



Politecnico di Milano
Facoltà di Architettura e società
Sede Piacenza

Master of science
Sustainable Architecture of Large Constructions

“BRERA IN BRERA”

**Restoration and new functional layout for the
monumental complex of Brera, Milan**

Supervisor:

Professor Marco Albini

Co-supervisors:

Professor Francesca Franceschi

Architect Francesco Bombardi

Student:

Omid Vernooos 752100

Academic Year 2010-2011

Contents

Acknowledgments.....	4
Abstract.....	6
About Italian Museums.....	9
Chapter 1: Introduction.....	25
Project Topic.....	25
Design Strategy.....	28
Site Location.....	29
Chapter 2: Analysis.....	31
Hisoty.....	32
Urban Analysis.....	42
Social Aspects.....	45
Environmental Sustainability.....	49
Mobility.....	52
Chapter 3: Design Project.....	54
Exteriors.....	55
Interiors.....	60
Chapter 4: Conclusions.....	74
Bibliography.....	79
List of Drawings.....	81

Acknowledgments

This thesis is a culmination of the various inter-disciplinary studies done in the past 2 years. In these years, I have worked with many people who have contributed in different ways to the development of this thesis. It is a pleasure to convey my gratitude to all of them in this humble acknowledgment.

Firstly, I would like to thank Professor Marco Albini for his supervision, expert advice and guidance throughout the course of study. His teachings, architectural knowledge and general encouragement for the past two years has inspired and enriched my growth as a student and the architect I would want to be.

I would like to thank Professor Francesca Franceschi for her advice and contribution which, have in many ways, has been the backbone to this thesis. Her originality and flair for architectural design has nurtured my architectural maturity and I will be grateful to her for a long time to come.

Many regards to Architect Francesco Bombardi, in particular.

I am much indebted to him for teaching me how to express my ideas and thoughts in clear simple illustrations. I am also grateful for his constructive comments and the time we spent in meaningful reviews and critiques.

Collective and individual acknowledgments are also owed to all my professors who gave me the initial key tools to understand architecture in its entirety. Professors of economics, structure, history, sustainable systems, digital drawing, urban analysis, sociology, public art and mobility have helped me understand and create the cornerstones of this design project.

I am very grateful to Marco Merigo for his collaboration and the times we have had during these two years. His willingness to share thoughts, our debates on architectural thoughts, has been very fruitful for shaping up our common design thesis. I am proud to have the opportunity to work with an exceptionally creative and intelligent person like him.

A very special thanks goes to Ruchi Varma, without whom my incoherent thoughts would not be assimilated into meaningful expression. I have hugely benefited by her precious advice and guidance on the structuring of this thesis.

Last but not the least, I would like to thank everybody, as well as expressing my apology, who I could not mention personally.

Abstract

The project focuses on the restoration and provision of a new functional layout for the complex of Brera in Milan called “Brera in Brera” including the redesign of its painting gallery. The aim is to renovate this monumental complex as a “space of exposition” in relevance to the whole building. According to the scale and history of the building it makes it strategically important in terms of an identity of the area. Therefore, the project is structured around major components such as maintaining the identity of the complex, quantitative and qualitative enhancement of spaces, and its connection to the urban fabric.

The location of the complex, Brera district is in the nucleus of historic Milan which due to the birth of this palace became a locality for artists and one of the important cultural quarters of the city. Over the centuries through the activities which hosted by the palace such as library, observatory, botanical garden and

the academy of great arts, made it influential in terms of cultural enhancement for the entire Milan. The palace, over the years, has grown and so has its painting gallery gained importance and has become a collective inventory of many precious artworks from Veneto, Emilia Romagna and Marches from famous artists.

In present days, the reputation and importance of the gallery attracts many visitors, but, on the other hand, regarding the classical way of visiting museums and painting galleries and the immensity of artworks bares us an important problem which is “the difficulty of visiting”. This difficulty is caused by “path length” and/or “personal interest” of visitors to some of artworks, generally for non-specialists, makes us a notable reconsideration about the “space of exposition” differently from the way they have done before. Hence, the previous space of exposition requires a conceptual and architectural intervention in order to consent different types of visitors in terms of education and age.

According to the larger scale study, another important problem is accessibility to different parts of the complex and surrounding spaces which emerge through the discourse of permeability. The spatial aspect of the complex has notable influence on the local area in sense of occupation of territory. Therefore, it requires studying its permeability in order to make a perfect integration with the city and this will be fruitful if it is accessible not only by the building users but also for city users who use the building as ‘passer-by’

In order to have a sustainable intervention, it was inevitable to evaluate different influential aspects during the design process. The recent researches and way of evaluation by different professors from different disciplines such as

history, urbanization, sociology, ecology, mobility and art, led the project to have a new look to a cultural complex by 'redefining' some significant terms which they have had also a notable transformation on their meaning over time.

The project was structured in two phases: First phase focused on the organization and the governance of the complex and aimed to diagnose and provide the required architectural solution as well as urban integration taking into account the initial strategy:

- New way of visiting an exposition space
- Dynamism and pleasure of spaces
- Synergy with the commercial activities
- Improvement of the surrounding urban space

The second phase concentrated on evaluating the applied solution considering the practical aspects such as mobility, structure and feasibility of the project.

This project aims to provide a new solution for a multi-function exposition space which acts also as a permeable part of city. The success of such project can be evaluated under shadow of different disciplines which interact and make a space more dynamic and pleasant and also make it functional and sustainable not only for the specific users but also for people who do not have a direct relationship with the main purpose of the complex.

About Italian Museums

The guiding thought behind the consideration on the museums starts from the elementary comment expressed by the French architect Julien Guadet, general inspector of civil engineering and professor of architectural theory at the Ecole des Beaux Arts at the end of the last century. The architecture of this century knows no order apart from the single cases and needs not models but, principles that can only originate from the specific project conditions.

This is even more obvious in cases of design or redesign of museum intended as extension, rehabilitation or restructuring. Special attention should go to what we could call museum conditions that mass of historical and cultural information that involves different and specific skills, often surprisingly foreign to architectural disciplines.

The Italian museum reality is particularly interesting because, given the widespread environmental historicization and its outstanding heritage, it, more than other countries, adopted

a special type of museum which could be called “internal museum”: the adaption of historic spaces to museographic developments; a laborious search for a balance between monumental buildings and new uses, between ancient collections and new users. Mainly thanks to the great museographic lessons of the Fifties, the “internal museum” in Italy is the fruit of the concentration under a single heading of various significant aspects of the architectural debate of this century, in particular from the end of the war on: the restoration, conservation and redesign of the city and its relationship with history.

In a country such as Italy, where the Heritage is indissoluble from everyday routine, where the urban fabrics are often monuments made of monuments, it is only natural to come across convents turned into hospitals or princely mansions become to ministries or universities. It is a practice bound primarily to the desire to conserve old buildings, often works of art in themselves but always important in the difficult process of maintenance of the ancient urban space, of which they continue to be prominent parts, despite having lost their original function. Among the various types of conversion, generally designed to conserve the building, there is one, very common one, whose purpose is not just to conserve the historical structure of the shell, it is conservation tout court: the museum.

Throughout the 20th century, the practice of turning historic abandoned or jeopardized buildings into museums has become increasingly common, and today, in Italian cities there are museums housed in a wide variety of architectural types: no longer just princely mansions or castles but abandoned forts, convents, deconsecrated churches, former factories, archaeological ruins and more.

After all, in the history of architecture, at least until the first decades of the 20th century, the responsibility of the architects called upon to convert historic buildings into museums was less that of conceiving a true spatial transformation, and more limited to an act of “decoration”. The old building appeared, generally, to be the most suitable place to exhibit collections: plenty of walls, background lighting and a fittingly monumental setting, attributing prestige to that organism of elevated culture that was taking shape under the name of museum. Museology had not yet been invented; the need to elaborate a “synthesis of critical interpretation and technological investigation, of intuition and scientific documentation, of architecture and public relations” was not felt. The museum was a “spontaneous” building, where the need for conservation, and hence the concentration of the materials, was the priority; the public was an abstract entity and in their material integrity the works seemed eternal. The result of need or of free choice, the museum seemed, almost by statute to reject the invention of architects, or rather it expressed itself in line with the academically aspects of tradition and efforts were concentrated on the decorative expedients required to place the work in a new setting.

The museum design at first was essentially the search for symbolic form, one which was often bound to monumental urban compositions. In Durand’s treatises as in the visionary projects of Boullée and Ledoux, or in the magnificent interpretations of von Klenz, Schinkel and Semper, the internal museum, as architecture of use, could be said to not yet exist, certainly not even museography, intended as spatial organization, with indications as to the arrangement, lighting, distribution of functions in different areas. The path leading from the “spontaneous museum” to the “designed museum” was a slow

process that had to wait the research and experimentation of modern architecture and, at the same time, reach the inevitable investigation of the theme of the museums as the most important and complex cultural institution of the twentieth century.

That was to determine the search for a true internal architecture in the creation of a museum, over and above the formal external structure and the type of objects conserved was, at a certain stage, the imagination of the route, as the result of the evolution of the concept of order and, as a consequence, arrangement.

The etymology of the word path, from the Latin *per-currere*, pass through, translated the architectural sense of what are, still today, the great museums of the past: interminable corridors or rows of rooms without interruption. In museographic terms, on the other hand, the invention of a path was to mean the construction of an itinerary, which coming etymologically from the Latin adjective *itineraries* returns us to the more charming idea of journey, of discovery, of story; an aspect that is conception and production before being architecture.

In the great princely galleries of the seventeenth century, such as that of Silvio Valenti Gonzaga immortalized by Panini, the route is obvious, given by the palatial layout of the building and guided by the practical need to connect two different wings of the building; today we would say leading to the exit. The arrangement was not a scientific concept: as well as a juxtaposition of works often dedicated by the personal taste of the collector and his advisors, there was very frequently in the museums of this generation, that lasted to the end of the eighteenth century, a decorative and/or iconographical arrangement, one by theme, or “hierarchy”, such as the display of the sculptures

of the Pio Clementino Museum in the Vatican which unfolded by subject and culminated in the Rotonda, showing not the most valuable works but the most important divinities.

In 1771, Granduke Peter Leopold of Lorraine decided to free the Uffizi of the scientific and naturalistic collections, starting up the Cabinet of Physics and Natural History. Two years later, the head of the Florentine collections Raimondo Cocchi suggested the creation in the Uffizi of a historical collection of Tuscan painting. It was a revolutionary idea for the period: for the first time a work was attributed with not an individual but a collective value, with the proposal that it be seen in the very precise temporal and geographical context of a “story”.

The linear route, coming from the idea of a chronological visual sequence of the history of art, was adopted as a principle of arrangement *par excellence* for collections of painting and sculpture, especially from the nineteenth century onwards. The visit offered to the public continued, however, to have the physical sense of crossing, a rapport with the building of passage, and with the materials, of orderly decoration. A physical not theoretical condition of Gallery, the route inside the museum, intended as passage through, maintained its linear development as expression of a physical taxonomy of the materials, in search of a “visual”, normally chronological “sequence” and was therefore considered also the ideal way to convey the sense of the historical evolution of the fine arts. After all the word gallery still remains as a demonstration of a canonical system of display of very ancient origin rooted in the Greek *stoà* and come through the Florentine *loggias*; a system still seen in the Uffizi and in the Vatican, in the Louvre and in the Prado, in the Metropolitan and in the Hermitage and which to varying

degrees of the absolute marked the idea of the building-museum until the twentieth century, when palaces were “offered” as museums and ex novo museums were conceived as palaces.

The growth of the collections had by the end of the eighteenth century led museums to jumble together paintings and sculptures, objects of art and naturalistic specimens, in the same place “so that the people may see and be educated”. The Museums was soon to become also a place of conservation of entire monuments, the massing of spoils of war, of dissolved inheritances; symbol, at a certain stage, more and better than other, of new national sentiments and place of identification of a people.

However, as early as the year VI in France, that is to say in 1798, something truly new had appeared on the horizon and had been expressed in the “première Exposition des produits de l’Industrie Française”. More than a century later Siegfried Geidion was to write that “exhibitions are born with industry. Both are a consequence of the French Revolution” and maintained that the museum in the nineteenth century was a clear expression of a desire for reassurance and certainty in an era of fast and substantial changes. The fortune of the museum visit in the rites of the bourgeoisie in the second half of the nineteenth century was a consoling looking back to compensate the present, in contrast with the excitement but also the inevitable dizziness of the visit to the national or universal exhibitions, sweeping panoramas of the speed of progress and “experimental laboratories of a new and industrialized methods the construction”. The French exhibition of 1798 can be considered to have marked a new way of exhibiting objects, the expression of a different desire to exhibit and enjoy, the starting point for the huge movement of international exhibiting that filled the

nineteenth century, where exposition meant panoramic view but also juxtaposition, comparison and sometimes representation of a discipline. A new architecture accompanied the advent of this new way of exhibiting: lightweight buildings, fast to build and to dismantle; Giedion was to define them “transitory buildings”, and, after all their purpose was what defined their form. The revolutionary season of the great exhibitions was not to pass without affecting the evolution of the idea of museum. The South Kensington Museum, later rechristened the Victoria and Albert Museum, was a great model for twentieth century museum-mania; in the museums of this generation the story told no longer centered around the work of art or nature but on the man who expressed himself through the work. South Kensington saw the very first experiments of evening opening, better suited to the “working classes”: a way to give captions to the public, to involve the visitors and enable them not only to observe the objects but to play at understanding them. The educational-play sense of Anglo-Saxon museums in the second half of the nineteenth century was, in some cases, also marked by the presence of reading rooms and small refreshment areas.

Although, with a new type of visitors and a different way of interpreting history, man was entering the museum as a central figure, the noble language of academics architecture, which proposed friezes and pediments, was certainly unable to relate to it: the new museums showed they could no longer and not only be a privileged home for collections but were a strong and effective cultural machine, expression of the contemporary and – towards the end of the century – the old museums of art saw their public diminish, now gone to crowd other places of expositions. The great anthropological revolution was to arrive late in Italy. Once the cradle of the very idea of museum, until the Second

World War, Italy registered an undeniable delay in innovatory processes in the museum field compared with countries such as England, France, Holland or Germany and had trouble finding a happy balance between the wealth and variety of its collections and the modern requirements of rising museography.

Museography as a science of rather as a discipline which acknowledging the complex nature of the museum, made up of three very distinct and often antagonist elements, namely collection, building and public, intended to take into consideration the needs of each element, and therefore called for collaboration, never experimented before then, between specialists of very different sectors, with the avowed desire to put order and method into museum practice.

At the end of the nineteenth century, in Berlin, Wilhelm von Bode had already successfully experimented the so-called method of “dual division” of works of art, reducing public display to a selection of works of great effect and leaving all the others classified by schools in *réserve*s for experts and scholars alone. This system, soon applied to many large European museums, became one of the most debated museographic subjects of the Thirties and was at the center of attention at the Madrid conference.

Architecture, in turn, starting from the principle of “dual division” wondered whether it was necessary to transfer the collection to new buildings, expressly created for this purpose or whether it were not better, whenever possible, to alter the old building with all the difficulties of each case. It is fairly curious today, a few years after the inauguration of the Grand Louvre, to read the interview given by the French architect Pontremoli for the ‘Cahiers De la République Des Lettres’ report. When

he questioned on the museographic adaption of the Louvre at the start of the Thirties he begins not without some regret saying: “Two distinct problems emerge: the conservation of the building and the enormously complex matter, which has many solutions, of the organization of the museum.

In the museographic field Perret made a distinction between the Museum of Antiquities, place of contemplation and delight, and the Modern Museum, “austere” place of conservation and study, auspicing the birth of Contemporary Museum, Our Museum consecrated to the Fine Arts as he defined it, and capable of reconciling the two formulae. “Our Museum” was to be purpose-built, a construction made to last and so in reinforced concrete, a material which responded to the last requirement but triggered a lively debate on the need for decoration. The objects seemed still to need a “frame” and an imposing home that would not diminish their perception; the time of essential bareness had not yet come. For Perret himself, indeed, the modernness of the forms was to make a dialectic contribution to the definition of the work. This better explains what “function” Perret and his illustrious colleagues were referring to. Conservation, certainly, but not only this; the museum was no longer conceived only in terms of form and matter, it proposed to express itself also as an active means of communication that based its effectiveness on experience.

Between 1920 and 1936 Europe looked with interest at the museographic experiments of Alexander Dorner. He saw that the practical and widespread need to reorganize art collections and that it was unthinkable to organize a museum on the basis of fixed ideas and categories.

The true star of the museum was now man: on the one hand creator and artist, on the other beneficiary who by way of a, not just aesthetic-meditative, experience had to be in a position to understand the climate of the period during which the artist had worked. Dorner's experiments can be considered the first significant projects of arrangement of the modern museum intended as an elaborate means to permit the active, physical and spiritual participation of the visitor.

The museum had clearly understood, if not yet absorbed, the cultural revolution brought by the great exhibitions and strove to elaborate within itself a number of "constructions" that would permit a genuine dialectic between fragment and culture.

Also in Italy throughout the nineteenth century town museums large and small had, more out of need than of free choice, witnessed the gradual accumulation in their inadequate rooms of works piled up without order or method, taken from the churches and convents by Napoleon or from various owners by the State thanks to the laws that followed national unity. And also in Italy all this accumulation soon led to inevitable saturation, followed by a sort of explosion: a revolution between the end of the nineteenth century and the early Thirties which, accompanied by the futuristic slogans that announced the death of the museums, was in actual fact, the cause and motive to its rebirth through the desire for total physical and conceptual reorganization.

Sensitive and present in the international debate that was seeing the birth of museography, Italy was reluctantly coming to terms with an architectural and environmental situation poorly equipped to absorb the trends of the modern museum. It would therefore seem that, in Italy, apart from the odd, very rare

case, a new museum did not mean a new museum. The most fitting home for newly-formed museums appeared still to be the historic building, so charged with fascination and so much more effective a communicator if itself a bringer of history.

The conversion of historic building into museum had to come to terms not only with a modern concept of museum but also with a modern concept of restoration; the original layout of many ancient buildings was scarcely compatible with the new requirements of conservation, illumination and perceptive and emotional involvement. As the practice of rehabilitating various categories of buildings as museums began to spread, the lines route, tenacious legacy of an unlearned architecture was destined to change before the conversion to museum of historical types with an arrangement that broke away from that of the palace.

The new museum conditions were to bring the architect the obligation to redesign the internal space on the basis of a possible or intentionally innovatory visual sequence. The convergence of spaces in some major operations in the years after the First World War represented something totally new compared with the traditional layout of museums in rooms to be visited in sequence.

The experimentation with new ways of arranging a museum in Italy had therefore to pass through the obligatory and strongly conditioning course of the architectural contingency and the priority need of restoration. The new perspective needs bound, on the one hand, to the development of the history of art and the conservative theories and, on the other, to the importance of a correct fruition of the material exhibited on the part of the public, were to do the rest. The new way of offering the material syntax of Italian collections, necessary to give Italian museums

the mark of modernity was conceived as a new mnemonic system that broke away from the principle of linear visual sequence to overcome, beyond the thinning out of the works, the heavy legacies of the monumental museum. This system could only be supported by the internal and external design of space because, as Albini was to say, a visit to a museum is first and foremost a physical experience. Long before him Descartes stated that “there is no memory of intellectual things” as memory is bound to the sensation, it is body, and, in the conceptual system of the method, it has neither place nor language.

As well as the conceptual system of the method, the museum seemed, as early as the end of the Thirties but mainly after the Second World War, to become a privileged place in which memory manifested itself in new ways, sustained by the language of architecture, because “architecture – as Perret wrote – is the art of organizing space and space is expressed through the form of that constructed”.

From these presuppositions was born in Italy ‘internal museum’ with creations that could certainly today no longer be repropounded, although at the time they spoke a contemporary language and, in the distribution of space, rather than imposing a route were able to offer an itinerary true and proper. The invention of an itinerary and the resulting identification of “its” route became, at a certain point this century the crux of museum design; the passage from the conceptual taxonomy of ordering to the physical one of arrangement.

The theme of the “continuity of tradition”, central to the debate on modern architecture took on in Italy a very special value in the face of the design of the museum, building type, or

rather intended purpose, all the more conservative if applied, with the intention of protection, to a historic building.

In contrast to the permanent places as said G. Pagano “Italian architects had, almost without exception, to be content with temporary building for fairs, exhibitions and show”. It is extremely difficult to directly compare an exhibition with a museum without risking the simplification of considering them expressions of the same system and stressing the merits of one as against the failing of the other. Although both are aesthetic experiences that start from common components – the works and the public – what characterizes the meaning of a museum, compared with an exhibition, is the different relationship that develops between specific components, such a space and time, compared with concepts of fixed or mobile, changeable or unchangeable, temporary or permanent.

Apart from the widely debated and acquired principles of museology, such as the rearrangement of the collections and the reorganization of the depots, the unresolved problem remained that of “bringing the museum alive”, bringing it near to the public, making it an “active” aid in the education of taste. This situation on the front of temporary exhibitions was less clear. It is plain that the most innovative experiences in the sector of arrangement were accomplished in the Thirties, on occasions totally different from those of art exhibitions and that the extremely rare exceptions gave rise to bitter controversy.

In contrast, official institutions such as, for instance, the Venice Biennale and the Rome Quadriennale did indeed make use of architects, but were marked by a “total lack of involvements as regards the stimuli coming from the world of figurative arts

in the arrangement of the exhibitions. Lastly, the exhibitions of ancient art seem to take place almost completely outside the circles of avant-garde architects engaged, instead, in the experimentation of direct collaboration with contemporary artists and this, in some temporary installations, attains results of extreme value. This separation between architects and works of art, exhibitions and museums, museums and public was destined, at least in part, to culminate after the Second World War, by virtue of a strange mixture of the urgent needs of the present and the aperture of broader horizons on which to project an acquired tradition. From this point of view, the season of the great art exhibitions played a highly significant role of union. Exhibitions attracted the public far more than museums and it is because the presentation of the objects in the exhibition is livelier and stimulating, the combinations more persuasive, the comparisons more forceful, the problems more clearly defined.

Started almost on the sly, the presence of architects in the role of arrangers expanded progressively during the Fifties and after closely intermingling with museum operation destined to become exemplary; the gift brought by the architects, far more than considerations of taste, were the rules and secrets of a trade consolidated in more than 15 years of experience in building “intelligent huts”.

The work of architects and arrangers was guided by a particularly cautious and never schematic – although not for this reason neutral – approach that started in the case of the transformation of historic buildings into museums, from three key factors: equilibrium between the demands of the new function and the quality of the piece; the individuality of every work, which requires its study and positioning; last comes the need to make the visit

a unique and irreplaceable experience, immersing the onlooker in a physical space capable of stimulation all his/her senses.

Between 1945 and 1948 came the museums of the Reconstruction, with a series of new rearrangements born in the name of simplicity and reduction to the bare minimum in the use of means and materials; it could be called the era of brick and whitewash, with the good results that are still to be seen today, some more successful (Brera) others less so (the Uffizi), where the commitment to monumental reconstruction with lavish use of means and absolutely traditional architectural formulae was openly declared. Reviewing in 1957 the Exhibition of museology of the XI Triennale, Licisco Magagnato thus described the main stages in the rebirth of postwar Italian museography. His was almost a stylistic interpretation starting from the “characteristic cases” and the “experimental solution” of presentation of the works arranged at the Triennale exhibition which – he noted – “stress the individuality of each single work” dipping “a little into all these models”. This was, however, an “exhibition of interior design” in which “the truly technical and educational problems of a museum were intentionally neglected. Above all, went the meaningful opening note, the “special problem of many Italian museums, not housed in buildings purposely constructed to accommodate collections, and which are often illustrious palaces in themselves architectural monuments” with all the ensuing restrictions imposed upon the arrangement and presentation of the works was not taken into consideration. The success of Italian museums in comparison with the foreign examples of the same period – as defined by Magagnato – was that they were nearly all the fruit of an elaborate work of restoration, and hence are to be judged basically in those terms. This is a special concept of restoration which in the specific situation of postwar

Italy, was broadened and, as Bruno Zevi wrote in 1954, “requires creative ability, as well as science” aimed at an “improving of the monument, its transformation into a new work of art in which the ancient is profoundly bound to the modern. Restoration and museography were thus, in that situation, perceived as two sides of a single problem; moreover, a beneficial act was expected from this amalgamation, going towards a new inward harmony between ancient and new, capable of spreading its effects to the heart of the problems of architecture and urbanities.

Starting from the extremely simple skylights with mobile blades in the San Matteo Museum in Pisa through the more complex solutions introduced in the technological roof space of museums such as Brera to the sophisticated diffusors of Capodimonte, differentiated from room to room – with the result reconstruction, to varying degrees of the roofs of these building - , it is possible to identify a fairly homogeneous line of research, hinged upon the reposition and development of the technological innovations already introduced between the two wars in some European museums. Expression of and “all round” rationality, it is not unusual for this attitude to end up privileging, in the adaptation of the historical construction, the application of museographic technique rather than a comprehensive appraisal of the problems of the “internal museum”. Far from descending from an updating of museographic principles, the form of the Fifties sprang from a number of elements, the difficult balance being translated into unrepeatable conformations of space. The result was a compact cognitive structure which, in the most successful examples, constituted perfect and unchanging synthesis of a cultural outlook and precise design intentions: a priceless historical record that shows the spirit of the era in all its fullness.

Chapter 1:

Introduction

Project Topic

The theme relates to design of restoration and new functional layout of the complex of Brera called “Brera in Brera” as well as the exhibition preparation. This new functional layout should have as a priority the reorganization of the Art Gallery – from now on it will be called Pinacoteca –and common areas. The new design must also provide subsequent further possibility, by ulterior interventions, the implementation of an integrated museum system extended to all expositive entities in the complex of Brera.

The project theme used to be a competition which was based on an agreement for the reorganization of spaces and functions hosted in the Brera Palace (Palazzo di Brera), signed by the Ministry of Heritage and Culture (Ministero per i Beni e le Attività Culturali) and the Ministry of Education, University and Research (Ministero per l’Istruzione l’Università e la Ricerca), has begun the procedures for the extension spaces

of the historic institutions of the National Art Gallery (Pinacoteca Nazionale) and the Academy di Fine Arts.

According to the manifesto of the competition, the new structure doubles the exhibition space of Pinacoteca and quadruples the available surfaces of the Academy of Fine Arts. The reorganization plan includes transferring the teachings of the Academy in a new building to be constructed on the campus of Bovisa, next to the Faculty of Architecture. However, inside the Brera Palace the academy will retain and the historical rooms around the courtyard of the library will house a core of excellence mainly for museum. The agreement also provides for the use of Palazzo Citterio from the Academy and this substantial reduction of the Academy will be a favor to Pinacoteca which inherits physical left spaces.

The project should in fact aim at the redesigned accesses, paths, common areas, reciprocal relationships of connection between the host institutions without losing their autonomy, and beside to the new design derived from the functional study, it must be planned for conservation, plant adaptation and security, according to the methods of their restoration

The reorganization of the complex must take into account some issues such as historical layers and sequences of operations; ratios between users; uses of cultural organizations and other uses both museum spaces , offices, and service applications.

Regarding to contemporary needs of the complex and new available spaces which caused by the Ministry's decision, the project structured around the following objectives:

- Expansion of exhibition space and services available to Pinacoteca
- Renewal the museum layout of Pinacoteca on the basis of scientific criteria of Museology as well as implementation, according to the criteria indicated by law DM 10.05.01 for “note address on the criteria of scientific and technical standards of operation and development of museums” published on S.O. alla GURI n° 244 DEL 19.10.2001
- Take care of the conservation and restoration of the monumental complex in regard to parts of the intervention,
- Ensure maximum accessibility to the new enlarged functions, considering the combination of people with mobility limitations and/or disabled (blind, visually impaired, hearing impaired etc.),
- Providing the conditions for the future realization of an integrated museum system by using all present exhibition facilities, whether related to other entities, while ensuring the performance of activities of different institutions as a whole,
- Respecting, in the design and implementation of interventions, the integrity of the complex and optimize the choices of functions as necessary for the protection of cultural values.

Design Strategy

The building contains a series of functions that provide different cultural activities such as temporary exhibitions, bookshop, private classrooms, stores and workshops that together with the main element of the complex, Pinacoteca create a cultural environment which somehow fulfills the lack of Academy.



The idea of permeability

The spatial configuration of functions such as offices, commercials and etc. are organized in the way to make the connection easier between them and at the same time strengthen the unitary of the complex as a whole.

Public in terms of both specific building users and city users plays an important role in this project. Various services are easily accessible to public in terms of specific building users and who even use the building as 'passer-by'.

This project as a whole aims to provide adequate multi-function exposition spaces which completes the role of main protagonist Pinacoteca under shadows of some important factors like new way of visiting an exposition space, dynamism and pleasance of spaces, synergy with the commercial activities, improvement of the surrounding urban space and in parallel acts also as a permeable part of city which is open to everyone.

Site Location

The location of the project is in the antique and dense part of Milan, and is very close to important historic elements of the city like Duomo and Castello Sforzesco, and Teatro della Scala.

The complex is surrounded by via Strettone from east, via Fiori Oscuri from north, via Brera and Piazzetta Brera from West and a Botanic Garden in the southern side of the complex. Currently via Brera is accessible by car and from south there is no direct access to Piazzetta Brera. Via Stratton is a dead end street which ends to the Botanic Garden.

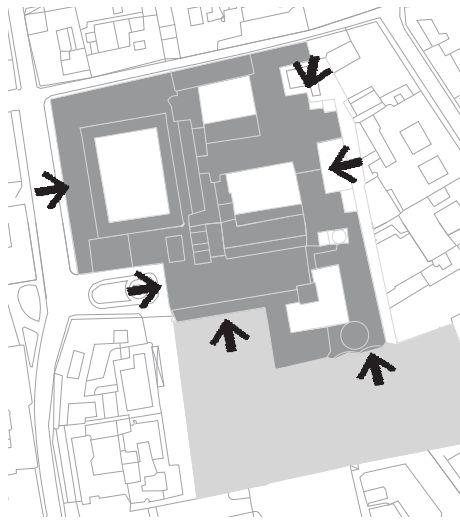


Aerial view of the project area and its relation to the antique nucleus
1. Duomo, 2. Sempione Park, 3. The project area of Brera

The area is highly accessible by public transportation and there are metropolitan and several bus and tram stops. It is so close to the various services such as bank, restaurants, museums, schools, etc. which are easily accessible by walking.

The connection between the surrounding streets currently is not fully available. Therefore for accessing to the main entrance of the complex from different sides it is necessary to walk around it. Practically the presence of the palace, especially for its scale, acts as an obstacle for the area and it is not permeable.

The Botanic Garden is not available for public use in terms of residents. Nevertheless it is a precious green space which can be fruitful but it needs a reconsideration and reorganization.



Public entrances of the complex



The complex of Brera including the Botanic Garden

Chapter 2: Analysis

A project design, especially in a greater scale, is a process, which requires many studies in different disciplines such as history, urban analysis, sociology, ecology etc.; and it is inevitable bearing in mind their effects before making any decision.

Considering the scale of a project such as Brera, by intervention on the complex itself the surrounding area will be affected and they emerge through different aspects such as local accesses, security and quality of life of residents which needs having a multidisciplinary study on them.

Hisoty

The history of the monumental complex of Brera starts from the time of Umiliati: semi-monastic order born under the pressures of social disputes and heretical which passed through the Lombardy after millennium. They settled in Brera, as their home, from 1201 till 1571 next to the Santa Maria church which is constructed by 1229 and completed in 1347 covered by black and white marble façade including an elegant gothic gate with some sculptures of Giovanni di Balduccio. The convent and the church are almost entirely lost (some decorative elements and sculptures are conserving in Castello Sforzesco and some of the fourteen century's frescos imputed to Giusto de' Menabuoi are still in one of the Academy's classrooms), but they used to be the pivot of the Brera complex and today some valuable parts like Orto Botanico and private garden of Brera square still remained. In 1571 papa Pio V, abolished the congregation of Umiliati and the convent including adjacent terrains entrusted to Gesuiti with this purpose to found a school with a dormitory. The first projects used to elaborate between 1573 and 1590 by Martino Bassi, but there were some difficulties to start. Only in 1627, when he could took over the enterprise of Francesco Maria Richini, a leading architect of Milan from first half of seventeenth century, some results documented. The area of the convent was renovated and had built first classrooms of the school. The project design and working progress, whether fixing or modifications, was slowly and only in 1651 the general of Gesuiti had approved the definitive project of Richini, which had contemplated for exteriors a vestment (paramento) by dark red brick, emphasized on the angles and articulated by robust hewn stoned decoration with gray blocks, leaned out

floor frame (marcapiano) and windows with marble alternate frontons. For interior, aside from two “rustic” courtyards, based on Gesuiti college of Rome and the Borromeo in Pavia, a big rectangular courtyards with two lodges, with elegant columns by red granite, Tuscany capitals, in ground floor, Ionic in the upper level. The connection between two floors is done by two majestic stairs with double ramps. Richini in 1658 died and the project continued by Gerolamo Quadrio and Giorgio Rossone. For a century the project carried on based on Richini’s design and the building assumed solid and stiff, typically style of later Lombard Baroque, which is recognizable in the urban context.

An innovative element was in 1764/65, because of initiative of father Ruggero Boscovich, mathematician and astronomer, construction of Specola (specula) which was origin of Osservatorio (observatory) and today is a precious archive and a museum. In 1773 by dissolution of Compagnia di Gesù, the college of Brera became the property of the state and in 1774 Maria Teresa from Austria gave the task to Giuseppe Piermarini, Imperial and Royal Architect, pupil of Vanvitelli, addressed toward the Neoclassicism, of designing and continuing the project. In 1776 was founded the Academy of Fine Arts and the Patriotic Society (then Lombard Institution of Science and Literature), which was tasked to study and experiment in field of agriculture and manufacturing.

Piermarini started from restructuring of the library, by amplifying that and providing an access from the stairs, which were done by Richini, designing elegant bookshelves, and also in Observatory, Botanic Garden, Academy. Between 1778 and 1795 is completed the superior level of the front and the main entrance, which is located in Via Brera, by building a neoclassic

monumental door with arches and columns and the courtyard would finished with a new wing from the square of the church.

By arriving French in 1796 and rising of Napoleon, some political and cultural changes gave new addresses to Braidensi institutions, from which it started prevail of the academy. In 1801 by assigning the painter Giuseppe Bossi as office clerk and from 1802 by presence of Andrea Appiani, painter but especially powerful and energetic commissioner for the Fine Arts, used to determine the successive history of the palace and for birth of the Pinacoteca (painting gallery). While Bossi used to decide about the academic renovation – by founding (1806) a gallery of paintings, gypsum, engraves – and used to rearrange the classrooms, Appiani used to gather in Brera an enormous quantity of paintings from churches and suppressed convents. For holding the new Gallery of Paintings in 1808 the church of Santa Maria of Brera used to subdivide transversally in height in two overlapped bodies, one assigned to the Museum of Lombard Antiquity (sculpture) and the other to the Pinacoteca (painting gallery). For regulating and creating peer spaces both in form and dimension, under the guidance of Pietro Gilardoni, architect of ministry of Interior, the gothic façade of the church was demolished in order to add some more meters to the building.

In the nineteenth century, as well as internal changes, the initiative was most noticeable and lasting, in 1859, after the victorious entry into Milan's Vittorio Emanuele II and Napoleon III, placement on a pedestal designed by Luigi Bisi of the colossal statue in bronze Napoleon I as Marte peacemaker, commissioned by Eugene Beauharnais in 1807, fused in Rome in 1811/12 on the model of Antonio Canova, who had until now held distant.

Equally significant, so as to connote the palace forever, was the decision, already foreseen in the statutes of Bossi, to allocate balconies, courtyards, lobbies and corridors on public monuments that celebrate artists, benefactors, men of culture and science, linked to Brera institution. This rich sculptural decoration now remains the best example, like the two monuments (1838) Cesare Beccaria in Pompey's Marquis Giuseppe Parini and Gaetano Monti who welcome those who climb the staircase Richino.

In the years between 1920-1925 architect Pietro Portaluppi, based on the chosen by architect Perrone, made interventions such as remaking the old floorings and transforming of skylights in the XVI and XVIII rooms, new construction of the Chapel of St. Joseph (open the eyepiece and the mezzanine floor with the addition of the altar and the marble balustrade), realizing the skylight for the XX room, and closing the public access to the Braidense library and to the Pinacoteca from the central lobby and reserved it for the gallery. The Second World War brought serious damage to the gallery, causing the total destruction of the shell and the partial collapse of walls of the entire southern wing, and in particular the Napoleonic rooms, which revealed what was left of the old Gothic structures. Pietro Portaluppi devised between 1946 and 1949 three projects for the reconstruction of these rooms; planned to redo roofs and skylights also for all other room. The restoration work began before 1949: Portaluppi closed the windows on the staircase, recovering the long entrance corridor and it also opened the space of Mocchirolo chapel, rebuilt in exact measure. The same Portaluppi directed the reconstruction of the south gallery, now used for the production of the masters of the Lombard school. An intervention explicitly requested to Albini by Dr. Wittgens, who after the death of E. Modigliani, did the duties of the

superintendent, so was limited in the development of specific solutions to be adopted in the skylights to open the corridor to the opposition of Portaluppi against interventions by other architects. In the sixties and seventies various works were undertaken: a new gatehouse was built on Via Fiori in reinforced concrete; it was planned to use the loft in the side of the Pinacoteca above the entrance and the offices of the Directorate, this also involves the implementation of a ground rising.

The complex, as it appears today is the result of a layering of different interventions over time. During the twentieth century each institute of the palace was customized by adopting their interiors to the new functions, but the complex with its multiple parts, courtyards, high corridors often rendered obscure, for the courts and passages, has maintained its impressive grandeur and austere.

The Art Gallery and its collections: Great museum for fame and rank, the Pinacoteca di Brera is different from the collections of Florence, Rome, Naples, Turin, Modena, Parma, for the events of his training that has no roots in collecting aristocratic, princely or royal, but in collecting political state, which is a result of the invention together Napoleon and democratic conceptions of the French Revolution.

It born, like the galleries of Venice and Bologna, beside of the Academy, for educational purposes, Brera soon differs from them, turning to the needs of political representative of the capital city of the Kingdom of Italy, in a big and modern national museum, in which the works from all schools of painting of the conquered territories were under protection, conservation, proper lighting and by giving opportunity to study

and comparison them which targeted public, celebratory and social. The first paintings of the Brera were, in 1799, some big canvases of Pierre Subleyras, Giuseppe Batoni, Pompeo Batoni, Carlo Francesco Nuvolone, Stefano Maria Legnani, originated from the church of Santi Cosma and Damiano alla Scala of Milan. Additional to these (four of them are exposed in the saloon XXXIV), right after, for the initiative of Giuseppe Bossi, in few years later added more paintings which are described in a volume by Bossi himself, “news of artworks in design publically exposed in royal academy of Milan in May 1806”, precious trace of opening of the Pinacoteca. In that date four saloons in first floor, in addition to a series of thirties of self-portraits, mostly Lombard, were also “la Crocifissione” of Bramantino, the “Madonna col Bambino e isanti Giovanni Evangelista e Michele” of Figino, the “Cenacolo” of Daniele Crespi, the “Madonna del Rosario” of Cerano, “San Gerolamo” and “Santa Cecilia” of G.C. Procaccini, the “Santi Elena, Barbara, Andrea, Macario, un altro santo e un devoto in adorazione della Croce” of Tintoretto, the “Martiri Valeriano, Tiburzio and Cecilia” of Orazio Gentileschi, besides from triptych with “Sant’Elena e Costantino” of Palma il Vecchio, and then the “Sposalizio della Vergine” of Raffaello, the “Madonna col bambino” (1510) of Giovanni Bellini, the “Ritratto di Lucio Foppa” of Figino.

Already in 1805, with Napoleon’s coronation as King of Italy, had decreed that the works were seized in the departments of the Kingdom gathered in the Academy in Milan and divided them, by pragmatic criteria, into three classes: those of the famous artists were exposed in the gallery, those, less attractive held for trading, of little value ones available to churches that had requested. When Bossi in 1807 resigned because of conflict with the Minister of the Interior, which had undermined the

democratic constitution of the Academy by nomination of a centralized chairman, Andrea Appiani, who was elected curator of the Museum, was started a huge work for recognizing, choosing and gathering the most worthwhile artworks.

In Brera, after gathering the paintings from churches and convents of the Lombardy, arrived another hundreds from different departments, numerous from Veneto, chosen with intelligence from Pietro Edwards, and in a few time was formed on of the richest galleries in Italy. Further to the big size paintings, there were added also (1811) the Pietà of Giovanni Bellini and some paintings of Carracci, Guido Reni, Francesco Albani and Guercino, purchased from famous gallery Sampieri of Bologna.

In 1813, an agreement by the Louvre, were exchanged for five paintings and other works by Rubens, Jordaens, Van Dyck, Rembrandt. While the best paintings, restored and equipped with gold frames, were placed in the halls of Napoleon, since then the fulcrum of the Museum, the others were started in the stores, be made available for exchange (which were not all in favor) and, above all, to be assigned to parishes that had requested. Between 1811 and 1824 nearly one third of the works recorded in the so-called Napoleonic Inventory, in which starting from 1808 up to 1842 is listed in chronological order sequence as entered in the Brera, had already filed out of the office with a new diaspora that made paintings confiscated even more distant from their original story. In those years came from various churches the frescoes of Luini, Gaudenzio Ferrari, Vincenzo Foppa, and still Bergognone and Bramantino, and the Museum, which now has perhaps largest collection of this kind, began to specialize in that activity of recovery conservation and since then it will integrate with its history.

Since 1815, by restoration and after that there were repayments to the Papal States, the growth of the collection continue with small but steady pace, according to the traditional channels of legacies, gifts, purchases and exchange rates. In 1882 the Pinacoteca, like in Venice and Bologna, got independence from the Fine Arts, which confirmed predominantly teaching institution, retained much of contemporary paintings, which continued to be exposed in the last rooms of the gallery. This inherited vast majority of ancient works, under the direction of Giuseppe Bertini (1882-1898), painter, author of stained glass, restorer, a prominent figure for variety of interests, culture and friendship; it was completely reorganized, rearranged and expanded.

Under direction of short Corrado Ricci (1898-1903), an eminent art historian, the Gallery expanded with the addition of rooms and a section of the access corridor (Room I), so the path wound continuous ring around the courtyard. The sorting and assembly - for the first time the paintings were exhibited for schools in chronological order and in a less bundled - were accompanied by a careful reconstruction, made on archival documents, the history of the gallery, which was published in 1907 and remains unsurpassed, while acquisitions continued by the “Uomini d’arme” by Bramante, four tablets of the predella of “Pollitico di Valle Romita” of Gentile from Fabriano, which allowed reconstruction, and sixty-three paintings donated by the collector and art dealer Casimiro Sipriot. The age of the direction of Francis Malaguzzi Valeri (1903-1908), Ettore Modigliani (1908-1934 and 1946-1947) and Antonio Morassi (1934-1939) were characterized by fierce policy of purchases and gifts that often led to Brera major works like “Il cavadenti e Concerto familiar” by Pietro Longhi, “le nature morte” by Evaristo Baschenis, the “Natività” del Correggio, “Rebecca ed Eleazaro

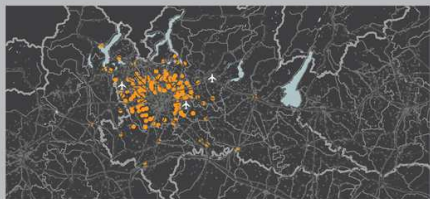
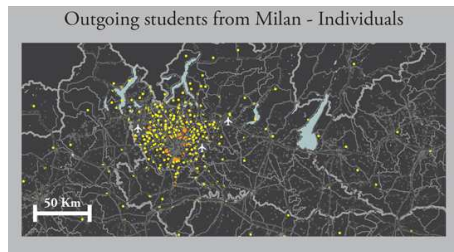
al pozzo” of Piazzetta, the “Madonna del Carmelo” of Tiepolo, the “Carro rosso” by Fattori. Since 1926 several purchases and gifts have been promoted by the Association of Friends of the Museums and the Brera in Milan and cultural organizations.

After the Second World War, from 1946, began reconstruction, headed by architect Piero Portaluppi, and, in a limited area, Franco Albini, while new installations was treated by the new director Fernanda Wittgens (1947-1957), flanked by Gian Alberto dell’Acqua, the successor (1957-1973). The museum renovated and opened in mid-1950 had the character of a large and luxurious decoration of aristocratic and moderate modernity, the result of an elaborate restoration work, the calculated locations and technological upgrading. Between 1950 and 1970 other paintings were added to the collection, among them the “Incoronazione della Vergine” by Nicolo di Pietro, the “Autoritratto” of Boccioni, the “Resurrezione” by Cariani, the “Tre storie di santa Colomba” by Baronzio, two “Portaroli” by Ceruti.

With Russoli Franco (1973-1977), heir to a museum that is suffering from decades of shortages and poor maintenance, lack of space, in a “condominium” (the palace) difficult to manage, and the closure of the controversy Art Gallery (1974) had a positive outcome in launching the project of “Great Brera”, which aimed enlargement in eighteenth-century palace Citterio (Via Brera 12-14, purchased in 1972) and based on interventions in Brera, in order to have space for all facilities and services needed in a modern museum, functional, from the teaching to those for the reception and guidance to the public. The disappearance of Russoli left the project in an unclear state. By Carlo Bertelli (1977-1984) the Pinacoteca is reopened, purchased new space extending in eighteenth-century

astronomer apartment overlooking the botanical garden, where it is exposed (1982), in an exhibition curated by Ignazio Gardella, donation of Emilio and Maria Jesi more than fifty paintings and sculptures of the greatest Italian artists of the early twentieth century (enriched with other 16 works in 1984), in addition to the deposit of twenty masterpieces of Futurism from the collection of Richard and Magda Jucker (later acquired by the municipality of Milan and exposed to CIMAC, Civic Museum of Contemporary Art). In those years, despite the impossibility of implementing a global project, were opened the first Italian “bookshop” and a cafeteria; the deposits were moved to the floor of the gallery and gained visibility, easy access, controlled climate, in the corridor and the partially reconstructed Cabinet of portraits of painters of Bossi; the smaller rooms which designed in 1950 for hosting Piero della Francesca, Raphael and Bramante, again become a single large room, that the project of Gregotti and Antonio Citterio featured by new materials for the Brera, by a flat ceiling and evocative lighting effects; The Citterio palace, incomplete and the rustic, called “Brera 2”, is used for exhibitions controversially. Since 1989, after closing and dismantling due to the reappearance of technical and trade unions, while building Citterio was redesigned by James Stirling, has begun a major restructuring and rationalization complex spaces, equipped with new technological systems. The museographic reorganization plan, sponsored by Rosalba Tardito (1984-1991), was designed by Vittorio Gregotti and so far has been realized in the Napoleonic rooms in a series of smaller rooms (rooms IIVII) and in the room XXI. At the same time there was a broad reorganization of the exhibited works, documented in this guide, where they were put to the news in recent years, which is called exterior deposit.

Urban Analysis



Milan, flowing map of incoming and outgoing students

By developing cities and extending catchment areas of the big cities such as Milan, the urban analysis in a design project, whether a new construction or transformation of an existing building, plays an important role especially for greater scale projects.

Large utilities are not only used but lived daily. The urban transformations were strongly affected and living spaces have been continually shaped by the action of some great actors here than in other parts of the city.

In order to have a success for a cultural and multi-function project, it is inevitable to know the agents which can be influential such as catchment area, dispersion and concentration of urban services, local mobility and etc. which cause to change our expectations from a cultural service over time and these expectations lead this kind of space to be more complex.

There are also some factors which define the complexity in this type of construction such as time planning, social security, traffic, economic impacts, etc. for which it requires a multidisciplinary analysis.

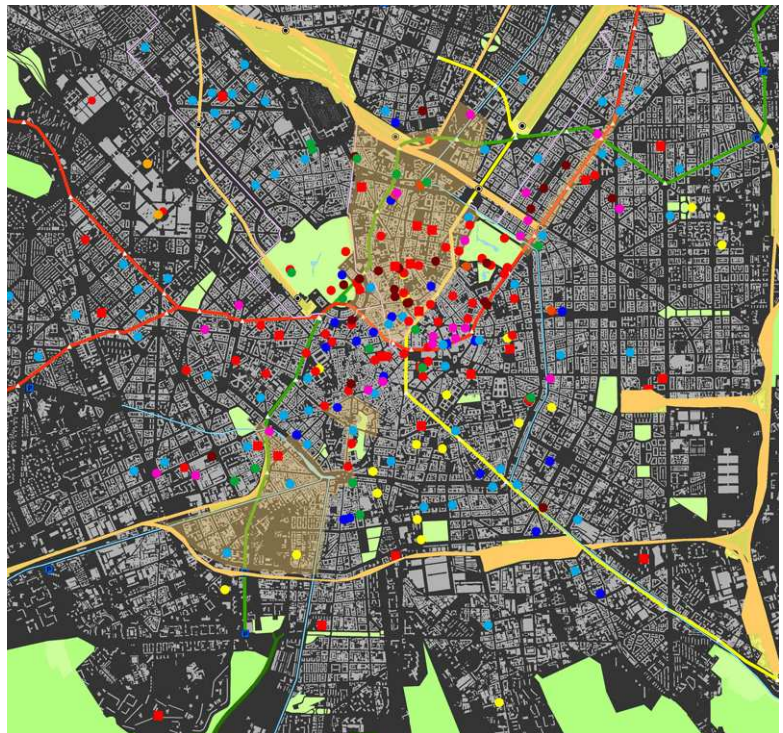
In present days museums are open to everyone and they have a strict relationship with the city. According to the scale of building and the surrounding urban fabric this relationship also changes the way of connection of the museum to the city especially to the settlements.

These facts show the importance of the connection way

between building and the city in terms of connection to the urban transportation, various activities both interior and exterior, crowd and also the architecture of the museum itself.

On the other hand another important aspect is accessibility to different parts of the complex and surrounding spaces which emerges through the discourse of permeability. The spatial aspect of the palace also has influence on the city in sense of occupation of territory. So it requires studying its permeability in order to make a perfect integration with the city and reduce less accessible areas which are always problematic in terms of quality of space and security.

According to the urban analysis which is done in the “Urban analysis and planning studio”, some aspects were appeared. Among those, the most important of them are summarized below.



Milan, distribution of cultural services and accessibilities

Concentration of the cultural services in the local area: According to the thematic map of city center of Milan, this area is highly concentrated by different services such as schools, art galleries, museums, etc. which is considerable from different point of views such as traffic and congestion. At the same time there is lack of such services in the outer part of the city and this fact causes a highly city travelling from outer parts of the city into the city center. Closeness to the local services: According to the primary analysis of PGT, which regards to the availability of the local services, it can be declared that the area has almost all services both the highest importance and recreational services. Highly accessible by public transportation: The complex is highly accessible by public transport. The most nearest metro stop Lanza is located at a distance about 500 meters and the other possible stop is Montenapoleone at about 600 meters. In addition the site is accessible by multiple lines of tram.



Distribution of cultural services and public transportation in locality

Social Aspects

Architecture and urban space play an important role among the sociological factors that influences humans and their well-being. Sociology analyses the role of architecture in the conscious shaping of urban space in the present days. This issue is very important from the point of view of sustainable development.

Sociological aspects of the influence of architecture can be observed in connection with man, his perception and needs, as well as from the viewpoint of buildings in a space and their symbolism, which influences us. The relationship between architecture and sociology is also part of the topical idea of sustainable development. Sustainable development of architecture may consist in architecture which has a positive influence on human perception, and satisfies human aesthetic needs, as well as needs for safety, well-being, and security. It should also have an inner positive charge to be able to attract a person's concern, which seems inevitable in the contemporary fast paced era.

Buildings greatly influence the human living environment in any case. Constructions, mainly great ones, have a strong impact on the place where they are built. They occupy part of the landscape, which is oftentimes considerably changed by them. It is not possible to analyze or fully describe the impact of construction works just by technical means in various disciplines such as sociology, economy, ecology, etc.

Nowadays, the term “sustainable development” is used in many fields of human activity and it is associated with an evaluation of the activities' results. There exist many interpretations of that

term, but generally sustainable development is understood as economic, social and technological development, through which the contemporary generation satisfy their needs, but which will not limit the future generation's ability to satisfy their needs as well.

Sociology of settlement, the city and the housing, deals, among others, with building (or architectural) activity of man, and his perception and needs. At the same time, interpretative sociology deals with this dilemma as well. These problems, which have a direct impact on the formation of social and spatial urban structure, caused by different factors like presence of residents and non-residents in the city and various conflicts between different populations.

Professor Giampaolo Nuvolati in his essay "Resident and Non-resident Populations: Quality of Life, Mobility and Time Policy" in "The Journal of Regional Analysis & Policy" said: "Cities are currently characterized by the presence of different populations: inhabitants, commuters, city users, tourists, and metropolitan businessmen, competing in the processes of accessing, controlling, and using resources and services. Local communities are no longer stable and closed entities but interact constantly with different populations coming from different places. Therefore, in order to study quality of life, problems and opportunities in the communities must be analyzed considering the daily flows of people using resources and services located in the city."

Regarding the design project of Brera he pointed, in his course of Social Research Methodology, many significant urban problems which call for sociological analysis such as security, quality of life of residents which are illustrated below:

Building a table of indicators for Security in Brera: The objective of this exercise is to create a list of indicators which can examine and evaluates the level of security in the Brera.

	GOOD QUALITY OF DATA	BAD QUALITY OF DATA
GOOD VALIDITY OF INDICATORS	<ul style="list-style-type: none"> •Number of crime's complaints in the neighborhood •Public expenditure for the safety of the area •Number of private supervision surveillances •Presence of public supervision during the day 	<ul style="list-style-type: none"> •Cycle-pedestrian flows •Number of children that use the public space •Number of resident families •Number of reports to the police forces •Number of private surveillances via anti-theft devices •Inhabitant' satisfaction index
BAD VALIDITY OF INDICATORS	<ul style="list-style-type: none"> •Number of late night opened activities •Presence of night lighting and video surveillance •Trend of housing market •Increase/decrease of commercial activities in the district 	<ul style="list-style-type: none"> •Unemployment rate •Number of unregistered workers •Number of un-occupied houses during the week-end •Number of immigrants in the area

Table of indicators for evaluation of security in Brera

Building a table of indicators for Quality of Life in Brera: Since the subject of the project design is a multifunction building, therefore, the presence of non-residents is highly noticeable. This presence and integration of different population can influence the quality of life of residents. This exercise intends to create a list of indicators which can evaluate the Quality of Life in the locality of Brera.

Flanerie: While Baudelaire characterized the flâneur as a “gentleman stroller of city streets”, he saw the flâneur as having a key role in understanding, participating in and

Environmental Sustainability

Ecological Building as a movement in contemporary architecture aims to create environmentally friendly, energy-efficient buildings and developments by effectively managing natural resources. This entails passively and actively harnessing solar energy and using materials which, in their manufacture, application, and disposal, do the least possible damage to the so-called 'free resources' water, ground, and air.

Whether the design site is a building in the inner city or in a more natural setting, connecting with nature brings the designed environment back to life. Effective design helps inform us of our place within nature.

Sustainable design attempts to have an understanding of the environmental impact of the design by evaluating the site, the embodied energy and toxicity of the materials, and the energy efficiency of design, materials and construction techniques. Negative environmental impact can be mitigated through use of sustainably harvested building materials and finishes,

materials with low toxicity in manufacturing and installation, and recycling building materials while on the job site.

Sustainable designers are finding it is important to listen to every voice. Collaboration with systems consultants, engineers and other experts happens early in the design process, instead of an afterthought. Designers are also listening to the voices of local communities.

The scope of the environmental analysis of the complex is an important element of this design project and is defined as the study of the sustainability that will interact with the future intervention, analyzed through different aspects such as materials; morphology; the vegetation structure; the geological, hydrological and hydro geological aspects.

The goal is to understand the ecological quality of the context in which the intervention will be done. Therefore evaluate the possibilities of transformation of some parts and ensure the sustainability of intervention.

The environmental characteristics of the new intervention and the applied technology and materials must be oriented to minimize the production of various pollutants through the adoption of architectural solutions coherent and compatible with the design rules of the environmental context and protection of existing vegetation.

The question is to define, if it is possible, the level of the sustainability. There are different ways to define the sustainability indicators. The first distinction is between indicators concerning directly measurable phenomena

and those concerning indirectly measurable phenomena.

There are various criteria to define the sustainability indicators such as absolute indicators, expressing the levels of the variables identified as important and relative indicators, made up by the relationship between absolute indicators of some type or different types.

The indicators can be classified according to their functions in three categories:

- Descriptive (or systematic) indicators, which are elementary indicators for measuring “what is happening” regarding the different environmental components
- Performance indicators, measuring the distance (distance-to-target) of present situation with reference to the values reference, political objectives, sustainability levels
- Efficiency indicators, they measure the efficiency of use of resources (or of pollution) for production, procedure, income units, etc.

The current situation of the complex has evaluated, based of “ITACA” protocol, in all sections analyzing the various factors such as quality of the site, consumption of the resources, emissions, quality of indoor spaces and quality of services. For each item the design project, at the initial phase, proposed theoretical and practical solutions. Among them the solutions which are applied in the new intervention are illustrated in the design project chapter.

Mobility

Regarding the main function of the complex which is “space of exposition”, mobility and movement of people plays an important role in this design project. There are particular nodes and spaces in which can happen crowd and be problematic for the flow of people.

According to the latest researches by Ch. Song, T. Koren, P. Wang, A. Barabási, “Modeling the scaling properties of human mobility”, which is published online on the Nature physics web site (2010): “Individual human trajectories are characterized by fat-tailed distributions of jump sizes and waiting times, suggesting the relevance of continuous-time random-walk (CTRW) models for human mobility. However, human traces are barely random. Given the importance of human mobility, from epidemic modeling to traffic prediction and urban planning, we need quantitative models that can account for the statistical characteristics of individual human trajectories. Here we use empirical data on human mobility, captured by mobile-phone traces, to show that the predictions of the CTRW

models are in systematic conflict with the empirical results. We introduce two principles that govern human trajectories, allowing us to build a statistically self-consistent microscopic model for individual human mobility. The model accounts for the empirically observed scaling laws, but also allows us to analytically predict most of the pertinent scaling exponents.”

In this project one of the most important nodes is the main entrance of the museum from Piazzetta Brera. From which people can access also to different parts of the building: southern side to the new cafeteria, eastern side to the museum and western side to the various services such as commercial sector, courtyards and temporary exhibitions. This combination of various entrances and exits could create an undesirable crowd in this zone which is privileged as the first priority for the museum users.

Regarding to the importance of main entrance, in the course of Mobility Planning by Professor Bazzani, this node was examined with a computer program, written by the very professor.

This digital simulation made the trajectories of imagined humans in this node and provided a model for predicting the spread of people and their mobility treatment in order to have an evaluative vision for distribution of activities such as ticket, bookshop, cloakroom and doors.

Chapter 3: Design Project

Regarding to the scale of the palace and initially distribution of foreseen activities, the design project divided in two major divisions: exteriors and interiors. Nevertheless they are strictly linked in terms of functions and itineraries, but this division was helpful in order to makes the project concentrated in one hand on the urban integration and on the other hand on the unitary of interior entities.

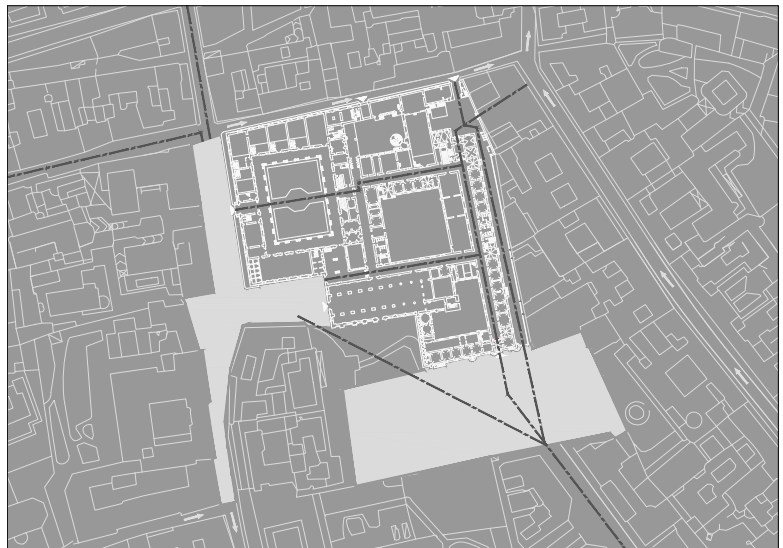
The organization of the entire complex has been thought:

- anticipating an evolution of the complex as a unitary system of institutions
- identifying organizational patterns and overall functionality including relations with the public and the city

Exteriors

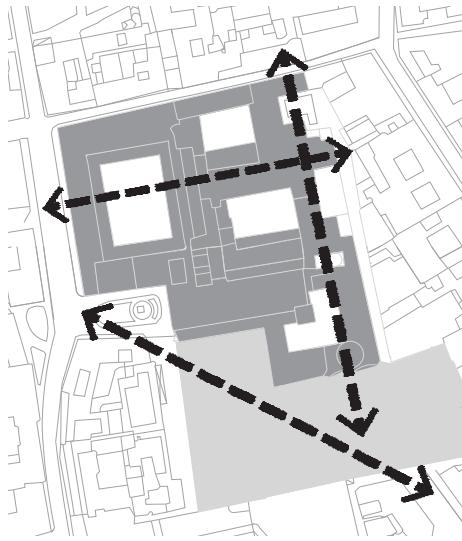
Public in terms of both specific building users and city users plays an important role in this project; the exterior functions are designed especially for city users. The main components which are located outside of the building are Sculpture Garden, Pergola and the literary café.

According to the larger scale study, an important problem is accessibility through the complex to the surrounding spaces which emerge through the discourse of permeability. In this project the itineraries are divided in two major parts: internal and external. The internal itineraries regard to the different entities and services which are distributed in the entire complex while the external ones aim to connect the different streets which surrounded the building especially through the Botanic Garden.



Network of itineraries

The spatial aspect of the complex has notable influence



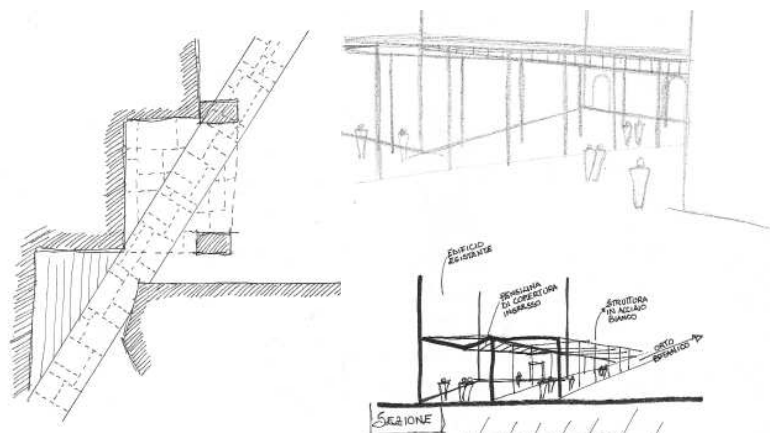
Map of directions

on the local area in sense of occupation of territory. Therefore, it required studying its permeability in order to make a perfect integration with the city and this will be fruitful if it is accessible not only by the building users but also for city users who use the building as ‘passer-by’.

In order to achieve this integration the project provides a “network” of itineraries which connects all surrounded street through the palace and Botanic Garden.

The exterior part of this network, starts from Botanic Garden in the southern side and goes in two directions: in one direction toward north it makes a connection between via Fratelli Gabba and Strettone and in the other direction passing through a long pergola connects the Strettone to Piazzetta Brera toward the north west of the Botanic Garden.

The positioning of the pergola follows two main objectives: Firstly it defines a clear and perceivable road from which the main exterior components like sculpture garden and literary café come out and secondly it make a shortcut between Strettone and Piazzetta Brera for who does not want to pass through the building.

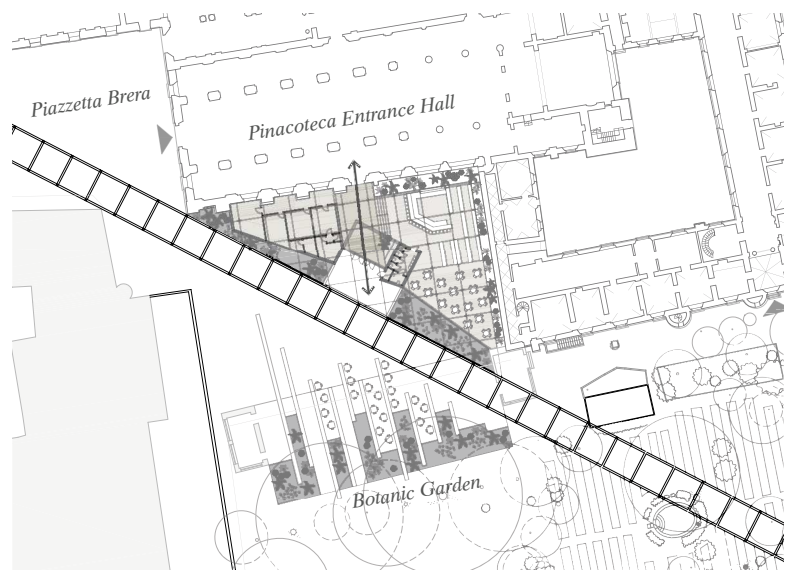


The pergola connects the Brera square to the southern side of the complex

Another main component is the sculpture garden which acts as a complement expositive function for the complex. The idea of inserting it, is to make a space which encourages the public to consider and understand art from a different perspective, one that might strike visitors as quiet unfamiliar when compared to a traditional museum experience. Practically the act of seeing sculptures in nature is a consistently different and often surprising experience, of course depending on the artist's conception of the piece and the dialogue that exists between the artwork and the site. Anyway in this design project, regarding the former main function of Botanic Garden, it is decided to dedicate a part of this sculpture garden to the statutes of the scientists and artists which have strict relation with the complex and also with Pinacoteca and for another part which will be distributed as specific points in the whole garden will be realized in situ as site specific artworks. The idea is that the site-specificity expresses the artwork's integration into the environment, the history and traditions of the place. The work blends in, adapts or occasionally even alters or distorts its context. It will be interesting to expose them to people and leave them to interpret the meaning of these sculptures which they will be completed or complemented by the environment in which they are located. Another goal is dedicating some of this temporary point to the students of the Academy which will not be in the complex anymore, but can use the garden to exhibit their artworks in order to leave a trace of Academy in the complex.

In the middle of the pergola's road there is a literary café which is annexed to the main body of the complex and it acts also as a secondary connection way into the main entrance of Pinacoteca. This literary café intends to reflect the culture of the context both urban and the complex itself. At the same time,

such heterogeneous space of meeting is expected to create an imaginary icon of the 'total' complex. The spatial configuration of the function, in addition to the internal bookshelves, by facing to the sculpture garden enriches this relaxing area by linking it with nature and culture. The objective of this function is to create a comfortable, innovative and attractive space which can be fruitful and accessible to building users and passer-buys. This space has two parts: one part is covered and it is a warm zone which is active in the whole year and the other part is the open space which looks to the sculpture garden and it is thought for the warmer seasons but, regarding to the floorings and ceiling covers it can be fruitful also in the colder seasons with minimum portable heating equipment.



Literary cafe and its accessibility

The pergola finishes in via Brera right after meeting the main entrance of Pinacoteca which will be a convoy for the passer-buys and an accompanying for who wants to enter to the museum. This end point is located in the middle of pedestrian area in via Brera which is visible for both people who come

from southern and northern side of the street and it acts as a visual sign which is identifiable from a longer distance.

The Brera Street which is located in the west side of the complex, in the design project is turned into a plaza where only foot travel and residents' vehicles are permitted. The former pedestrian zone, from south, has extended up to via del Carmine. Therefore the upper side will not be allowed passing by car to public but residents.

The importance of the pedestrian area in Via Brera is because of main entrances. In the proposed project they are defined in two divisions: one of them which come from Via Brera to Honor Yard (Corte d'Onore) becomes the ingress of the temporary exhibitions and commercial activities while the entering in Piazzetta Brera will be the main entrance of Pinacoteca. Regarding to the 'network' of itineraries which is explained above, all functions are easily accessible by entering from any ingress and it extends the accessibility to all entities inside.

Interiors

For the organization of interiors it is necessary to refer to a perspective view of the configuration of the complex as a unitary system, structured as a large multidisciplinary institution to reconnect with each other, with reference to their original specificity, in a single center of activities and cultural attractions, which connects areas of science and humanities.

Brera has a strong European dimension in offering a universal perception of disciplines that makes it unique, very different from other museums.

Therefore the complex provides an evolution as unitary system of institutions,

- with various expositions offers,
- including activities of education and research, aside to museum activities and their integration,
- with spaces for welcome and communal facilities, for all types of users, divided into spaces for dining, studying, reading, provided in different parts of the complex
- containing a “congestion of services” , and support services, sanitation and hygiene, nursing, control centers, security systems, storage, cleaning, security guard, to preserve the “privacy” of the different institutions in a complex used in a unified manner.

The main components of the overall organization are:

- permanent exposition (Pinacoteca),
- restructuring the interior of Santa Maria church as the

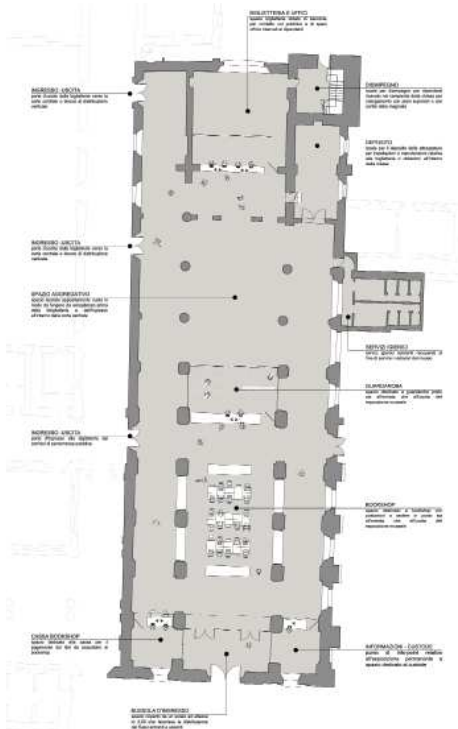
main entrance of Pinacoteca,

- the 'central yard' as a unique and principal covered public space,
- the 'central hub' for vertical connections,
- temporary expositions,
- commercial and refreshment activities,
- reorganization of corridors

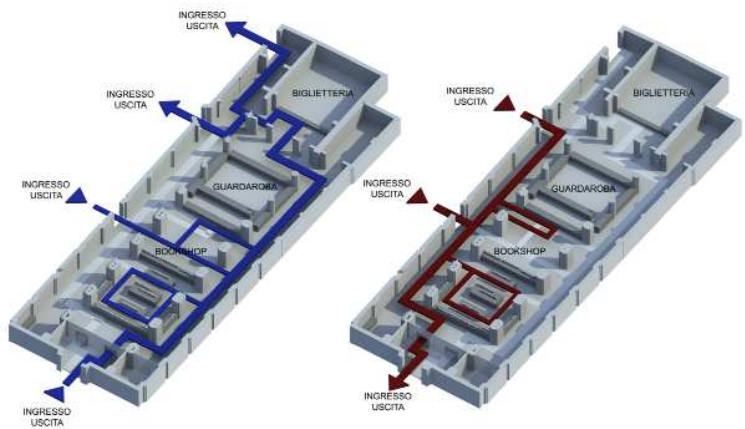
Main entrance of Pinacoteca: According to the main component of the complex which is Pinacoteca, the project dedicated a proper entrance for it in a particular and historic element of the complex which is Santa Maria church.

This space is a combination of different functions such as bookshop, cloak room and ticket which are furnished by distinguishable furniture in order to create an explicit difference with respect to existing body of this monumental church.

The organization of this space provides two corridors in the aisles and the furnishing part in the nave. This way of division is thought to orient the entrance flow toward the right aisle and the returning one on the left in order to avoid intersecting visitors.



Pinacoteca Main Entrance Hall



Incoming (left) and outgoing (right) flows

In the middle of the hall, before cloak room, there is an empty space which meets the axis that comes from the literary café, from right side and the access from the Honor Yard, on the left side. This virtual node aims to give possibility of having access to different services and functions and also the possibility to enter to this space from other sides of complex in order to make it more permeable.

Pinacoteca: According to the practical and theoretical studies during the analysis, one of the major elements of a museum is the path and how a visitor passes through it. Therefore, the reorganization of Pinacoteca, from the first steps, in addition to the other elements such as light and positioning of the artworks, focused specifically to propose a new and practical idea for redefinition of the routes and its interruptions.

In present days, the reputation and importance of the Pinacoteca attracts many visitors, but, on the other hand, regarding the classical way of visiting museums and painting galleries and the immensity of artworks bares us an important problem which is “the difficulty of visiting”. This difficulty is caused by “path length” and/or “personal interest” of visitors to some of artworks, generally for non-specialists, makes us a notable reconsideration about the “space of exposition” differently from the way they have done before. Hence, the previous space of exposition requires a conceptual and architectural intervention in order to consent different types of visitors in terms of education and age.

The linear route, coming from the idea of a chronological visual sequence of the history of art, was adopted as a principle of arrangement “par excellence” for collections of painting and sculpture, especially from the nineteenth century onwards.

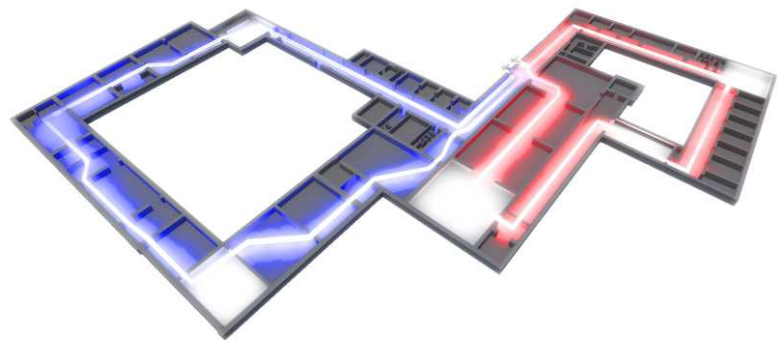
The visit offered to the public continued, however, to have the physical sense of crossing, a rapport with the building of passage, and with the materials, of orderly decoration. A physical not theoretical condition of Gallery, the route inside the museum, intended as passage through, maintained its linear development as expression of a physical taxonomy of the materials, in search of a “visual”, normally chronological “sequence” and was therefore considered also the ideal way to convey the sense of the historical evolution of the fine arts. After all the word gallery still remains as a demonstration of a canonical system of display of very ancient origin rooted in the Greek stoà and come through the Florentine loggias; a system still seen in the Uffizi and in the Vatican, in the Louvre and in the Prado, in the Metropolitan and in the Hermitage and which to varying degrees of the absolute marked the idea of the building-museum until the twentieth century, when palaces were “offèred” as museums and ex novo museums were conceived as palaces.

However for Pinacoteca has organized the reasoning in relation to the Direction, taking into account:

- articulation of long route and brief routes (loops),
- interrupting the route by dedicating specific spaces as ‘relaxing rooms’,
- placing of the visitable storeroom,
- constraints in the position of artworks,
- possible improvements in systems of museum preparation (opening windows, resting places, partitions in the rooms),

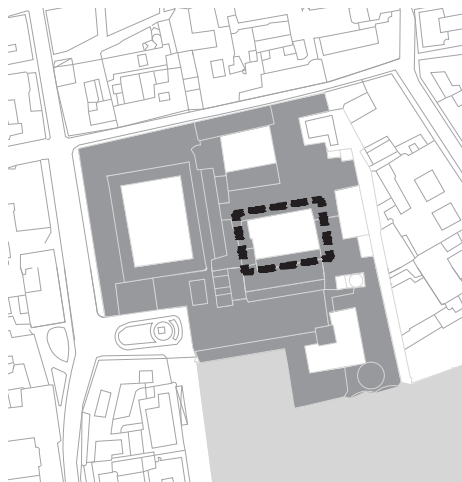
The Articulation of the routes provides two paths: The short path offers the possibility for the visitors who want to see the main artworks without studying them in detail. This route takes short time to pass in order to avoid making

visitors tired. At the end of the route there will be possibility to continue the journey by entering to the long path. On the other hand the long one is dedicated to the visitors who want to spend more time to see the artworks in detail or for students who want to sit there and doing sketches.



Long (left) and short (right) visiting routes of Pinacoteca

In both itineraries, during the visiting there are spaces dedicated as 'relaxing room'. These points, which act as interruption, are located during both long and short routes. These rooms have very simple architecture and painted by less effective colors like white and gray. The aim of these relaxing rooms is to provide a neutral space in which there is nothing to watch for visitors in order to leave them think about and interpret the artworks that they have seen in the gallery.

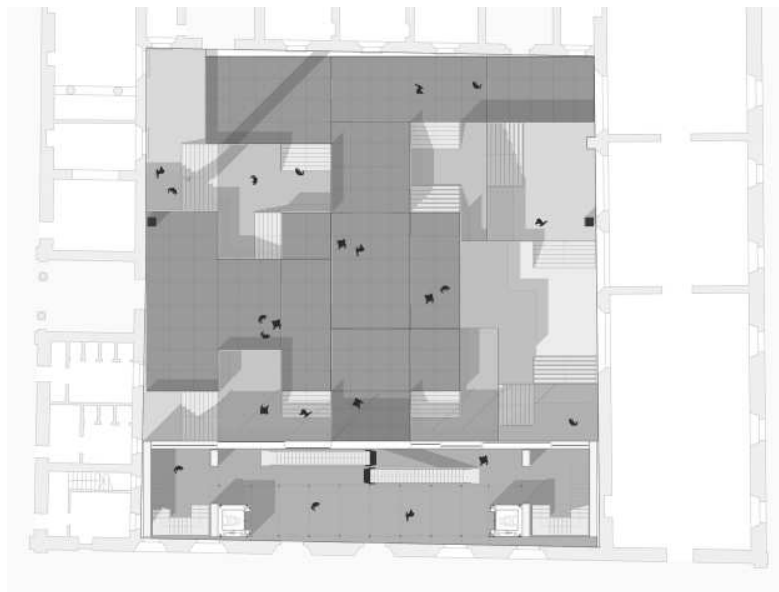


Position of Central yard with respect to the whole complex

Central Yard: According to the Ministry's decision about moving the academy out of the palace, in the center of the complex which is now dedicated to the library of academy will be a notable void that in the design project is foreseen for the central public space.

This void is divided in two major parts, in the rectangular southern part is positioned the core vertical connections and the rest of this area is dedicated to a public space.

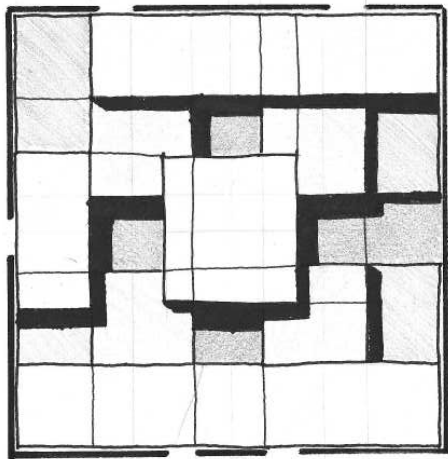
The central yard is the place where the visitors will begin their exploration of the exposition spaces. It is surrounded by the walls of existing building on all sides. This huge area houses two main elements: the core vertical connection and a public space. At the same time it provides various ways to the: main entrance of Pinacoteca, commercial activities, and temporary exhibition in the underground floor. The physical location and its function make this space a central hub of the whole complex.



Central yard ground floor

In the core vertical connection there are two staircases, two elevators for handicap persons and two escalators which connect the ground floor directly to the level of Pinacoteca, in the first floor, without any interruption in the mezzanine which are accessible both by elevators and staircases. In that level, which is suspended like the other floors by cables, there are other

two escalators which join this level to the last and surprising floor: Belvedere. This long path after a visual interruption right before arriving, which is caused by two huge beams that they positioned for structural functioning, offers a panoramic view of the city through a huge parallelepiped glass box from which it is possible also to see the hanging roof of the Central Yard.



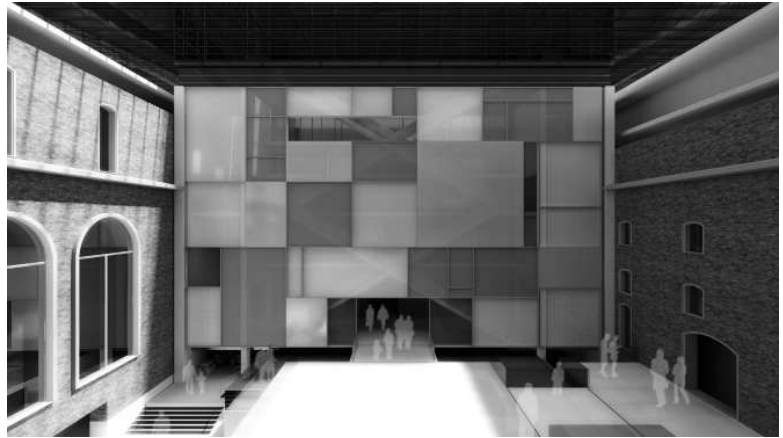
The sketch of platforms

The quadrate part of the Yard houses a huge public space with various purposes. At the ground floor a set of semitransparent quadrilateral surfaces define a vast distribution point with various ways to other entities which shaped the Yard. At the same time by means of small staircases leads the visitors down to the temporary exhibitions through the asymmetric shape platforms. The measure of platforms determined by juxtaposing aural rectangular shapes starting from a two by two square, which is necessary space for passing four persons in two opposite directions.

The arrangement of platforms is thought in a way to have some smaller spaces, which are dedicated for positioning statues and information before arriving to the underground floor. At the second last level there are relaxing areas. These points belong to the bars which occupied the existing rooms in the basement as preparation space close to own platform as serving area.

In contrast to the original façade of the surrounding building in the Yard, the core vertical connection is covered by a thin shell which has two main objectives: firstly it defines the vertical connection zone which houses the tools and crowd in a clear and definite way, secondly it continues the three dimensional geometry of the platforms through a two dimensional way, like Mondrian composition, in order to create a unique pattern which repeats in both horizontal and vertical direction which is

composed by semitransparent, transparent and empty modules.



The contrast between new facade and existing ones

Temporary exposition: One of the main components of the complex is the temporary exposition. This kind of exhibition acts as a complementary space of exposition beside presence of the museum. Although both are aesthetic experiences that start from common components – the works and the public – what characterizes the meaning of a museum, compared with an exhibition, is the different relationship that develops between specific components, such a space and time, compared with concepts of fixed or mobile, changeable or unchangeable, temporary or permanent.

Temporary exhibitions have some fundamental advantages for a museum system. Apart from the widely debated and acquired principles of museology, such as the rearrangement of the collections and the reorganization of the depots, the unresolved problem remained that of “bringing the museum alive”, bringing it near to the public, making it an “active” aid in the education of taste. This situation on the front of temporary exhibitions was less clear. It is plain that the most innovatory experiences

in the sector of arrangement were accomplished in the Thirties; on occasions totally different from those of art exhibitions and that the extremely rare exceptions gave rise to bitter controversy.

In contrast, official institutions such as, for instance, the Venice Biennale and the Rome Quadrennial did indeed make use of architects, but were marked by a “total lack of involvements as regards the stimuli coming from the world of figurative arts in the arrangement of the exhibitions. Lastly, the exhibitions of ancient art seem to take place almost completely outside the circles of avant-garde architects engaged, instead, in the experimentation of direct collaboration with contemporary artists and this, in some temporary installations, attains results of extreme value. This separation between architects and works of art, exhibitions and museums, museums and public was destined, at least in part, to culminate after the Second World War, by virtue of a strange mixture of the urgent needs of the present and the aperture of broader horizons on which to project an acquired tradition. From this point of view, the season of the great art exhibitions played a highly significant role of union. Exhibitions attracted the public far more than museums and it is because the presentation of the objects in the exhibition is livelier and stimulating, the combinations more persuasive, the comparisons more forceful, the problems more clearly defined.

The design project dedicated an area with numerous rooms, where they are located in the underground floor which has no need to the natural light, for this highly important component and it is accessible, for public, via the Central Yard by vertical connection and specifically through the platforms which act, for this function, as a huge welcome area.

Commercial activities In addition to the museum and exposition spaces the project provides also a set of commercial activities which are distributed in different parts of the complex.

Most museums undertake activities that generate income to support their aims and objectives. They trade with visitors through shops and cafes, or by charging for admission and educational activities; they trade with businesses such as publishers; they have commercial relationships with sponsors; in addition they may hire out their premises, or offer consultancy services to other organizations.

The extent to which museums need to levy charges directly on the users of their services, and engage in trading activities in support of their core role, depends on their particular constitutional arrangements. For some it is the principal means of funding their day-to-day operations. Even museums supported out of public funds may be financially dependent on charging for services, trading activities and sponsorship.

A museum's fundamental charitable purpose may be supported by activities that are ethically consistent with it, but are not necessarily charitable in nature. A museum must be clear about the way in which its trading and commercial activities contribute to its fundamental purpose. It is important to have explicit principles underlying commercial and trading activities, including the charges levied and the level of surplus or subsidy planned for. While markets are seen as a method of optimizing benefits to the consumer, their application to museums can only be partial, not least because much of a museum's duty is to the future.

Guidelines have been prepared by the Museums Association's

Ethics Committee to help museums take account of ethical principles in their commercial and trading activities. They are aimed at all who work in or for museums, including staff, members of governing bodies, friends, other membership groups, and directors and employees of companies contracted to provide services to museums. Members of the public do not distinguish between services provided by a museum itself or a subsidiary company, contractor agent or franchise holder and any contract between a museum and a service agent should take full account of these guidelines.

The design project dedicated some parts of the complex to the commercial activities taking into account some of these guidelines which are proper to this project:

Trading and commercial activities must be consistent with the museum's purpose and should not conflict with the museum governing. Where possible, they should enhance the quality of the museum and they should not bring the museum into disrepute.

Wherever possible, trading and commercial activities should aim to enhance public access, education and enjoyment. They must not reduce public access to the collection and information about it.

- Trading and commercial activities must not subject the museum's collection to unacceptable risks.
- Activities which work in commercial activities should see their role as supporting the fundamental purpose and aims of the museum and should respect the limitations this may put on their activities; on the other hand, activities which involved in other areas of museum should support their commercial endeavors and respect their expertise.

- A museum shop provides a public service and is not solely for generating income. It also serves an educational purpose and can enhance public access to information about the collection.
- Museums should have a clear boundary between shop and gallery areas so that visitors are able to make a clear distinction between objects for sale and those on display as part of the collection.
- Catering provides a public service and is not solely for generating income. Good quality food and drink enhances visitors' enjoyment of the museum.
- Museum catering should aim to meet the needs of a wide range of visitors and not, for example, be restricted to full meals. Free drinking water should be available for all visitors.
- Museum catering outlets should be designed and located to minimize risks to the collections.

The commercial activities physically are distributed in different part of the complex as shops, Bottega and refreshments spaces.

The shops are located in the Honor Yard (Corte d'Onore). This choice is made regarding to its importance and its closeness to Via Brera. This yard in the project will be the main open public space which in inside the building and it acts also as a distribution point from which users can access to other main activities such main entrance of Pinacoteca, Central Hub and temporary expositions.

The Bottega part is located in the eastern side of the complex where is via Strettone. Apart of having a series of rooms which are suitable to be independent Bottega, another main reason for this location is to revitalize this street which currently is less used. The design project provides a direct connection from this street

and the Botanic Garden which helps to make it more visited.

A literary café annexed to the complex in the Botanic Garden. This space acts in two ways: one is making a pleasant space of connection between the building and botanic garden in which the sculpture garden is located and the other is providing a shortcut entrance from outside to the main entrance of Pinacoteca. This latter, indeed, has a reciprocal approach in sense of giving possibility also to have access to the literary café from other parts of the complex passing through the entrance of Pinacoteca which helps notably to make the complex more permeable.

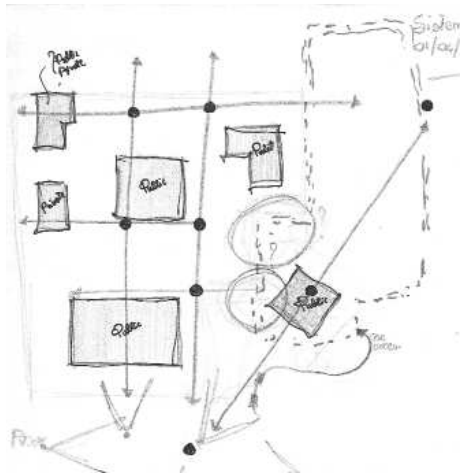
Another set of bars and cafés are located in the basement which occupied the existing rooms in the basement as preparation space close to the central hub. This vicinity provides an opportunity for these bars to use some specified platform as serving area.

Corridors: In the definition of ‘network of itineraries’ in this design project, which is mentioned in the exteriors chapter, the existing corridors play an important role in this network.

Verification of these interior itineraries is done considering the following criteria:

- Identification of entities, functions and gates of the ground floor,
- Providing a static and dynamic canvas for presenting artworks and information,

The corridors act as main horizontal connection ways of the complex. Regarding to the length and uniformity of them, it will be difficult for visitors and especially for new building users to find the entrances and the functions which are distributed



Nodes and connections of the complex

in the whole complex. This problem requires many signposting in order to address people to the correct destination and give useful information about other parts of the building.

In the project design provided a dynamic and technological solution for use the corridors themselves for addressing visitors and providing information. The objective is reducing the signposts and makes the corridors a guidance element.

In order to achieve that, the project proposed to cover the entire corridors by a special canvas and projecting the particular images and information in the specific points and in some points it is thought to insert or hang printed materials. This canvas offers a big framework for housing the artworks of the students' Academy in one hand and on the other hand creates a uniform space in which this uniformity in some points like main entrances and historic frescos which are remained on the walls will be interrupted.

In case of historic remained artworks, the canvas will continue but at that point the material changes to a transparent one in order to protect the artwork. In the points in which there is an entrance, the canvas will provide an opening. These interruptions will create variability in order to make the specific points distinguishable easily by visitors.

Chapter 4:

Conclusions

So, the time has come to draw the threads of this thesis together and to look what are the conclusions of this attempt to redesign the historic building of Brera and transform it in accord to the present day's needs.

My first conclusion looks at the architectural transformation. Our expectations from spaces and their functions change over time in accord to our needs and these expectations act as the engine of transformation. The alteration of a single purpose place to a multi-function one has been undertaken in various urban elements like railway stations, libraries, museums etc. by combining different functions and relative activities. Spaces for the exposition of artworks have also sustained this change by adopting different way of presentation such as closed space and open space exhibition at the same time. This combination provided an opportunity for gathering them as a unified 'system of exposition'. The process of transformation in the contemporary days is not limited only to this 'system' but also for the building which houses this function. Antonella

Hubber in “The Italian Museum” (1997) discusses about that: “(...) we can legitimately sustain that the new use of historic buildings starts, first of all, from a suitable intended use, to be assessed in accord not only with the dimensions and the history of the building, but also with the community’s requirement for the new uses. The architectural language is a subsequent problem in which the relationship with the urban fabric is to have the same importance as the new use.” It seemed that examination of museum design ought to provide an effective language for understanding the changing role of museums and that this was an issue deserving of more systematic analysis and it is valid for both the museums which are realized in the existing historic building and the new constructions. Charles Saumarez Smith in “The Seventh Reyner Banham Memorial Lecture” (1995) said: “Any discussion of the modern museum and its architectural form needs to begin with an examination of the museum’s classic, historical characteristics, since so many of the ways that modern museums are laid out consist of an implicit dialogue with, and commentary on, an always present set of precedents. Many modern museums consist of adaptations of, or additions to, historic buildings; but even when they are built *de novo*, the history of the building type is always expected to be available in the mind. More commonly at this period, museums and galleries would occupy historic buildings and make strenuous efforts to ignore or disguise the historic architecture or, as in the many examples of newly designed galleries in Italy in the 1950s, treated the historic architecture in a way that was self-consciously a historical and essentially abstract. Here the dominant language of display was provided by Carlo Scarpa, who in the Galleria Nazionale in Palermo, the Museo Castelvecchio in Verona and the Museo Correr in Venice, created an idiom of highly aestheticized,

open spaces which enhanced the private contemplation of the single work of art.” I would like to affirm that, the process of transformation happened to many definitions we had made them before, but by maintaining the original significances and routes because, otherwise it will be a new definition.

My second conclusion is that, transformation, especially in a larger scale, is a multi-disciplinary process which requires considering other actors of different fields to evaluate various influential aspects of the new intervention. In order to have a success for a requalification project like Brera, it is inevitable to know the role of the construction, at least in the locality, and its impacts. Considering the scale of complex, by intervention on the complex itself the surrounding area will be affected and they emerge through different aspects such as local accesses, security, economic impacts and quality of life of residents which needs having a multidisciplinary study on them. Therefore this project design from the first steps benefited of the courses by professors from different disciplines.

My third conclusion maybe is a more tangible one. Visiting a museum takes a long time and is so wearisome. Regarding to the high request for such cultural activities both as leisure, profession and education in recent years it seems that it is necessary to revise the way of museum-visiting. The contemporary museums are open to everyone and they have a strict relationship with public at different ages. This relationship also changes the way of communication between museum and the increasing visitors which are increasing especially by acquiring. Arthur Rosenblatt in his article in “The Metropolitan Museum of Art Bulletin” (1970) said: “To help this expanding audience understand the collections, museums are becoming increasingly involved in

education. Museum buildings now need multimedia spaces: spaces suitable not only for exhibition but also for the amazing variety of sophisticated educational devices available today, such as films, recorded tours, or audio-visual orientation programs. In addition, the building should be arranged so the visitor is guided through the exhibits in a logical manner their organization giving him additional understanding of the diversified material. Thus the architect-designer of a modern museum must be aware of what it is that a particular museum needs to communicate through its exhibits, and to see that his design offers a flexibility of use never anticipated by architects in former times. The success of museum administrators and architects in directing the evolution of museum design, in fulfilling their expanding roles in education and the public's pursuit of pleasure, is under far greater scrutiny than ever before. The community expects more from museums today. And the building - the instrument - must be far more responsive to these expectations." At the same time it is necessary to consider also the problem of the path length and personal interests. Therefore the project as an advantage offers two routes long and short. It seems that it will be useful to have a possibility to see the most interesting artworks in a shorter time in order to solve the problem of getting tired which happens during the visiting. As Kahn said of the experience of museum-visiting, "The first thing you want in most museums is a cup of coffee. You feel so tired immediately".

My fourth and final conclusion which regards mostly to the urban aspect is that a huge public building should not be isolated in the middle of the city and should not create a physical obstacle for the urban fabric. The urban aspect of a design project plays an important role especially for greater scale projects. Large utilities are not only used but lived daily. These

facts show the importance of the connection way between building and the city in terms of connection to the urban transportation, various activities in both interior and exterior, crowd and also the architecture of the building itself. The spatial aspect of the palace also has influence on the locality in sense of occupation of territory. So it requires providing enough accesses in order to make a perfect integration with the city and reduce less accessible areas where became marginal over time and they are always problematic in terms of quality of space and security.

For, in the end, the final conclusion that I would draw from this attempt is that the success of a such project, a part of the various scientific criteria, can be evaluated also by observing the relationship of the public and the complex which interacts and makes the place more dynamic and pleasant and this interaction consequences the spaces more functional and sustainable not only for the specific users but also for people who do not have a direct correlation with the main purpose of the complex.

Bibliography

1. Antonella Huber, *The Italian Museum*, Milano, Lybra, (1997)
2. Walter Benjamin, *L'opera d'arte nell'epoca della sua riproducibilità tecnica: arte e società di massa*, Torino, G. Einaudi, (2000)
3. F. Bucci, A. Rossari, *I musei e gli allestimenti di Franco Albini*, Milano, Electa, (2005)
4. Arthur Rosenblatt, *Architects and Museums*, The Metropolitan Museum of Art Bulletin, New Series, Vol. 28, No. 8 (1970), pp. 355-361
5. Charles Saumarez Smith, *Architecture and the Museum: The Seventh Reyner Banham Memorial Lecture*, Oxford University Press on behalf of Design History Society, *Journal of Design History*, Vol. 8, No. 4 (1995), pp. 243-256
6. Garry Thomson, *Book Review - Studies in Conservation*, Vol. 11, No. 3, International Institute for Conservation of Historic and Artistic Works (1966), pp. 160-162
7. The Museums Association, *Ethical guidelines 3 - Trading and Commercial Activities*, address link: <http://www.museumsassociation.org/download?id=8355>
8. Giampaolo Nuvolati, *Resident and Non-resident Populations: Quality of Life, Mobility and Time Policy*, *Journal of Regional Analysis & Policy*, Vol. 33, n. 2, pp. 67-83, (2003)
9. Giampaolo Nuvolati, *Mobilità quotidiana e complessità urbana*, Florence, Firenze University Press, (2007)
10. Dominique Gauzin-Muller, *Architettura sostenibile: [29 esempi europei di edifici e insediamenti ad alta qualità]*

ambientale], Milan, Edizioni Ambiente, (2003)

11. Lorenza Perelli, *Public art: arte, interazione e progetto urbano*, Milano, F. Angeli, (2006)

12. Giovanna Fossa, *An atlas for Milan. Renewing the urban contexts of infrastructure nodes*, Milan, Skira, (2006)

13. Cecilia Ghibaudi, *Brera e la guerra*, Milano, Electa, (2009)

14. Steven Holl, *Parallax : architettura e percezione*, Milano, Postmedia books, (2004)

15. Jimena Blazquez Abascal, *Sculpture parks in Europe : a guide to art and nature*, Basel ; Boston ; Berlin, Birkhauser, (2006)

16. Marc Augé, *NON-PLACES*, London, New York, Verso, (2008)

17. Ch. Song, T. Koren, P. Wang, A. Barabási, *Modelling the scaling properties of human mobility*, Nature physics, an article which is published online, (2010), article link: <http://www.nature.com/nphys/journal/v6/n10/full/nphys1760.html>

18. Wikipedia, *Flâneur*, address link: <http://en.wikipedia.org/wiki/Fl%C3%A2neur>

19. Brera web site, *Approfondimenti e materiali*, address link: http://www.brera.beniculturali.it/Page/t02/view_html?idp=280

List of Drawings

Concept	01
Site Plan [1:2500]	02
Functions and Flows	03
Central Yard - General Plan [1:100]	04
Central Yard - Facade View	05
Central Yard - Section [1:50]	06
Central Yard - Section [1:50]	07
Central Yard - Details [1:10]	08
Painting Gallery Entrance [1:200]	09
Painting Gallery	10



Politecnico di Milano
Facoltà di
Architettura Ambientale
Sede Piacenza