were opposed, preventing large-scale destruction to the historic urban structure.

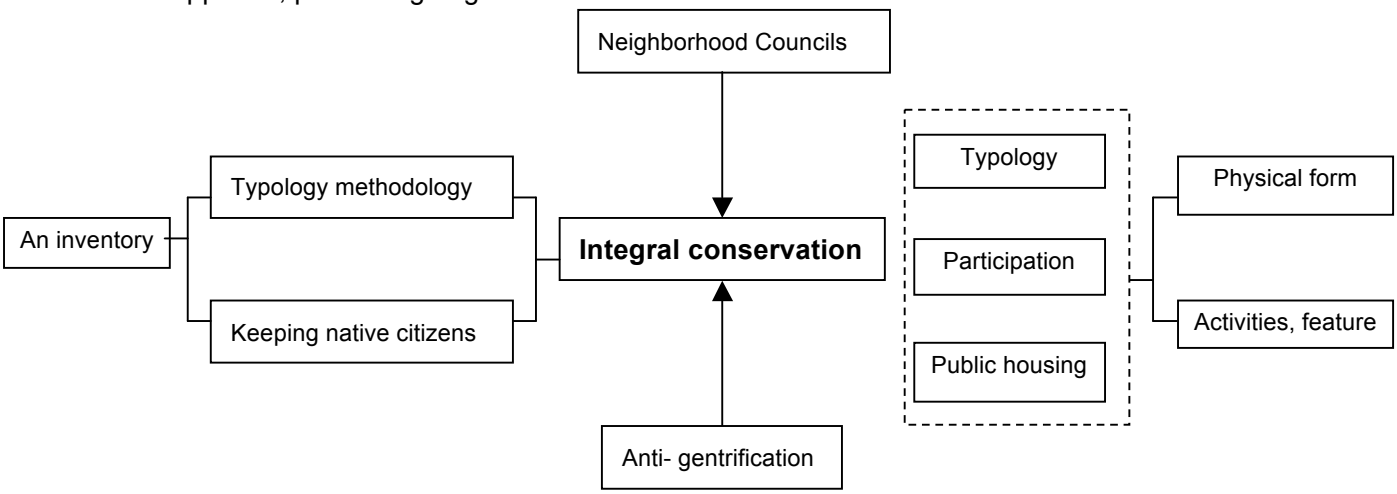


Figure 2-40: illustration of conservation in Bologna

2.7.1.6 Typology application step

Typology and morphology method was applied in analyzing the components of historic center and formed the technical basis of the first phase of conservation. Technically, typology was applied into building ontology study, providing four main steps for intervention: firstly, categories of buildings were defined based on their dominant components and feature. Through the similarity analysis, homogenous characteristics can be gained, settling the foundation for intervention. There are four main typologies and each has many sub-typologies in the analysis. According to typology, a set of indications decides feasible uses of each typology. Then, indications for allowable modification for each typology are fixed for regulations. At last, management of each type was confirmed. In short, the application of typology are: Analyzing, classifying and defining the topology of the historic building; deciding the feasible and adaptive uses of the typology; making and forming allowable intervention indications and regulations for each typology.

As such the Bologna experience is a scientific **subject-oriented** approach to provide policies based on physical subjects. The use and management of buildings depends on ontology, referring its structural, location and organizational features. In the historic center, every building was analyzed and classified into a category, including four categories of typology showing below, see figure 2-41. The uses to be adopted for the modification of the building according to the regulations and criteria were listed pointedly, see table 2-3.

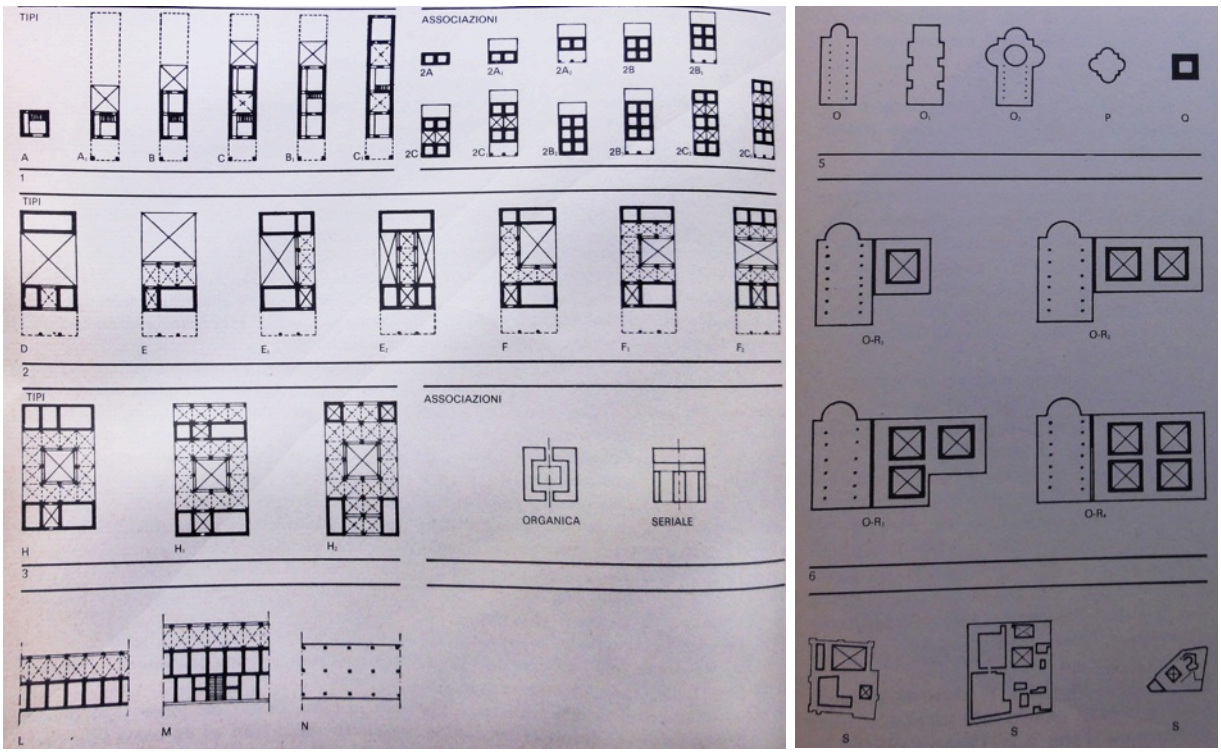


Figure 2-41: some building types and subtypes in Bologna

Types	Objects	Sub-types	Contents	Characte	Adaptive Use	Note
A	Large containers; Contenitori		Palaces, convents, churches, baptisteries, towers, depots,	Give main space structural features	Public, collective uses" schools, research centers, libraries, theaters, exhibition halls, civic clubs, laboratories,	Important symbol of culture and history
B	Buildings around one or more courts		Courts	Keep the original uses, especially in ground floor	Only for public and private Cultural activities,	
		10 to 20 meters front facade	Two combined half courts			
		21 to 50 front facade	a court, delimited by four principal buildings			
C	Private buildings	A 4 meters narrow front, deep coverage	16-18th century buildings,	Life and activities of workers and dwellers	Residential, apartments for students, single persons, retired and old people, young couples	public housing
D	Other types	At a different scale		As a space context	Private residences	

Table 2-3: some types and adaptive use types implemented in Bologna

The criteria and regulation was set in groups, to indicate the allowed modification. There are three sets of intervention categories, including six kinds of interventions, see table 2-4.

Criteria	Sub	Objects	Regulation	Aims	Tools	Note
Group 1		Restoration		**Restore values**		
	1a		Strict regulation	Restoring historic values, the original stylistic characteristics	Eliminating contrasting additions forbidding any intervention without reinforcement	
	1b		Partial regulation	Eliminating the additional not those fit historic values.	Survey and investigation	
Group 2		The fabric aggregation of bulk buildings		Keep fabric testimony of social organization of certain periods	Forbidding artificial reduction, arbitrary weeding and the way “thinning”	
	2a	All external elements, structural and features	Conservative recovery and rehabilitation			Facades, Portici, courts, loggia, corridors,
	2b		Restructur-ing within limits	Restoring original configuration, Preserving typologies,	replacing old organisms partially, different façade with various typology to avoid standardization	
Group 3						
	3a		Reconstructing		Demolish and rebuild	
	3b		Demolition		Public open space; rebuilt same volumes in other areas	

Table 2-4: types and interventions in Bologna

After the typological analysis, the morphological analysis was applied to the study of the forms and evolution of fabric structure. When it comes to study the morphology of Bologna it is evident that the relationship between ordinary residential fabric and important buildings can be preserved through maintaining their constant connection. In the morphological analysis these two levels were duly identified.

Pointed to the aggregation, specific intervention types were provided in the plan. On account of the physical decay of structures and the obsolescence of socio-economic aspects, some portion of the fabric would be distinguished as a unit. According to the status of the buildings, they can be categorized as a collective unit and property to be processed with a common set of intervention. The historic center of Bologna was divided into 13 districts according to their identity, functional and morphological condition. The master plan 1969 provided technical basis for the future conservation and restoration, which guides future works for preserving and revitalizing the fabric structure.

2.7.1.7 Public housing program step

Often, protecting material conditions of historic areas is seen as the only aim, neglecting the social ecology change. Most of time, once material conservation finished, local inhabitants would be expulse by the rising rent. The preserved areas would experience gentrification and the conservation will loose its social fairness. On the outset, Bologna cannot escape from the socioeconomic gentrification trend either. The conservation can control the adaptive use and keep attractive living areas successfully, but the eviction and replacement of low-income class began.

The Alderman of Bologna planning and the local technical committee made recognition of the risk of gentrification and want to provide social housing for low-income class. It wreaked side effects, and furthermore it made the conservation so successfully as comprehensive public policies. The Social Housing Program for the Historic Center (Piano di Edilizia Economica e Popolare, PEEP) was adopted in 1972 and approved in 1975. The PEEP, coordinating the financial effort of the city with the National Agencies for Public Housing, accommodated old historic buildings for low-income class. This intervention was based on some theoretical premises bringing from mere physical conservation boundary to a social and economic mechanism level.

At that time, real estate construction merely cared about private investments. Great investment in construction could not meet the living condition improvement need. There were 65 million of rooms but 55 million persons; there was a serious housing shortage, especially for workers and low-income groups. And the social housing construction decreased from 25% in 1950 to 3% to 4% at the beginning of 1970s. The council first wanted to constraint the speculation in the real estate market. To this end, the rehabilitation of historic center could aid to fit the imbalances between historic center and suburban areas, by transferring concern from new construction area to conserving the existing historic center. Plus the Housing Reform law, No. 865, dated 1971, granted the government the power of building expropriation for the public functions, such as schools,

open spaces, infrastructures. As a public welfare, social housing began to be seen as a kind of public good and set by legislation. The local government had the power to intervene in historic houses in the name of social housing with a low rent. During public houses program implementation, Neighborhood Councils provided the most important organization tool to support the planning performing and the operational policies. These policies encouraged the private activities in conservation with subsidies. It also regulated several management types, see table 2-5:

Management	Public house types	Subjects and factors
A	Collective ownership	The area or the buildings
B	Lifetime duration	Member of the cooperative rent
C	Fair rent	According to the income of inhabitants
D	Conservation paid by long time rent span	No capital investment by the dwellers
E	Mobility of the tenants according to family needs	Efficient use of space, preserving the social links and structure of the neighborhood

Table 2-5: management of the housing

The first phase of PEEP 1972 only covered 5 areas of the 13 historic areas pointed out. Feasible adaptive reuse of the old structures to meet modern requirement had been carried out. Especially based on habitants living in the buildings, categories and subcategories can be re-organized and combined. Interventions provided a similar flexibility with respect to the dwellers. For example, the category Cb1 can be changed variously at different levels (two apartments on first and one on the second or six small apartments in the whole). Other public functions were taken into the consideration, such as the childcare, playrooms for children, open space and collective restaurant for students and the elderly, parks, social centers, elementary schools etc.

The most important aspect in Bologna case is the public policy role of the plan, that operated towards founding an operative way to make a sustainable conservation protect the social components, maintain the vitality of historic center and achieve the social justice. Secondly, every procedure has a concrete legislation support. The planning power was strengthened by the authority and sustained by a public subsidy. Thirdly, power decentralization triggers the private owner to involve them in the conservation implementation positively. While a wide participation triggers the public initiative, sources and private resources, the plan got enough supervision. In this way, the integral conservation planning based on the political, legal and economic interactional factors; the physical and social conservation can be implemented successfully.

2.7.1.8 Compromise and adjustment step

Owing to the private property right violation, the expropriation law had generated extensive opposition from owners and right party. To save the whole program, the authoritarian and all the political parities reached an equilibrium point accommodating mutual compromise in 1975, named the Covenant. The adjustment still guarantees the original goal to protect the low-income tenants' interest and small owners.

Especially, the compensation to the expropriation changed from the value corresponding to the agricultural land multiplied by certain coefficients up to 80 percent of the expenditures on the houses. The government makes use the subsidy as a tool to gain the initiative in rent deciding and priority of allocation. If the owners were extremely poor, the commune would cover the whole cost of conservation. As the second hand landlord, the government guarantees lower rent. The expropriation refers to the owner who doesn't pay for the intervention; they loose their right to yields.

The covenant lasts for from 15 to 25 years. In order to exclude any possible speculation, there were several additional rights of the administrations: the Commune has the priority to buy the house at the price based on the estate from State Offices for Land and Building Estimation if the owner wants to sell the estate. The owner would be obliged to reimburse the entire subsidies and the interests earned. The owner's family has the inherited right but need to pay back the subsidies or sell the estate on a reasonable price. The agreed rent is based on an evaluation, including subsidy grant, duration of the covenant, the tenants' income, the owner's expenditures, the rent of public housing (on the average about 12 percent of the tenant's income). The tenant should be chosen among those on the list. The commune has the right to allocate the apartment which is empty more than 4 months. The commune can penalty any violation. During the conservation construction, all the tenants living in the house will be provided by temporary houses.

2.7.1.9 Brief conclusion

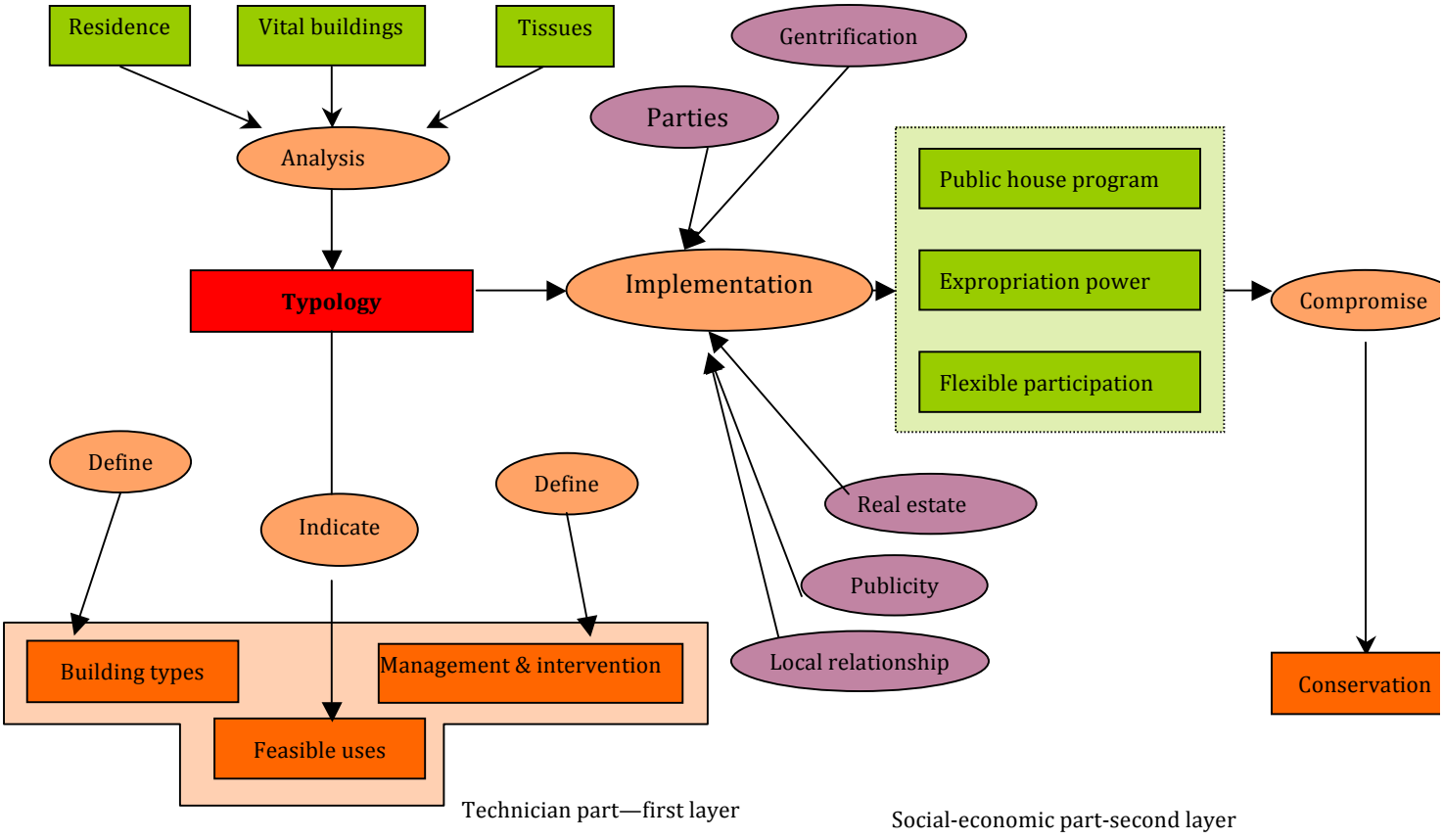


Figure 2-42: main ways of conservation in Bologna

The Bologna case provides plenty of stimulations to historic conservation procedure design. In the first level, based on typology and morphology methods, it supplies operative technician foundation for the physical intervention. Then it aims at protect the public interests by the means of a public housing program. Thank to it is possible to maintain the local inhabitants and contribute to a socially balanced development of the whole city. The public participation supply an effective way to carry out a very complex planning machine proving that the public organization way is vital and irreplaceable in the implementation, see figure 2-42.

2.7.2 Genova, a block-based intervention case study

The following intervention routes are suppressed to incorporate in new buildings without erasing prior traces, even just partial, to bear witness to ancient. Genova adopted a different conservation method than Bologna. In Genova conservation, the “block”, composing the mosaic of urban fabric, and composed by several building units, performs the way of intervention.

2.7.2.1 Block 1 intervention: Via Canneto il Lungo, via chiabrea, vico Giustiniani, vico Sauli

This block has a clear, geometric shape, delimited by the roads. Via Canneto il Lungo and Via Giustinian are two oldest and important links in Genova’s morphology shape. Though situated in a good location, these buildings had experienced continuous downgrading from aristocratic residences of a certain prestige in 18th century, to houses to rent for middle class in 19th century, finally to apartments of present time. Buildings were in mess with bad hygiene. They only accommodated few residents while the ground floor were empty. Due to social structure change, it had suffered a progressive deterioration in physical status and of living quality. The aim of the conservation was to favor an environmental restoration, to improve living conditions, to redevelop the noble decoration of great palace. Historic value and attractiveness of the block was highlighted.

Figure 2-43: evolution and historic property of Block 1, Genova

The basic work is the same as Bologna, a carefully study on historic evolution, fabric, and historic elements, like atrium, paintings, frescos and the structure elements of the block see figure 2-43. In this way, all the relevant elements of the property can be distinguished, (see figure 2-44-3). Then pointedly different types of interventions would be stressed out, like single or multiple intervention, recast, merging or reduction mode see figure 2-44-4.

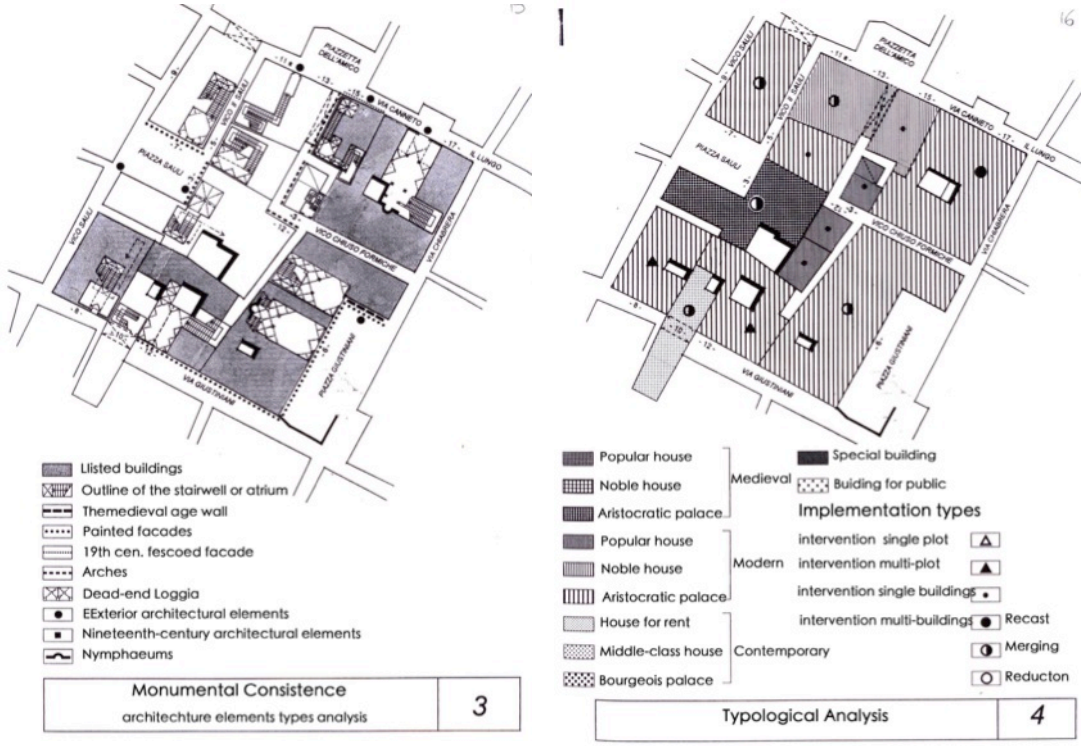


Figure 2-44: elements and typology of Block 1, Genova

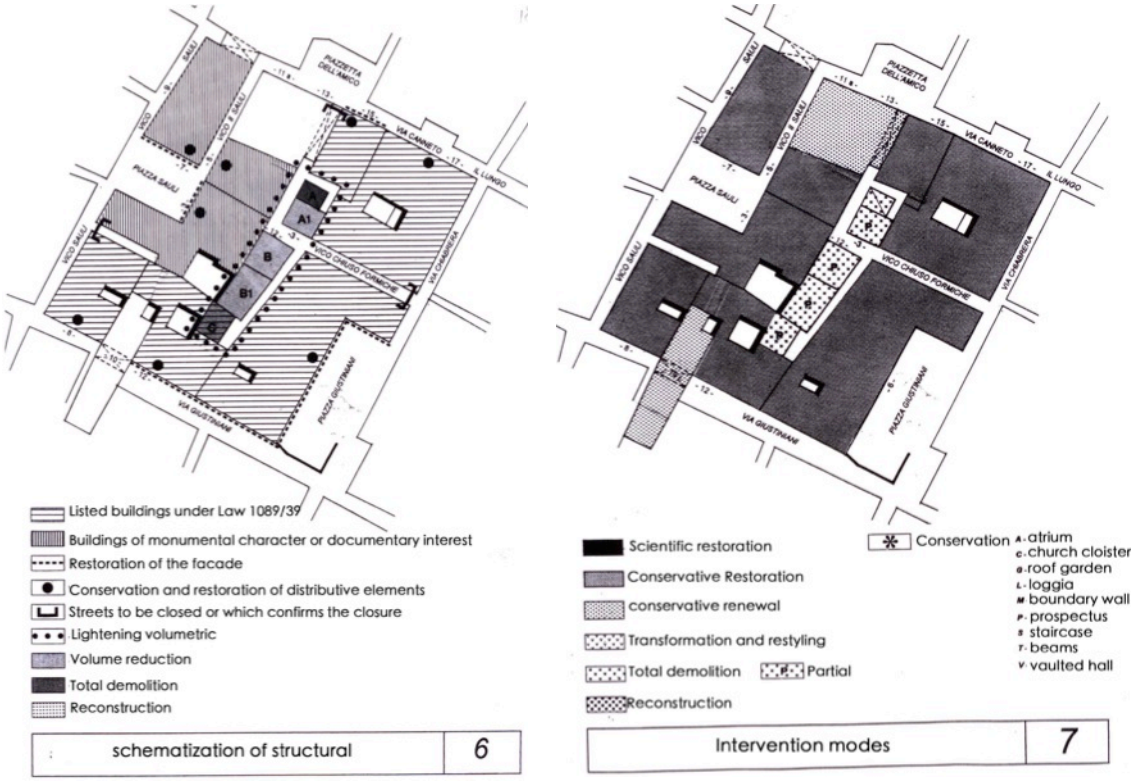


Figure 2-45: evolution and historic property of Block 1, Genova

2.7.2.1.1 Interventions

On the basis of adequate historical analysis, every element was involved in certain intervention. The whole physical environment was treated as conservation subjects. Some buildings which are not listed were treated as they were. Façade and distributive elements are restored. Six different intervention methods were applied, included scientific restoration, conservative restoration, conservative renewal, restyling, partial or total demolition and reconstruction, see figure 2-45. Some detailed ways of intervention include:

1 Volume thinning

The proposal basically applied volumetric reduction. Buildings which cause congestion and unnecessary addition, would be demolished, like volumes blocking paths, severely impaired image or disorganized elevations.

Taking the building in Vico Formiche 3 as an example, with little historic values, limited accessibility we see that the yard had insufficient space to meet an acceptable living standard. So, a reduction of the elevation was provides as well as a reorganization of the communication. The height reduction produced more light for the surroundings part of the building.

2 Atrium-courtyard - staircase space reorganization system

Interventions went on to deal with internal elements to reorganize, relocate and restore the communication system through the atrium-courtyard–staircase intervention. It was to achieve a new space structure to relocate and separate public and private access. The street potential vitality was triggered by relocating main commercial functions along main routes. In this way, it was feasible to restore the original entrance, enhance and recover the original dimension of the atrium, courtyard and scale of the staircase.

3 Enhancement of painted facades

Numerous fantastic frescoed façade are seen as one important factor of the block identity. The enhancement of the facades would meet public enjoyment. As an essential incentive component, it triggered the public to cherish the great palaces and mansions.

4 Reuse introductions

The block was in poor status while most of buildings were wholly empty. The ground floors and lower floors were abandoned, only some were arbitrary treated as warehouse. A plurality of uses was proposed: some ground floors, which are along the main roads are allocated some boutique and craft shops, while some other are used as storehouses not suitable for living. Infrastructure and services for community and tourism are distributed in the ground floor. The more lightened rooms in the upper floors are used for residence. Based on the different living events occurring in the day, some flexible functions are attached to the open space. The parking is provided for the shops while some technology education service are provided for the inhabitants.

5 Accessibility

Via Giustiniani was modified as a pedestrian path, allowing limited vehicular communication for craft and commercial activities. The square Giustiniani was used for parking. Vico chiuso Formiche, via Canneto il Lungo, and via Chiabrera were designed for accommodate more public space.

The implementation pays attention on the indigenous inhabitants, who were entrusted to be relocated in the original houses. The municipal government was responsible for the economic and technical support. The physical intervention adopted integrated subjects, implemented various degrees of interventions, optimized internal living space quality and introduced commercial and public activities. The object-oriented intervention successfully provided new vitality in these historic properties.

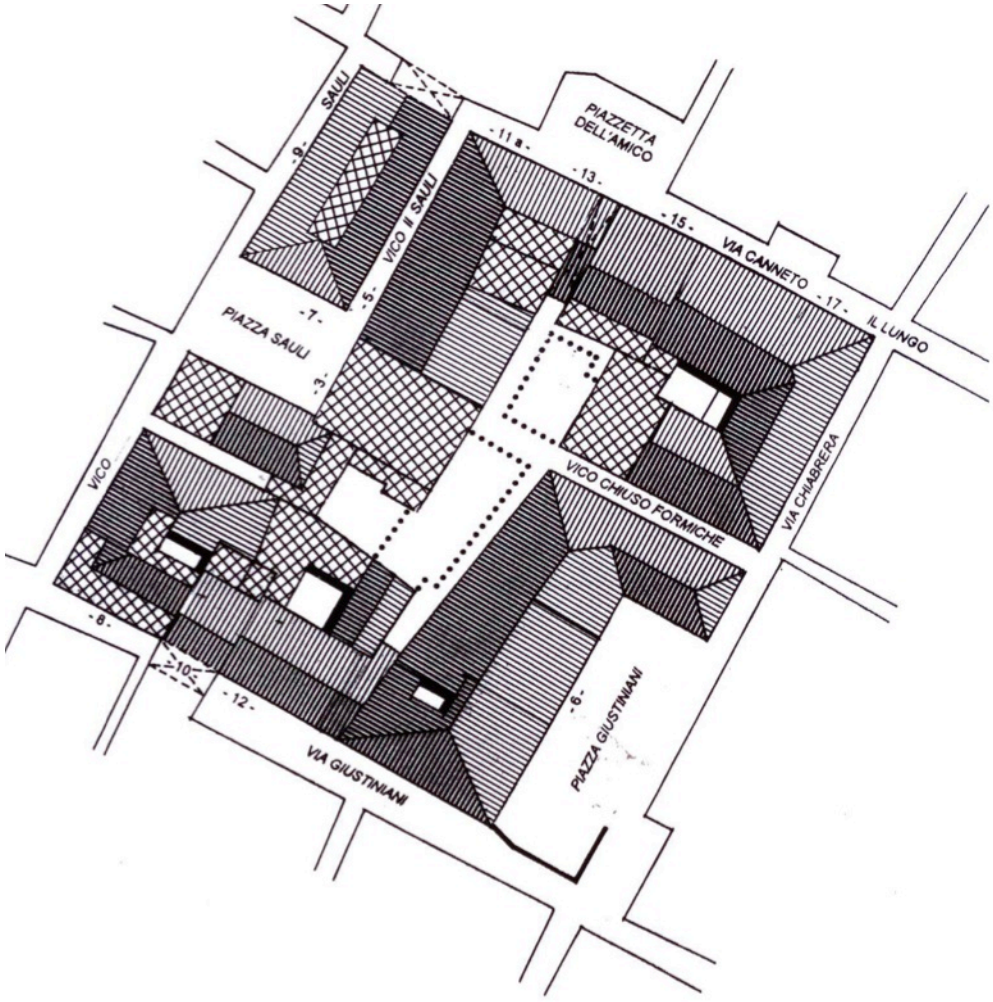


Figure 2-46: site planning of block 1, Genova

2.7.2.2 block 6 intervention- the Via Canneto il Lungo, vico Sauli, via Giustiniani, piazza S. Giorgio, via Canneto il Curto

The block 6 has a space structure that evolved from medieval space pattern, staying comparative stable. The block was cut into two parts by Vico del Sale, one of the main connects between the port and the commercial center. Tough fluctuating between prosperity and adversity, suffered in deterioration, it is always treated in an intact way over

centuries. As a witness for city center's persistent vitality, its conservation is part of the whole city rehabilitation.

The block is adherent to historic center heart, the Square S. George, which is the commercial, traffic center, see figure 2-47. Enjoying this splendid location advantage, the morphology, space form and function are the embodiment of social-economic flows. The prosperous trade from the port of Genova and the other courtiers around the square S. George brought great vantage to this area. Because of this external communication, housing aggregation embodied effectively to the outer different functional needs[1]. The whole block had a high-level space quality, with fabulous materials, elegant houses types and towers.

Figure 2-47: up, the red part is Block 6; down, street perspective of Block 6, Genova

The shops with porches open to the street form the place for public activities and traffic for centuries. Churches are the container of both public and private events. The transition from free square area to half-public porch space to private shops and housing is the articulating of the relationship from public to private, from the community life to the household living. This relationship of spaces helps to clarify the structure of social relations and the space form feature.

[1] L. Grossi Bianchi. E. Poleggi, op. cit., p. 97.

The block underwent a heavy transformation in 19th century, and then suffered a progressive deterioration till recently, because of Genova had relegated its role in ocean transport. Fortunately, the block had not suffered any destruction in wars in the 20th century. The social fabric, characterized by a common middle class, does not present social collapse even the degradation was widespread during the serious hollow-out period.

Like the basic analysis of its components in block 1, the conservation subjects could be fixed, see figure 2-48. The project was to improve the hygienic conditions, to reduce the built volume and to optimize the living space quality. Intervention methods were the same as what were applied in block 1, with 6 different ways, see figure 2-48-6. It also undertook the due obligation to revitalize the urban vital center, as one vital part of it.

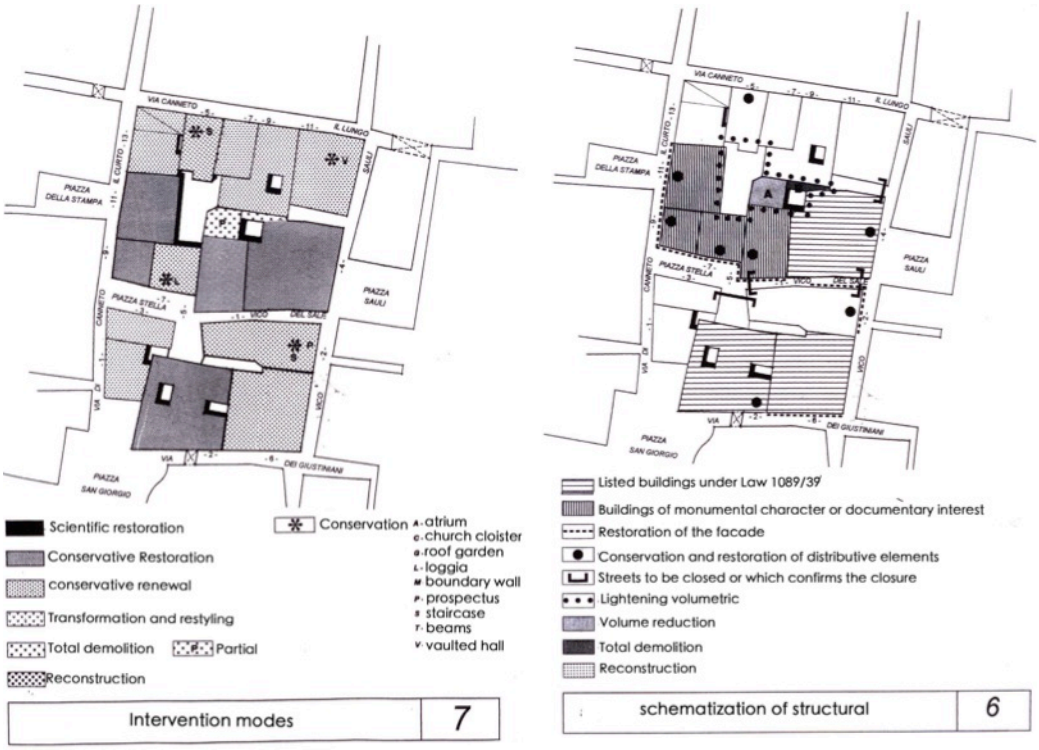


Figure 2-48: elements and interventions of Block 6, Genova

2.7.2.2.1 interventions

1. Volumetric Lightening

Stella Square 5, a 5-story building, which was an addition to the main building, was in deterioration. It would be partially demolished to restore the yard, creating a bright and spacious interior half-private space. It would improve views of all buildings involved. Plus the space supplied the possibility for adding external elevators.

2. Atrium-courtyard - staircase space reorganization system

Pointed to the internal space, the intervention would reorganize, relocate and restore the functions, and reorganize the communication system through atrium-courtyard–staircase space. It would achieve a continuous successive space from public to private space. Street potential vitality was triggered by locating main commercial functions along main

routes, by creating walk-able route along the porch. In this way, the original entrance was restored and the original dimension of the atrium, courtyard and scale of the staircase were restored. It was implemented in the following aspects:
a) Enhancing the atrium space with elimination of the partition wall in the Vico Sauli 2;
b) Recovering the space of the atrium of the Canneto il Curto 9 with elimination of the partition wall, which was used for warehouse;
c) Upgrading of the atrium to via Giustiniani 2, repairing the staircase to intact top floors.

3. Recovery medieval loggias in significant positions
To redevelop the medieval loggia in Vico Sauli 2, Vico Sauli 4, highlighting the facade of the building structures that still exist. These important historic elements were the symbol of its elegant position and creating more vivid space image.

4. Enhancement of painted facades
Numerous frescoed façade are full of such urban space identity. The enhancement of the facades was to meet public enjoyment. This refers to the buildings of Via Canneto il Curto 9, Piazza Stella 5 and 7, Vico Sauli 2, Via Canneto il Curto 11, and Via Giustiniani 6.

5. Intended functions
The ground floors would open for public; especially some shops would reopen for suitable form of retail based on the market analysis. On account of Via Canneto il Curto is the mal commercial shopping streets, it was modified as the pedestrian with strict vehicle requirement. There would be located parking area for the retail shops and consumers. The upper floors were divided and relocated for inhabitants.

6. Accessibility
Via Giustiniani was modified as pedestrian with vehicular limited. All the area constraints vehicular access so as to improve the space quality, and to enhance the public property. It also paid attention on the negative space which around the corner, such rear area of buildings of Via Giustiniani 2, Vico del Sale 1 and 5 Stella Square. Several facilities were located to make them more open and more public.

This design innately was to keep the original space pattern, to persevere the important historic goods. With regard to historic authenticity, during this intervention, the historic routes would be kept. Pointed to the property of every element, various levels interventions were carried out, such as the scientific conservation, conservative conservation, conservative renewal and etc.

In addition to the physical factor, the adaptive accommodation of these facto into modern life is another necessity to perform. It uses volume lightening to reduce the space for better lighting, to form convenient communication and half-private space. Special attention on the active is the key factor for rehabilitating this area, commercial activities, walk-able space, facilities and more importantly, modern life quality. Facilities allocation and function modification trigger the vitality of the residence and the commercial area.

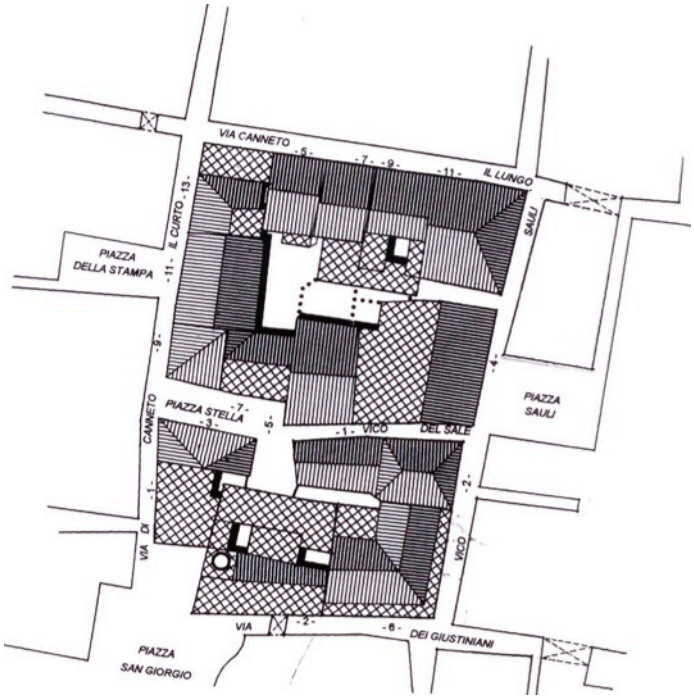


Figure 2-49: site planning of block 6, Genova

2.7.2.3 Brief conclusion

The conservation in Genova has embodied the idea the conservation should never be isolated by a responsibility on social functions. The integrated conservation policy can gain success than the pure physical intervention. As at the beginning of this section, all the intervention respect any hint in history and highlight every “historic trace”. Genova had made application of block as conservation “unit” to carry out various interventions. The work firstly outlined problems of the built environment, such as the deterioration, crowding, disordering etc.,. Then the conservation had two aspects: on one hand it cared about the built space pattern, reducing the internal volume to provide livable living space, convenience connection, and readable identity; then, it reorganized the communication and feasible commercial shops, reestablishing social connection. So doing, the spatial image was organically involved into the whole city identity system, by the tower and loggias, see figure 2-50.

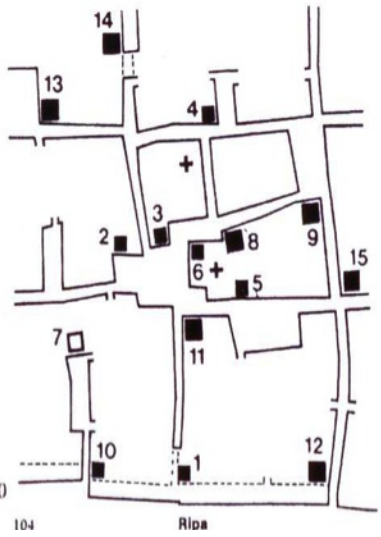


Figure 2-50: urban space connection between Block 6 with the main square through the tower allocation

2.7.3 Palermo, a fabric-oriented conservation plan [2]

The conservation in Palermo proposed a quite innovative and adventurous method based on morphology analysis. At a more large-scale level, the space intervention comes from a tissue-oriented perspective. Aim to fulfill the historic morphology and maintain historic feature, the intervention, especially with new insertions, cares for original space form and allocate new functions need consistent with the old fabric.

Also, the plan improves the role of old city cater in relation with the whole city in order to gain a balanced development and a better living quality.

In the comprehensive proposal[3] for the rehabilitation of the historic center, the key method applied into the plan is the morphology study [4] . The program includes three stages[5]: survey and analysis, elaboration, plan drafting. Initially planners focused on identifying reasons of problems and subjects in historic center, and then an analysis of feasible methods was proposed.

Urban configuration is formed by material elements, built in various time. Neighboring elements, usually beyond the roads and streets' boundary, evolve with some specific homogeneity. These areas, embodying similar iconic images, are seen as distinctive unit within the urban fabric mosaic.

Besides the macro-level morphology analysis, the plan makes detailed intervention proposals for the buildings to preserve. Specific interventions

Figure 2-51: historic center of Palermo

[2] Cinà G. et al.., *Dossier. Il caso Palermo*. Progettare, Rivista trimestrale, n. 1, Palermo, 1985, pp. 41-88.

[3] In 1979, Giuseppe Samonà, Giancarlo De Carlo, Giuseppe Di Cristina and Maria Aanna Sciarra Borzi, were appointed by the Municipal Palermo to develop a comprehensive proposal for the recovery and rehabilitation of the historical center.

[4] Abbate G., *Il ruolo dell'analisi tipologica nel recupero dei centri storici*, Publisicula, Palermo 2002.

[5] Ajroldi C., *Lettere su Palermo di Giuseppe Samona e Giancarlo De Carlo, per il Piano programma del centro storico 1979-1982*. Officina, Roma, 2004.

were provides for the materials facing to serious decay. New constructions and functions were inserted in some urban void with careful constraints with regard to some acceptable types, consistent with the surrounding urban landscape. In both cases, some care to typology is applied in the conservation and rebuilding, see figure 2-52.

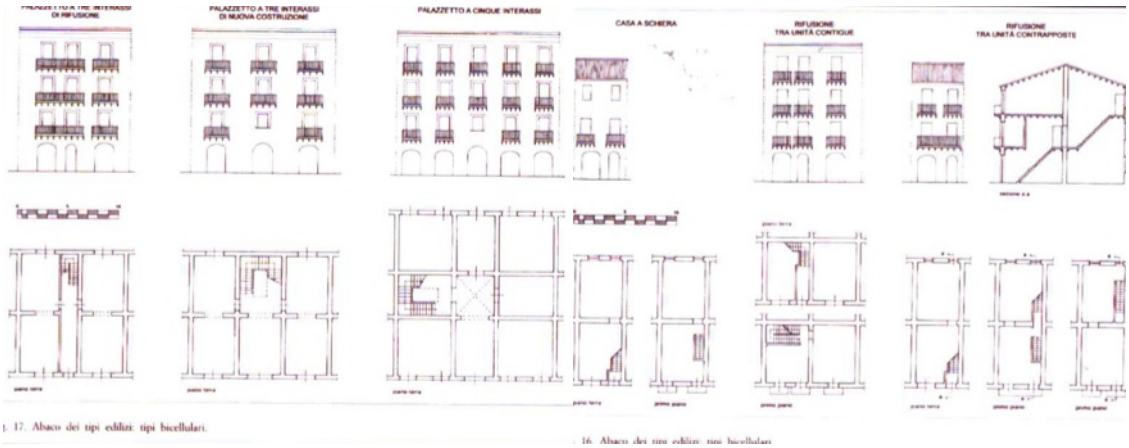


Figure 2-52: buildings typology analysis in Historic Center of Palermo

2.7.3.1 The “Program Plan” for the historic center

The planners, leaded by Samonà and De Carlo noted: the conflict between the historic center and other parts of the city leads to disappearance of 'historical' values. Historic center has lost the centrality, which is the reason of the degradation of its commercial functions; leading to social exodus and the disintegration of the local society. Hence Program Plan should tap its potential to reestablish a renovated role for the old city.

The plan embodied two duties: to fix a suitable role of the historic center in the city as a whole and provide basic interventions for the historic fabric itself. Two major groups of planners were organized: one worked for the formulation of the general plan for the entire historic center, the other worked for the compilation of a pilot project. On one side a plan to reuse the ancient fabric, recover the dilapidated structures and design destroyed parts. On the other side the planning of a delimited neighborhood to set an intervention example for other parts.

To each part of the tissue the functions and roles for the revitalization of the entire historic center are given. The plan aims at redevelop the space system of each tissue portion, triggering operations for adaptive reuse.

To this end it is appropriate to incorporate the existing fabric into modern life [6]. At the tissue level, the analysis has two main aspects: in the first place, the meanings and values in the space structure, in which the architectural language witnesses the collective memory; in the second place, the role of this tissue in the whole center. The first aspect asks to study essential signs of the fabric, including streets and buildings, to know the

[6] De Carlo G., *I NOTA*, 13 April, 1979. In Ajroldi C., *Lettere su Palermo di Giuseppe Samona e Giancarlo De Carlo, per il Piano programma del centro storico 1979-1982*. Officina, Roma, 2004.

various characteristics of the present elements. The planners pre-established a set of "iconic" signs and codes to interpret the elements of blocks, including facades, volumetric organization way, pavement and etc. The signs and codes contribute to compose the image of the morphology of the urban structure. Therefore, the morphological forms interpreted into groups of icons that represent the overall image[7]. A critical overall evaluation, in qualitative terms, referred to every element[8].

2.7.3.2 The tissue analysis

Owing to the morphology analysis of the whole historic center, there are 11'Contesti' (tiles of urban mosaic), delimited by the designers[9] according to the physical characters of the historical fabric, see figure 2-53. In each tile, every element was distinguished by morphological analysis of the quadrilateral old center.

The linear element，as one of the most important factor in the configuration, like streets and roads, plays a vital role in the fabric partition. The roads provide the successive interface and underpin relationship between other elements.

Moreover two types of urban unit are identified: close system and serial system. The first refers to palaces, churches, convents and single big monuments; the second refers mainly to uniform group of buildings, like row houses etc.

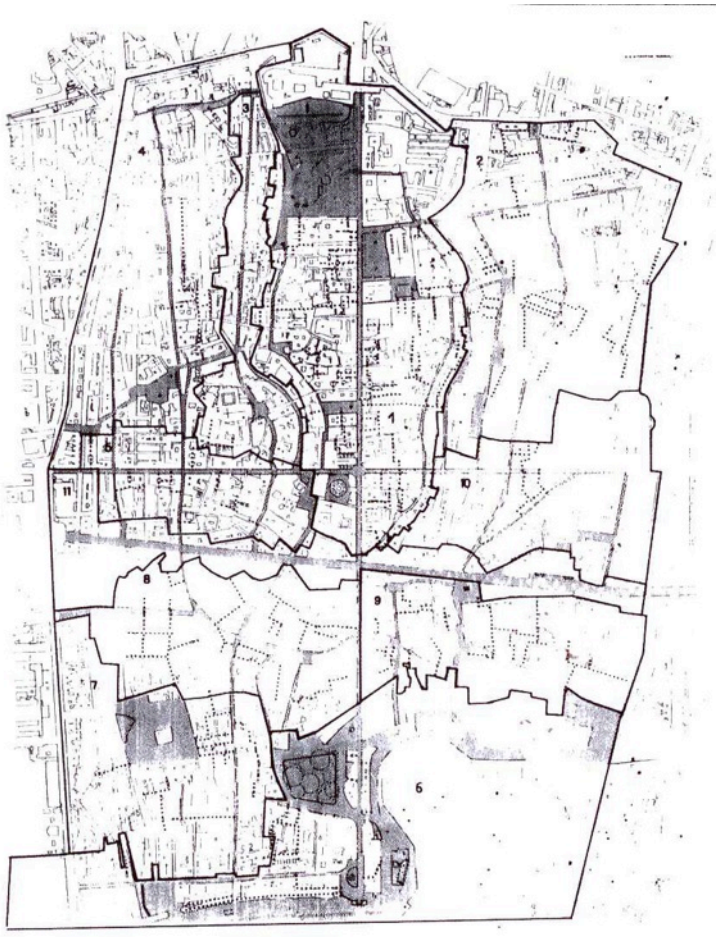


Figure 2-53: tissues division in Historic Center of Palermo

2.7.3.3 Overall plan

The plan had two parts: one is a set of principles in the intervention; the other

[7] Ajroldi C., *Lettere su Palermo di Giuseppe Samona e Giancarlo De Carlo, per il Piano programma del centro storico 1979-1982*. Officina, Roma, 2004..

[8] Ibid.

[9] Abbate G., *Il ruolo dell'analisi tipologica nel recupero dei centri storici,* Palermo 2002. And Samonà G., De Carlo G., Cristina G. Di, Borzi S., *Piano Programma per il centro strorico di Palermo: Introduzione generale,* Palermo, 1982.

is the graphic drawing to give and interpret the regulation and recommendations. The intervention has detailed plan, prescriptive rules and paradigms of architectural types, as well as schematic illustrations. The architecture was divided into two categories: monuments and listed buildings. Each monument has their own intervention within the planning of the block to which it belongs, indicating the type of intervention and the admitted use. The listed buildings have two categories, depending on the degradation of the buildings. To some of the most degraded and uninhabited buildings would be applied a massive intervention to turn them as housing-parking building, providing modern facilities. The better ones would be used for residence.

For the residential buildings there are some modification about the use distribution, such as new location of kitchens and toilets, and some replacement of windows, and arrangement of drainpipes and plasters. The other items of intervention are about environment qualities, referring the street furniture and public parks, school facilities, public services, university residences and pedestrian routes, lighting, signs and windows. The Program Plan was implemented under the public budget.

2.7.3.4 Planning Guide for the Albergheria-Ballarò neighborhood

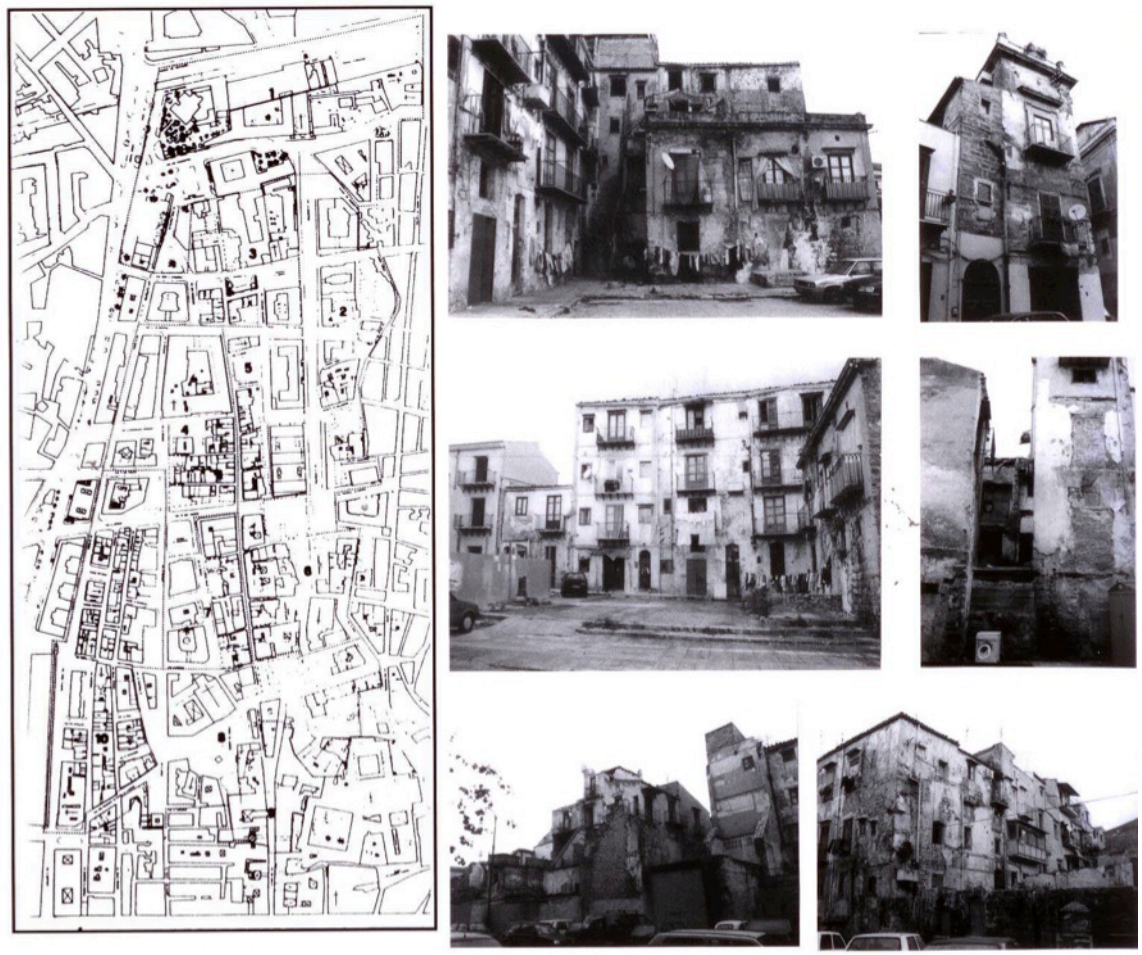
In the Program Plan, planners adopt a generalized intervention to all parts and propose a set of basic interventions. Because of the high-level differentiation of each part and the various problems, general interventions cannot solve all the problems. There is a need to make more detailed plan at large scale (1:500) to suggest suitable proposals for each part, as in the case of the Albergheria-Ballarò neighborhood.

The area experiences a deep but not desperate deterioration for a long time. The fundamental elements of its structure can be distinguished and substantial economic and social activities survive in the degradation. The whole tissue was divided into 10 sub-tissues, see figure 2-53.

The morphological structure is marked by the axis of Via Albergheria. There co-exist two different spatial pattern types: one of the twentieth-century city, which original medieval part is experiencing desolate deconstruction, and another made by modern uncoordinated low-quality buildings, see figure 2-54. This mixture phenomenon of various spatial configurations was brought by the early decades of 20th century's "restoration". Then the reconstructions on the destroyed areas by the last war, according a recovery plan and the P.R.G. of 1963, aggravated the situation without constructive functions.

The events and social relationship suffered great collapsed. Some of decay residential buildings were still largely under unused and abandoned; especially the upper floors. A small amount of local commercial and handicraft were located in the ground floor. Ballarò markets a typical traditional market, which kept a dual commercial and social role. Also, the area was lacking services for leisure and social activities.

The environmental features, of historical and monumental area, the functional structure of the present services were also paid special attention. The settled population, its structure and texture, was a fundamental factor in fixing public services. The socio-economic situation was also under survey.



Furthermore new interventions should not affect the essence and the iconographic image. The morphology was to be fulfilled, consisting of solid fabric together with free open space. Open spaces, as complementary to built-up areas was identified. According to what had been done in some recent Italian experiences, building types was considered sacred and therefore must be preserved at any price, while spatial characters of open spaces was considered less restrictive[10]. Free space's role was neglected. Some free space has the same value and authentic features.

Therefore, some free space has the same value and authentic historic features. So they were sued for the new resident buildings, some were kept free for accommodate public activities, and some served for preserve the original relationship with the morphology. The monuments, the listed buildings and important resident buildings were under certain intervention, see figure 2-55. There was a flexible and loose application of typology in this case. In the project, types had been renovated and modified to better correspond to

[10] Progetto guida dell'area AlIbergheria- Ballarò, introduzione, in supplenmento a progettare I, Palermo 1982.

contemporary needs.

With regards to social factors, De Carlo advanced to accommodate together population of different economic and social levels. New buildings would be erected in large areas of collapsed or dilapidated fabric area. Most importantly, the local inhabitants would have retained the social identity..

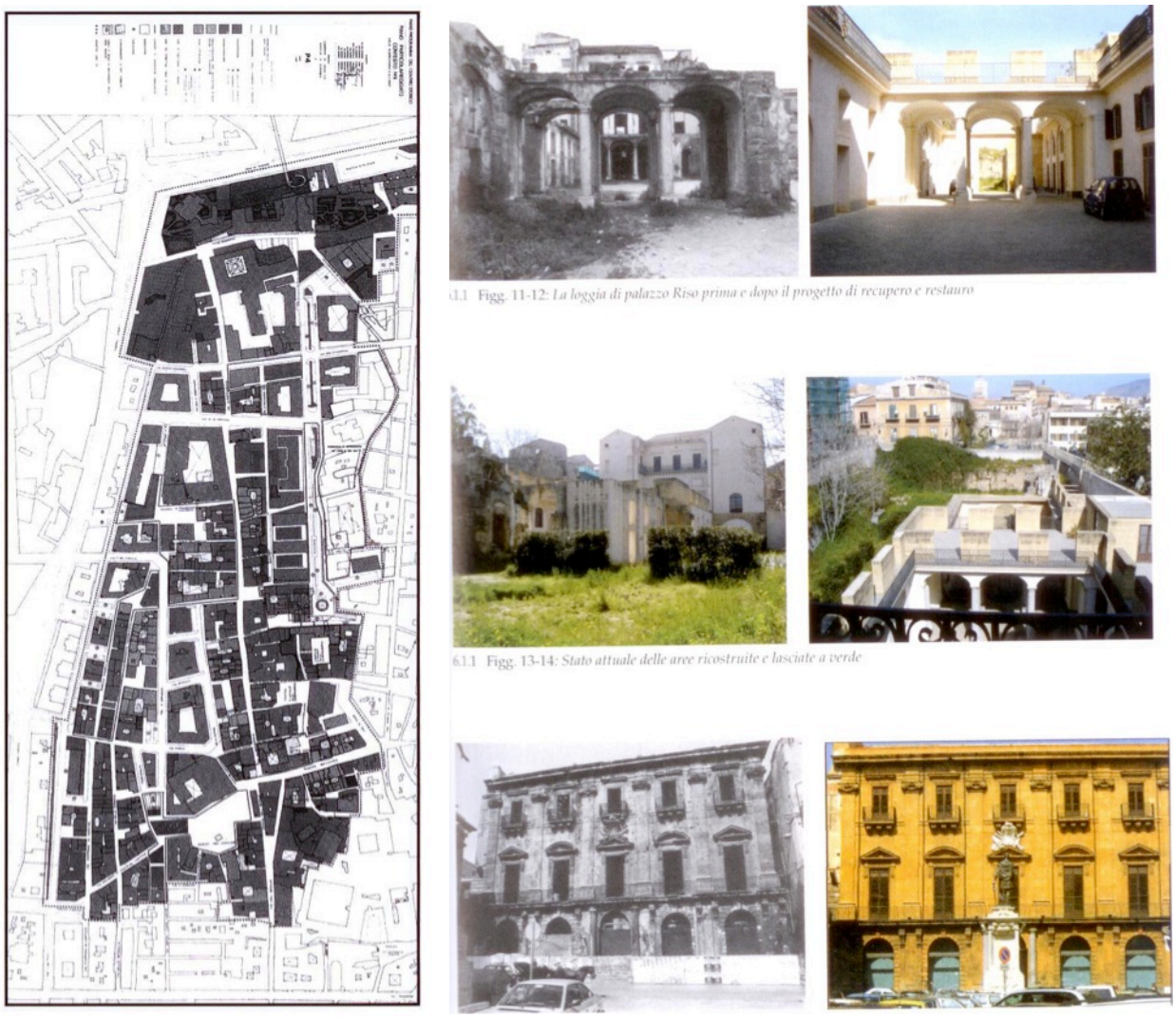


Figure 2-55: interventions in the tissue Allbergheria-Ballarò.

The outdoors activities were considered in order to perform a vital community. The proposal was to reconstruct the central role of the street Albergheria. Keeping the original urban iconography of the buildings along Corso Tukory. Some morphological alterations of the original shape, and also some radical transformation, was adopted for help communication and suitable functions.

Furthermore, the plan proposed to recover and restore the buildings overlooking the square Bailarò. A progressive establishment of new craft activities was allocated along the square. Sided by the improvement if the commercial function, the traffic planning provided a new large parking. Vehicular traffic was seen as the factor to make imbalance between

society, economy and artifacts. Hence the reorganization of the connection was very important. The aim to foster a human dimension inspired the conceptual design, as well as the construction criteria. In this way, the whole district recovery took its strength and attractiveness. The public property was consolidated. The co-existing of historic built environment and new insertion create a harmonic space feature, see figure 2-56.

Figure 2-56: intervention of buildings, the Block Allbergheria-Ballarò, and the result

Because of the difficult political situation and the lack of detailed plans, the Program Plan and the Project Guide for the historic center of Palermo was implemented slowly but steadily. It has gained a great success in its erected aims, and the tissue-oriented intervention method is applied widely in Italian small-scale historic centers, like Dossier's historic center conservation[11].

According to the planners, both the above mentioned plans take into account the history as "**history of the present**". It means that the plans should concern not only the events of the past, but the current space status and its needs. The proposal is the process of "deduction" from the analysis of the status quo the role it has played and it can/will play. It aims to make the historic center as an active part of metropolitan system through the role resetting. If we neglect the present situation, the resulting city will suffer a historical discontinuity.

[11] Cinà G., *Caltagirone. Il piano quadro del centro storico of Dossier*. Progettare, Rivista trimestrale, no. 2, Palermo, 1985, p. 65-68. And Cinà G. et al., *Il progetto guida dell'area Albergheria – Ballarò. Contesto 4*. Progettare, Rivista trimestrale, n. 1, Supplemento, Palermo, 1985, pp. 72-107.

2.8 Conclusion

Contemporarily, our entire human and environmental landscape can be altered and re-altered within one generation. These changes can occur so rapidly that it calls into question our apparently sophisticated ability to predict the evolution of our cities. The dynamics of change functions primarily, though not exclusively, in three intensely interrelated areas: the socio-cultural, technological, and natural environments. In a sense, this is a revolutionary process as well as an evolutionary one. It appears that we have lost control of our cities in four critical realms: environmental and urban social quality, urban physical and population growth, urban management and governance, and fiscal deficiency. Planners should pay more attention to hold a stable one, face to the unpredictable challenge. Existing built environment should be incorporated into modern physically and immaterially. The ability to deal with the built environment is a fundamental way to evaluate the capability of planners and governance.

From the comprehensive study of main issues of Italian historic conservation system, such as its evolution, its legislation, and typical cases, we find out the following seven advantages:

1 An instinctive respect of heritage: oriented in its philosophy, the inherent respect to existing historic buildings has formed a social consensus. It provides a substantial premise for distinguishing their values. It also expands the scope of historic conservation subjects from identified subjects to historic built environment. It grabs the kernel of the conservation to protect the authenticity of historic beings and its background.

2 A dialectic identification of various values of historic beings: the full-scale acknowledge of aesthetic values, historic value, time value and artistic value has been progressively identified. It outlines the basic intervention subjects' properties. The identification of various values is the foundation for various levels of intervention.

3 An accurate definitions of scientific intervention methods and analysis tools: every part of subjects, like historic center, diachronicity and synchronicity; and every scientific reference, like typology and morphology, are accurate and operative. It provides consolidated tools for any cases to prevent confuse interpretations.

4 A technical-oriented conservation system: it provides maximum freedom and respect to experts' innovation and creativity. A great number of professionals and institutions involve themselves into conservation career actively. They prompt the theory advancement, the methods application and the dissemination of the experience.

5 An effective conservation mechanism full of "procedure justice": as the embodiment of the social consensus, the public authority and the legislation protect the equality of every player and public interest. The management of governance, with efficient public power decentralization confirms the implementation capacity.

6 An extensive public participation: as a complementary power to the limited public budget, private power provides great support to historic conservation work. Their great strength makes most of the conservation plan come true. The enthusiasm makes the private participant as the main body of conservation.

7 An active social policy: a flexible and active governance incorporates many innovative methods and plan. It develops the pure physical intervention into a comprehensive public policy.

In sum, Italian historic conservation has gained great success in human cultural heritage maintenance and use. Its historic conservation mechanism can provide an excellent reference for the actual rude Chinese conservation system.