

Connect to reveal

**Proposal from making a 15th
century cloister into an inclu-
sive and participative space**

Politecnico di Milano

Master's degree
Building Architecture
Master thesis

Connect to reveal **Proposal from making a 15th century cloister** **into an inclusive and participative space**

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Index

Abstract

Introduction

I. Cloisters San Barnaba

1.1. Origins

1.1.1. San Barnaba convent

1.1.2. Società Umanitaria

1.2. Changes during the time

1.2.1. The urban surrounding growth

1.2.2. The site evolution

1.3. Present

1.3.1. Functional analysis

1.3.2. Its potentialities and fragilities

II. Opening the cloister to the public

2.1. Design of a Pavilion

2.1.1. An entrance, a passage

2.1.2. A link

2.1.3. Structure and technology

2.2. Definition of passages

2.2.1. Through the library

2.2.2. Between two cloisters

III. Introducing inclusive functions

3.1. Workspaces

3.1.1. Library and archives

3.1.2. Student open spaces

3.2. New outdoor spaces definition

3.2.1. Public garden

3.2.2. Library garden

3.3. The cafeteria

3.3.1. Relationship between two times

3.3.2. Connection between three spaces

Results of the visual and physical connections

Conclusion

Index of figures

Bibliography

Acknowledgements

Abstract

Società Umanitaria, a non-lucrative association, currently face a recognizability problem in its headquarters located in Milan city center. Indeed, it is inside a 15th century cloister, behind a church rarely opened. These matters make the cultural center too private. Its visibility in the urban context is too low and it's not well connected for potential users, visitors.

The research aims to discover how to make Società Umanitaria more evident from the outside, to use the potential of its buildings and to correct its weaknesses. To design a more inclusive and participative space, a deep study on San Barnaba convent history is presented to reconnect the place to its roots. Architectural changes are proposed to invert the visibility state of Società Umanitaria by creating a pavilion and defining new entrances and openings. Finally, a different function organization inside the cloisters is suggested to provide more accurate spaces for the neighborhood needs. The results indicate that the visual and physical connections make Società Umanitaria more attractive, visible and connected to its time and surroundings.

The redesign of the institution headquarters point denote that a 15th century closed complex can be an inclusive building from the 21st century.

Chiostro San Barnaba

Origins

San Barnaba convent

Chioostro San Barnaba history begins in the 15th century, when the Sforza family donated an area of Milan to Amedeo Mendes da Silva, a noble from Portugal who gave up his wealthy life to become a Franciscan. It was in 1466 that the construction of the Church of Santa Maria della Pace and its adjoining convent began. The construction of the complex was long. It was stopped in 1470 by Pope Paul II due to the constitution of a new Franciscan congregation. The church was finally inaugurated in 1497.

The Franciscan convent sheltered brothers. They respond to Saint Francis of Assisi, who gave them a way of life summarized in the Rule. The Franciscan project has several dimensions: contemplative life, fraternal life, a preference to help the poor and evangelization mission. In 1500, the First Order of Saint Francis numbered 60,000 brothers. They are calling themselves brothers to each other. They have the same rights and the same duties. They live in houses called convent, meaning gathering (the word monastery is inappropriate, it's reserved for the Clare's house). The Franciscans are not monks, but a religious group called Mendicant Orders. It is a mixture of the two typical forms of religious life: contemplative and active. Throughout the centuries and across countries, the Franciscan Order has had specific values: poverty, simplicity, humility, justice, peace and joy, wonder at God, at people and at all creation ... They are not

gathered for a specific work, nor to have jobs. It is according to the needs of various periods that they find and maintain places of pilgrimage, chaplaincies, parishes, summer camps, magazines, etc. Once the missionary goal is understood and lived, each brother is encouraged to do honest work according to his abilities and tastes... and, again, according to need. They can devote themselves to all kinds of honest work, according to the urges of the hour: pastoral, social, community, educational, missionary work, etc. They are helping to build a new world. Among the Franciscans there are social animators, nurses, cooks, preachers, parish priests, catechists, teachers, journalists, secretaries, mechanics, etc. As for the San Barnaba Convent, in the 16th century it only had 60 cells and 3 cloisters. It was not until a century later that it was extended with 30 additional cells and a cloister. In 1805, the convent, disused and belonging to the State, was requisitioned by Napoleon. Its function will change many times like many other religious buildings at that time, becoming first a stable, then a warehouse, a hospital and finally a correctional school. In the 19th and 20th centuries, the complex took different paths, but it was redeveloped and devoted again to religion when the nuns of Santa Maria Riparatrice became the landlords. The San Barnaba Convent was owned by the Marchiondi House of Correction and was finally bought by Prospero Mosè Loria, Italian entrepreneur and philanthropist, the creator of Società Umanitaria.

Società Umanitaria

Prospero Moisé Loira, patron of Mantua, founded the Società Umanitaria in 1893. This historic Milanese institution is growing thanks to the generous donation he made upon his death.

Società Umanitaria is a non-profit association. Thanks to the intellectual and material contribution of experts and project supporters, it provides assistance to the poorest. It has developed weapons with a view to combat poverty and fight for equality. Società Umanitaria provides help, work, education, training and culture. It is a socially engaged association that resists for progress and for emancipation. It engenders the construction of social housing, the creation of the School of Decorative Arts, the Teatro del Popolo, the Scuola del Libro, and pushes aid for immigration.

Its headquarters are in Milan, but it was not until 1907 that the Società Umanitaria moved into the cloisters of San Barnaba. The association is now all-around Italy like in Rome, Naples and Sardinia.

SOCIETÀ UMANITARIA

FONDAZIONE P. M. LORIA

MILANO - Via San Barnaba, 38 - MILANO

SEZIONI, SEGRETARIATI ED UFFICI:

- MILANO: Ufficio Centrale dei Segretariati laici di assistenza agli Emigranti - Via S. Barnaba, 38.
ROMA: Società Umanitaria - Piazza Campo Marzio, 7.
TREVISO: Ufficio Centrale del Lavoro presso il Comitato Governativo - Villa Margherita.
VENTIMIGLIA: Società Umanitaria - Via Ruffini, Palazzo della Posta.
BERNA: Società Umanitaria - Marktgasse, 50.
MARSIGLIA (Francia): Società Umanitaria - Rue Sylvabelle, 54.
MODANE: Società Umanitaria.
NANCY (M.-&-M. - Francia): Dott. Domenico Salza - rue des Jardiniers, 48.
- ABBIEGRASSO: Ufficio collocam. Contadini.
ALESSANDRIA: Segretariato provinciale della Emigrazione - Deputazione Provinciale.
ANCONA: Segretariato del Popolo - Piazza Umberto I, Portici Teatro delle Muse.
AOSTA: Società Umanitaria - Via Umberto I, 2.
AQUILA: Segretariato dell'Emigrazione - Piazza del Duomo.
ASCOLI PICENO: Segretariato per gli Emigranti.
AVELLINO: Comitato Dante Alighieri.
AVEZZANO: Segretariato Emigrazione - Palazzo Comunale.
BARDONECCHIA: Società Umanitaria.
BARI: Sezione Barese della Società Umanitaria - Corso Vitt. Em., 57.
BELLINZONA (Svizzera): Camera del Lavoro.
BELLUNO: Segretariato dell'Emigrazione - Viale delle Alpi, 15.
BERGAMO: Società Umanitaria - Via dei Mille, 12.
BIELLA: Società Umanitaria - Piazza d'Armi, 1.
BINASCO: Ufficio collocamento Contadini.
BOLOGNA: Segretariato provinciale dell'Emigrazione - Presso l'Ufficio del Lavoro, Palazzo Provinciale.
BRESCIA: Società Umanitaria - Via Tosio, 14.
CASALMAGGIORE: Segretariato del Popolo - Casa Comunale.
CASTANO PRIMO: Gruppo Emigranti - Casa del Popolo.
CASTELLAMARE ADR.: Segretariato Emigrazione per la Provincia di Teramo - Piazza Vittorio Emanuele.
CESENA: Segretariato Emigrazione - Camera del Lavoro.
CHIETI: Segretariato Emigrazione - Via dello Zingaro, 10.
CODOGNO: Ufficio intermandamentale di Collocamento - Palazzo Municipale.
COMO: Segretariato provinciale dell'Emigrazione - Via Volta, 4.
CREMONA: Società Umanitaria - Via Meli, 8.
FABRIANO: Segretariato Emigrazione.
FELTRE: Segretariato circondariale dell'Emigrazione - Palazzo Comunale.
FERRARA: Ufficio Provinciale del Lavoro.
FIRENZE: Segretariato Toscano dell'Emigrazione - Via de' Conti, 1.
GENOVA: Segretariato Emigrazione - Via San Luca, 4.
GUALDO TADINO: Società Operaia di Mutuo Soccorso.
GUASTALLA: Segretariato Emigrazione per la provincia di Reggio Emilia - Camera del Lavoro.
- IGLESIAS: Segretariato del Popolo.
IMOLA: Segretariato Emigrazione - Camera del Lavoro.
JESI: Segretariato Emigrazione - Camera del Lavoro.
LANCIANO: Ufficio del Lavoro e dell'Emigrazione.
LODI: Ufficio collocamento Contadini - Corso Vitt. Emanuele, 29.
MACERATA: Segretariato Provinciale per gli Emigranti.
MANTOVA: Segretariato Provinciale dell'Emigrazione - Via Trieste, 20.
MELÉGNANO: Ufficio collocamento Contadini.
MODENA: Segretariato del Popolo - Palazzo Comunale - Via C. Battisti, 11.
MONZA: Alleanza Economica Operaia - Via Azzone Visconti, 23.
NAPOLI: Società di Patronato per gli Emigranti - Via Marina Nuova, 77.
NOVARA: Segretariato provinciale dell'Emigrazione - Piazza V. E., Palazzo Mercato.
PADOVA: Ufficio di Tutela degli Operai Emigranti - Società Umanitaria - Palazzo Comun.
PALLANZA: Ufficio Assistenza.
PARMA: Segretariato Emigratz. - Via Vitt. Em., 162.
PAVIA: Società Umanitaria - Via Scapoli, 12.
PIACENZA: Società Umanitaria - Corso Vittorio Emanuele, 212.
ROMA: Consorzio Laziale di Assistenza ai Lavoratori - Piazza S. Marco, 17.
ROVIGO: Segretariato Emigrazione - Via Poste Vecchie, 7.
SULMONA: Segretariato Emigrazione - Università Agraria.
TERAMO: Segretariato dell'Emigrazione.
TIRANO: Sezione Valtellinese della Società Umanitaria - Ufficio provinciale dell'Emigrazione e del Lavoro.
TORINO: Segretariato Provinc. dell'Emigrazione - Stazione di Porta Nuova - Baracca N. 2.
TREVISO: Segretariato Emigrazione.
UDINE: Società Umanitaria - Piazza Vittorio Emanuele, 4.
VARALLO: Segretariato Circondariale d'Emigrazione e d'Assistenza.
VARESE: Segretariato Circondariale di Emigrazione, Assistenza e Lavoro - Via Grifi, 3.
VENEZIA: Segretariato Provinciale dell'Emigrazione - Deputazione Provinciale.
VERONA: Società Umanitaria - Palazzo Gran Guardia.
— Segretariato Emigrazione - Piazza Erbe, 17.
VICENZA: Segretariato provinciale di Emigrazione - Corso Umberto I, 60.

Figure 1: The offices of Società Umanitaria in Italy in 1920

Changes during the time

The urban surrounding growth

Due to the historical maps research, it is possible to observe the urban growth of the Guastalla neighborhood. We can go back from the 17th century and notice the construction of another brick construction located via San Barnaba.

La Rotonda della Besana has been built in a gloomy moment of Milan history. Indeed, the town lost around 46% of its population caused by the Great Plague, a black death epidemic brought by the French troops during the Thirty Years' War. The amount of dead people filled the cemeteries and at the end of the 17th century, the Ospedale Maggiore was insufficient and not adequate for the sanitary needs of a big hospital. The town of Milan decided to build new cemeteries at the borders of the city. La Rotonda della Besana saw the light at the end of the 17th century with its late baroque style church in its center. It was dedicated to bury the unclaimed corpse, named "Foppone". But in 1792, its function changed because of the new Austrian laws and became abandoned. For a century and a half, the building had many purposes from an Italian glories memory building to barracks, warehouse, storage, a hospital bleachery, a hospital, the photo gallery of the Ospedale Maggiore and finally abandoned a second time from 1910 to 1938, its acquisition by the Milan Municipality. Restored in 1956, in the 90's and in 2010-2012, La Rotonda della Besana is now the Children Museum of Milan.

The complex is composed of a Greek cross church in the center inaugurated in 1700, named San Michele ai Nuovi Sepolcri. It has four arms leading to four identical facades, an octagonal dome and a rich portico with four exedras. The enclosure is in exposed bricks composing a symmetrical polylobed plan punctuated by arches on pilasters, opened by large windows and oculi.

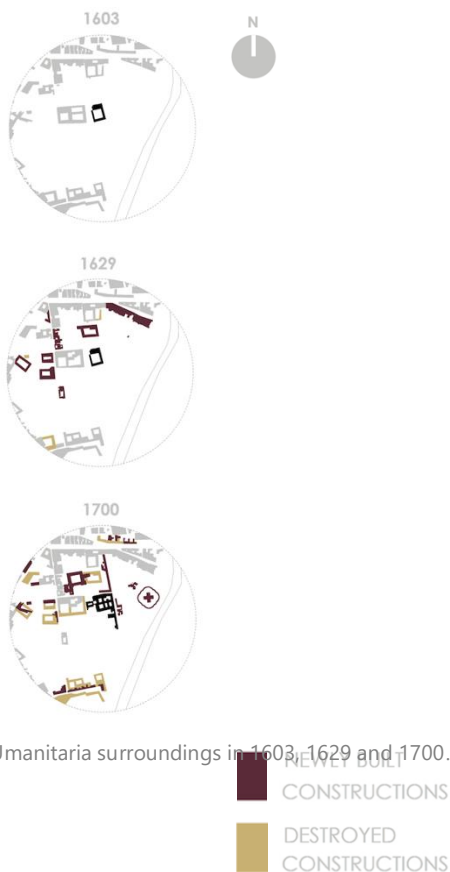


Figure 2: Plans of Società Umanitaria surroundings in 1603, 1629 and 1700.

From the maps of 1856 and 1910, a colossal density growth of Guastalla is noticeable. Again, Milan history explains it with the Industrial Revolution. The Italian Kingdom was unified in the second half of the 19th century and Milan became the commercial city of the north of Italy. Railway construction was developed and made Milan the biggest connection hub of Italy. In the beginning of the 20th century, Milan was the principal south European railway hub of business and of foreigner's travel. With all those developments, the city needed to grow and in 1930 we can observe an urban density close to nowadays density.

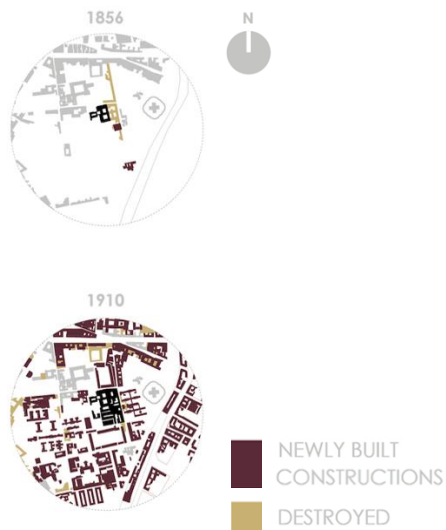


Figure 3: Plans of Società Umanitaria surroundings in 1856 and 1910.

Between the map of 1930 and the map of 1946, we can spot the new construction via San Barnaba, facing the Chiostro San Barnaba, the Palazzo di Giustizia of Milan. Its story began in the end of the 19th century when the justice offices were way too small in the Piazza Beccaria. In the beginning of the 20th century, the places multiplied because of lack of spaces. A concentration building was needed to solve this issue and, in 1929, a public competition was launched by the mayor G. de Capitani d'Arzago. The new Palazzo di Giustizia will take place in a parcel between Corso di Porta Vittoria where the San Prassede barracks were taking place. The concept had to be "simple and severe that must serve the purpose for which the building is designed and be worthy of the city of Milan", said the mayor. Three over twelve projects presented got retained but none was worthy enough. Since the situation was getting worse, the Podesta (fascist authority representative) and the mayor had to decide and agreed to trust an architect that proved his capabilities in the past to design the tribunal. Marcello Piacentini (1881-1960), professor in Rome and monumentalist architect, proposed a design in October 1931 which was accepted by the Head of State in February 1932 who qualified the project as "worthy to represent justice in Milan". It's a complex of thirty thousand meters square divided in three sections: the Court of Appeal, the Magistrates Court and the Court, perfectly independent of one another with their own entrances from the outside, but connected through two large parallel halls, crossing lengthwise the whole building. Regarding its structure in front of the

cloisters of San Barnaba, the facade is one hundred seventy meters long and twenty height meters high. This side has a triple entrance and a portal surmounted by an inscription "Justicia" and two bas-reliefs made by Corrado Vigni.

We also notice multiple changes in the city between 1930 and 1965 because of the bombings of the second World War. The British Army bombed the north of Italy in 1942 and 1943, targeting the "industrial triangle" composed of Milan, Turin and Genoa. It started in October 1942, 135 tons of bombs were dropped on the city center of Milan. San Vittore prison is touched, as well as the headquarters of Hoepli, two train stations and the Monumental Cemetery. They discovered that the firebombs were less efficient in Italy than in Germany due to their larger streets and stone and brick building structure. It continued in February 1943 with 110 tons of bombs targeting the factories of Alfa Romeo, Caproni, Breda and Fraschini. The train stations of Centrale and Farini were also touched as well as residential zones of the city. The historical buildings damaged were Palazzo Reale, the Teatro Lirico and the Basilica of San Lorenzo. But it's in August 1943 that Milan suffered the most. It was attacked four times in ten days with 2 470 tons of bombs. Fortunately, 900 000 to 1 150 000 inhabitants were evacuated after previous bombardments. Most of the people still in Milan left on the 13th of August. The raids of 1943, particularly violent, killed more than 1000 people, damaged 50% of the buildings while 15% of them were destroyed. It left 250 000 people homeless. In spring 1944, bombardments continued targeting the

Lambrate train station and in October 1944, it was the factories of Breda, Fraschini and Alfa Romeo which were the intention. The Fraschini factory was missed and the commander decided to drop the bombs when he realized. The explosives were released on Gorla and Precotto, two suburbs of Milan. The finality of those attacks were 2 200 people killed. A third of Milan inhabitants, that is 400 000 people, lost their houses. The city lost a third of its buildings. The bombardments targeted the city center which resulted in losing three quarters of the historical buildings like Sforza Castle, the Palazzo Marino, Santa Maria delle Grazie, San Fedele Church, Vittorio Emanuele II Gallery and the Duomo of Milan.

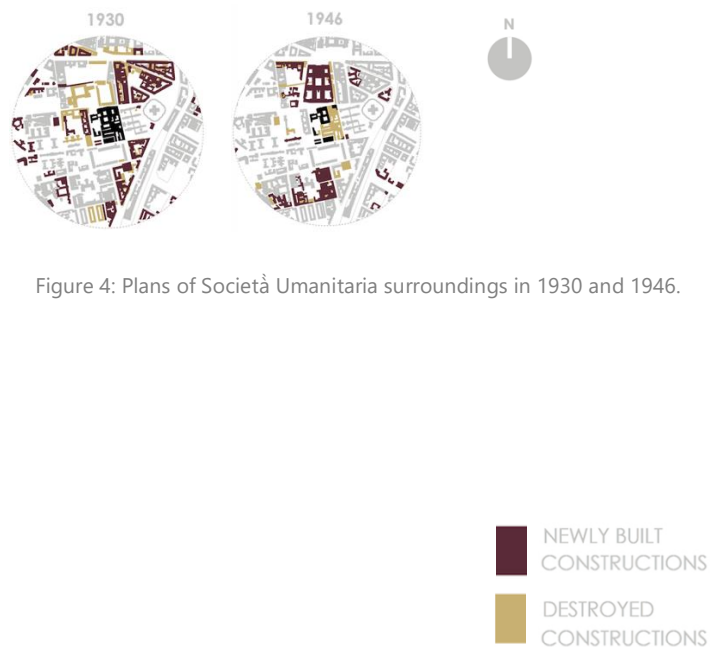


Figure 4: Plans of Società Umanitaria surroundings in 1930 and 1946.



Figure 5: Colonne San Lorenzo after the bombardments, Milan, 1943.



Figure 6: Via Poliziano after the bombardments, Milan, August 1943.

At the end of the second World War, 65% of the building of the Cultural Heritage of Milan and its urban fabric were destroyed. Despite, for example, the Last Supper of Leonard da Vinci, the blocks of sand and reinforcements were not sufficient apparels to protect the original masterpieces that were kept in the walls of Milan. In 1944, the municipality gave a financial help of one million Italian lira that paid only the clearing of the streets. In 1947, the ruins of the lost city were used for the artificial hill project of Piero Bottoni, the Monte Stella. The city was completely down. The rise of the population, already started in the 30's, the effect of the war and the real estate speculation confused the city even more and the zones that were very proletarian before World War 2, became the new favorites. But the debate of reconstruction of Milan is very present in the architectural discussions. Should the architects rebuild Milan identical, or should they take this opportunity to design in the way of freedom and modernity? The famous group of architects of Milan and Venice (Albini, Gardella, Figini and Pollini, Bottoni) tried to answer this question. The head of the group, Ernesto Roger, director of, at that time the leading architecture magazine, *Casabella Continuità*, provided an interpretation: not to imitate forms but to preserve their own identity. This resolution led to the construction of architectures nowadays belonging to the cultural heritage of Milan like the Torre Velasca (BBPR, 1956-1958), the Pirelli skyscraper (Gio Ponti, 1956-1961), or the Padiglione d'Arte Contemporanea (Ignazio Gardella, 1951-1954).



Figure 7: Plans of Società Umanitaria surroundings in 1946, 1965 and 1990.

Between 2012 and 2020, we recognize the construction on the same parcel of the convent San Barnaba. In- deed, the work of Tribunal Work, Family and Guardianship, by Carmelo Mauguri, started in 2011 and ended in 2016. It is 52 meter long via San Barnaba and 110 meters long via Pace, where the Teatro del Popolo was. This twenty meter high building has a dark grey metallic covering. The original wall from the 15th century via San Barnaba was kept. In via Pace, the architect decided to continue the brick structure with the same material in a more modern way.

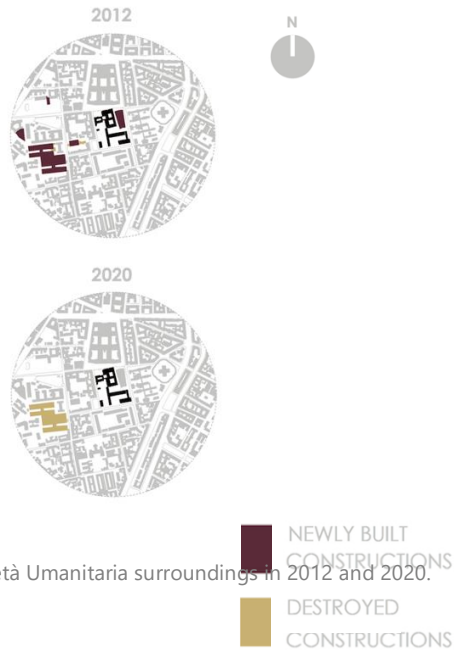


Figure 8: Plans of Società Umanitaria surroundings in 2012 and 2020.

The site evolution

The historical maps found from 1603 to 1700 show the genesis of the complex San Barnaba. Until the middle of the 17th century, the building was composed by Santa Maria della Pace Church and the beginning of the convent. It's at the end of the century that the convent was developed and could host a larger number of Franciscans.

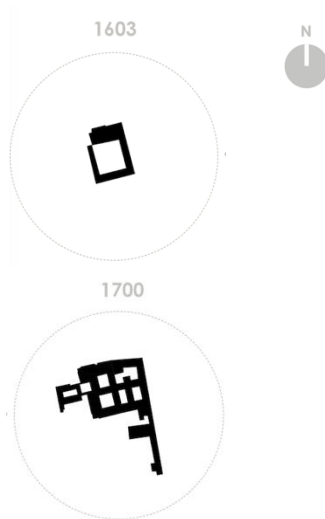


Figure 9: Plans of San Barnaba complex in 1603 and 1700.

In the 19th century, the convent started its long journey beginning with Napoleon. Due to the changes of functions, the complex lost many parts. But in 1907, it finally became the headquarters of Società Umanitaria. The association didn't hesitate to build on its land many offices, classrooms, and other spaces dedicated to its light motive: provide help, work, education, training and culture to the poorest.

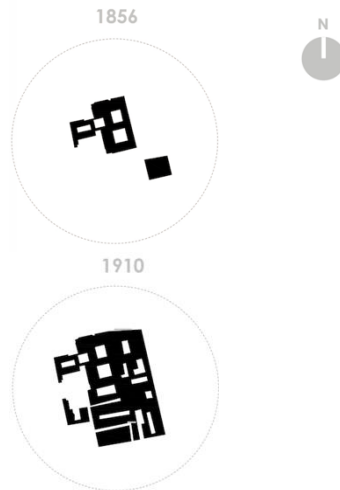


Figure 10: Plans of San Barnaba complex in 1856 and 1910.

Of course, as mentioned before, the parcel of Società Umanitaria suffered the most during WW2. 80% of its buildings were in ruins and many masterpieces in the Salone degli Affreschi were destroyed. It was a turning

point for the association led at the time by Riccardo Bauer. It was missing funding, at the end of the war humanitarian projects were devalued and, finally, it was confronted with great administrative and bureaucratic difficulties for its reconstruction. But Riccardo Bauer didn't let himself be defeated and launched the renaissance project of Società Umanitaria. He undertook the program of the building renewal and strengthening with the motto: "educate for democracy". This project became his plan of action and education to be applied in all areas, in all activities, in all sectors of the life of the community. In 1945, only certain activities could resume in the few remaining classrooms.

For the reconstruction, the competition resulted in taking the architect Giovanni Romano from the plans of Ignazio Gardella. The project consisted of rebuilding Società Umanitaria in an educational and cultural aspect. The north building was dedicated to art rooms while the south building was for cultural matters. The structure followed the concept of the free plan with large spaces that could be easily converted. 20x30 cm prefabricated and hyper vibrated concrete posts made up the load-bearing structure. The posts were spaced one meter apart and therefore facilitate the composition of the parts. On the facade, there were bay windows framed with iron rods made by the students.



Figure 11: Chiostro dei Pesci after the bombardments, Milan, 1945.



Figure 12: Chostro della Memoria after the bombardments, Milan, 1945.

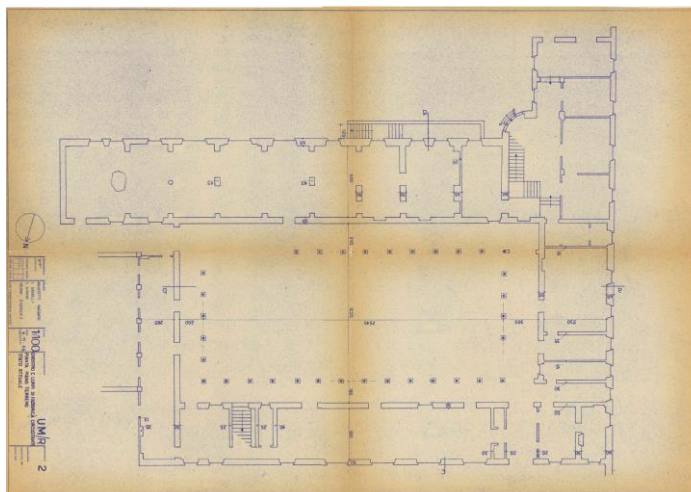


Figure 13: Ground floor plan of Chostro dei Glicini after the bombardments, Giovanni Romano, 1947.

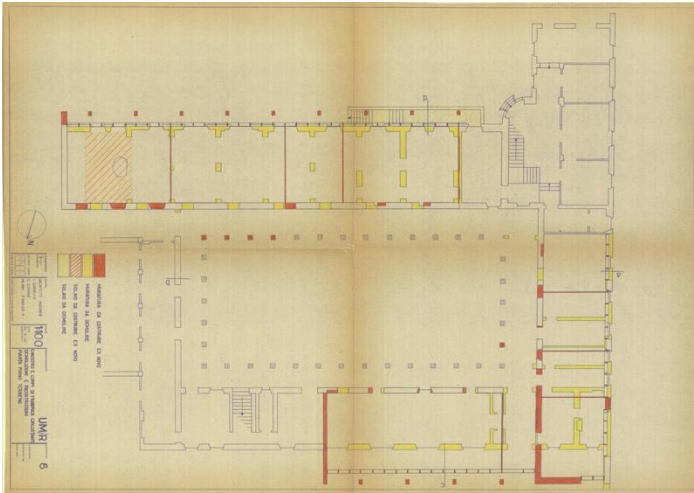


Figure 14: Restoration ground floor plan of Chostro dei Glicini, Giovanni Romano, 1947.

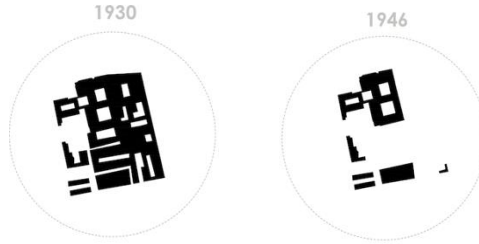


Figure 15: Plans of San Barnaba complex in 1930 and 1946.

In the late 50's, the south part of the parcel was designed. The Convitto and the light machinery school are built as well as, nowadays, a school, notarial archives and some court offices. Since the 60's, Società Umanitaria plot didn't change apart from the construction of the Tribunale Work, Family and Guardianship, by Carmelo Mauguri, in 2016.

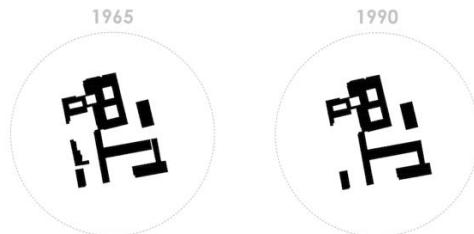


Figure 16: Plans of San Barnaba complex in 1965 and 1990.

Timeline

1466

Construction of Santa Maria della Pace Church starts.

1907

San Barnaba Convent becomes the head quarters of Società Umanitaria.

16th century

San Barnaba Convent had 60 cells and 3 cloisters.

19th century

The function of the convent changed a lot.

1805

Napoleon takes over the complex.

October 1892

Prospero Moisé Loria donate his legacy to Società Umanitaria.

June 1893

Creation of Società Umanitaria, « to help the dispossessed to take over from themselves providing them with support, work and education ».

1497

Consacration of Santa Maria della Pace Church.

1924

Fascism seizes the association and purges it.

1943 - 1944

80% of the convent is destroyed due to the WWII bombardments.

1948 - 1956

San Barnaba Convent reconstruction by Gardella and Romano.

1957

Construction of the convitto, for students.

1990's

San Barnaba Convent restoration.

1991

Award of Civic Recognition Gold Medal from Milan Municipality.

1957

UNESCO becomes a partner of Società Umanitaria.

1947

Second competition of Società Umanitaria.

2007

Construction of the courthouse.

1937

First competition of Società Umanitaria.

Present

Functional analysis

The cloister of San Barnaba is located on a parcel located 15 minutes from the Duomo, in the district of Guastalla. The convent is now made up of 4 cloisters in which Società Umanitaria organizes all kinds of events: concerts, weddings, fashion shows, banquets ...

The largest of the cloisters is the Chiostro dei Pesci. Its courtyard has a fountain dating from the 15th century, the fishes that lived there gave it its name. There is also a porch and a hundred-year-old beech tree. It serves 3 outdoor circulations, one of which leads to the Salone degli Affreschi, the former refectory of the convent. This 300 square meter room is today the most valuable room of the complex. Indeed, it is adorned with frescoes dating from the mid-15th century reproducing the Crucifixion, made by Bernardino Ferrari, the Last Supper of Lomazzo, a copy of that of Leonardo da Vinci, and other works by Marco d'Oggiono. Well damaged during the bombings of the Second World War, the ruined parts of the room were rebuilt and then a restoration work was established in 1995. This room gives access to the Giardino dei Tigli which, having direct access to the street, makes the organization of events very practical.

The Chiostro delle Statue is directly accessible from Via San Barnaba. At the end of the garden, a statue dating from the 1900s gave it its name. Its wooden terrace with two tall magnolias is used by the restaurant Il Chiostro di Andrea.

The Chiostro della Memoria is just aside, only separated from a cinema room. It is the smallest cloister but it has a very nice solar exposure. It gives access to the Giardino dei Platani, a much larger garden with an orchard, two small ponds and a gazebo. These two spaces are separated by a brick wall dating from the construction of the convent where there are damaged frescoes.

Finally, the Chiostro dei Glicini, characterized by wisteria climbing on its four facades, gives access to parts dating from the Gardella-Romano restoration. It has more modern buildings and a private garden in front of the Church of Santa Maria della Pace.

The functional organization within the head office of Società Umanitaria is mostly semi-private. Indeed, 56% of the activities belong to the field of culture: a cinema, an auditorium, four exhibition halls and a reception hall. 11% is assigned to educational spaces: twenty-seven classrooms and a library. Finally, 33% of the building is devoted to the private sector: offices and archives.

Its potentialities and fragilities

-
-
-

Opening the cloister to the public

Design of a Pavilion

An entrance, a passage

The design project is a pavilion located in the garden in the north part of the plot. The garden is not used while it has many strengths. It is big of more than 300 m², composed of decades old trees and provides a direct view of Santa Maria della Pace Church. It's on Via San Barnaba, a busy street, behind the tribunal, connecting La Rotonda della Besana to the university of Statale.

The pavilion is a triangular outdoor space, covered by a concrete flat roof. It is supported on two sides by concrete planks placed in a specific rhythm. The third side is a structural wall comporting windows in concrete boxes facing the church.

The intentions of this space are multiple. The pavilion is meant to be an experience, a path. It defines, first, an entrance. It connects the cloister to its history and to its surroundings. It creates exterior spaces for the visitors and for the users of Società Umanitaria but also a covered area to observe a monument. Finally, the pavilion is a new public space for Società Umanitaria and for its neighborhood.

What is the first thing we see on a building? Objectively, we see the entrance: an opening, such as a door, passage, or gate, that allows access to a place. How do we enter Società Umanitaria?

The design research began at this specific question, when we realized the answer was more complicated

than it should be.

Società Umanitaria headquarter is reachable by two main accesses: Via San Barnaba, 25 and Via Francesco Daverio, 7. Those two gates are not very different. They are discrete and not bringing the visitor to a specific space or use in the former convent. The access Via San Barnaba is generally used by the clients of the restaurant Il Chiostro di Andrea or by the guests of an event. The gate in Via Daverio is mainly used for people who come to study or to work in their office. They come to hear or see conferences, exhibitions, or to participate in events. Moreover, the two entrances are unclear in the urban landscape. In Via San Barnaba, it's a passage through a brick arch where the limit between the courthouse and San Barnaba convent is. There is still a lot of construction work going on and the narrow path doesn't retain the attention of the pedestrian. In Via Daverio, even if the gate is wide and better defined, it brings the people into the Platani Garden where all the buildings of the plots are. The visitor is not led anywhere and might get lost without signaletic. This investigation shows that if a person wants to enter Società Umanitaria, they will have to choose between two unclear and not dedicated accesses.

The pavilion defines a new entrance in Via Francesco Daverio of 8,7 meters. The access' width and height make it more recognizable for the pedestrian and so becomes the main access of Società Umanitaria. It also needs to be visible from both streets. Of course, in Via Daverio, the pavilion is prominent but, in Via San Barnaba, it is through the existing wall surrounding the

garden that the building is distinguishable. After the visitor enters the pavilion, they will notice the planks. Those structural elements are not only supporting the roof, but their rhythm has specific impacts on the visitor experience.

The Serpentine Gallery Pavilion of Peter Zumthor in London made in 2011 is a great reference. The visitor experiences an event while visiting it. Indeed, the building is, from the exterior, a black rectangle without any openings, rather hostile than inviting. But the architecture leads the people inside narrow corridors to finally arrive in a warm and flowerish cloister. The Tamayo Pavilion by Fernanda Canales, in Mexico City made in 2018, is, as described by the architect, an open museum. The architecture is an open and outdoor space. The walls are defining a path like a labyrinth. They also have the function of leading the eye of the visitor. Some of them have openings like windows, some others have mirrors which reflect the vegetation. The people are driven to see specific things. Moreover, it looks like the architect took care of the existing vegetation by creating an irregular adaptable plan.

These references show how architectural design can make people see and go where the designer wants to. Architecture makes you live an adventure, feel emotions and this is what the rhythm of the planks does. The planks are deciding where the visitor can pass and can see through the spacing between themselves. The minimum interval is 35 centimeters while the maximum is 1,50 meters. The maximum interval is set so the visitor can access to the "public" garden and to Società Umanitaria library entrance, an

arch-shaped door designed on nude facade of Gardella-Romano restoration.

The boxes are also a part of the experience made by this building. They set up an observatory of the church. These narrow spaces provide a seat and a view on the origin of San Barnaba convent, the Santa Maria della Pace church.

The entry of the light inside of the pavilion is a challenge. Indeed, as mentioned before, the garden has a north exposition since San Barnaba convent blocks the sun rays to come on the structure. To overcome this problem, a light analysis has been made to understand the black spots of the plot. Figuring the places where it would be very obscure, the pavilion was taken down from the wall of San Barnaba to not create more shade in the library. Then, the intervals of the planks played a part in letting the light enter the dark areas of the pavilion.

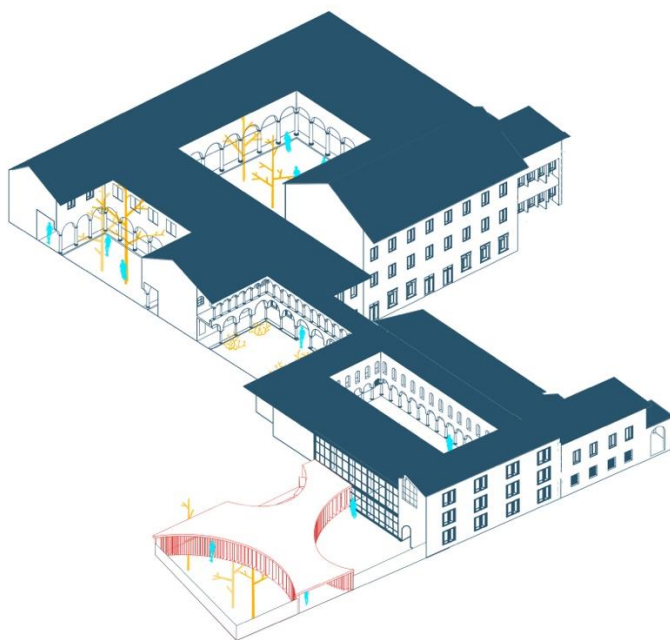


Figure 17: Isometry global of the design project

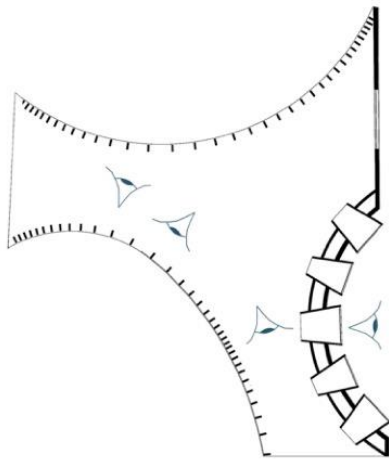
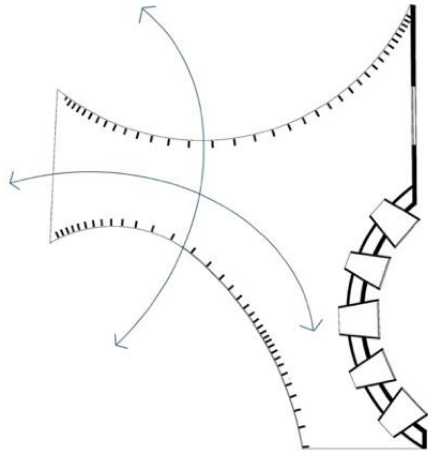


Figure 18: Schematic plans of passages and views provided by the pavilion



Figure 19: Società Umanitaria entrance from Via Daverio



Figure 20: Pavilion entrance



Figure 21: View from the pavilion on Società Umanitaria library entrance

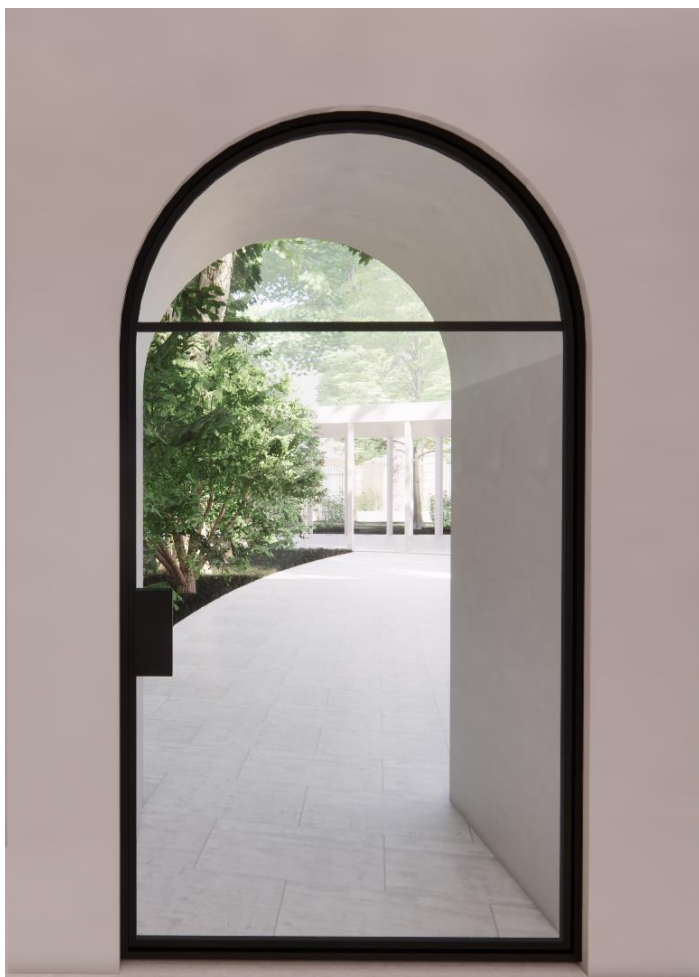


Figure 22: View from Società Umanitaria library entrance on the pavilion



Figure 23: View from Santa Maria della Pace church on the pavilion



Figure 24: View from the pavilion boxes on the church

A link

The pavilion has a connection function. Indeed, it relates the cloister San Barnaba to its surroundings. But what are the surroundings of the cloister? Three types can be defined as its "surroundings". First, the neighborhood. The implementation of the entrance makes the cloister more visible. But the design project needs to be related to the urban fabric. To do so, the original wall enclosing the garden is kept. The creation of outdoor spaces like the two new gardens are another link with the location. As seen before, the neighborhood is mainly residential and procures a lot of schools. A new public garden is needed in a city to breathe, enjoy nature, find calm or let off steam for the youngest. Secondly, the pavilion represents a transition from the street to the cloister. It doesn't have clear limitations between the spaces it creates. For example, a visitor comes from the street, a public space, and enters inside of the pavilion. They have the choice between staying in the public garden, observing the church, reading in the library garden and entering in the library. The pavilion does not define three different limited spaces but a graduation through the exterior to the interior. Finally, the pavilion is reconnecting the cloister to its history. As mentioned before, Santa Maria della Pace church was built from 1466 to 1497. The convent construction followed but was finished after. Without the church, the convent would not exist. Moreover, the church is a monument but belongs to a private owner. The pavilion tries to put again in the spotlight this hidden church.

The church does not have an ordinary history. Consecrated since 1497, it lost its religious purpose in 1805 while Napoleon took over the whole complex of San Barnaba. From a military warehouse to a riding school, the church became an auditorium in 1900 under the purchase of Bagatti Valsecchi nobles. In 1906, the nuns of Santa Maria Riparatrice dedicated it again to religion and provided its restoration. It's finally in 1967 that the church was bought by the Equestrian Order of the Holy Sepulcher of Jerusalem who still uses it today for its functions, admitting the public only on the morning of every first Thursday of the month or by reservation. The façade of Santa Maria della Pace is facing the garden where the pavilion is located. It's in a Lombard baroque style composed of a splayed portal with an ogival lunette. Restored in the 1900, it was preceded by a baroque pronaos supported by two Tuscan columns with the fresco. The design of the five boxes makes it clear that the pavilion leads the visitor to observe something. They are noticeable from the entrance, and they are oriented in an arc shape centered on the church façade. The boxes are not only passages, benches are installed so the visitor can spend some time in them. From the pavilion, the visitor can see the pavilion and the library of the cloister.



Figure 25: Existent wall Via San Barnaba



Figure 26: View from the pavilion on Società Umanitaria library



Figure 27: View on the church from a pavilion box



Figure 28: View on the church and the cloister from a pavilion box

Structure and technology

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Definition of passages

Through the library

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Between Chiostro della Memoria and Chiostro dei Glicini

The same concept is used to connect two cloisters. In Chiostro dei Glicini, two openings are designed to join visually with Chiostro della Memoria. These apertures connect two outdoor spaces meant to be separated. They are communicating through those openings and can be used for the same purpose during events.

The concept is applied in a different way than in the library. In fact, in the library, the opening was between an exterior and an interior. Moreover, it was following only one arch dimension. In this case, the aperture is between two exterior spaces that have two different arch dimensions. Through the analysis of the proportions, in plan and in section, only two openings can be made on this wall.

Through Chiostro dei Glicini, the visitors can observe the other cloister façade. This visual connection made the design research continue on San Barnaba restoration state. Knowing the story of the complex and noticing the structure missing parts, the nature of the materials was clear. The structure is in original red clay brick. It is covered by a mortar called *arriccio*.

Usually used to cover brick or stone structure, this mortar levels the surface and is a binder between a structure and a fresco. Made of limestone, sand and water, it has great preservation properties of pigment. This material is covered by a silicate plaster. A water-repellent paint for exteriors with a high air, light and weather resistance. The columns are made of an Italian metamorphic stone named *serizzo*. It has a similar formation to granite and a chromatic homogeneity. It is considered as a hard stone, highly resistant, adaptable to harsh climates and large temperature differences. As mentioned before, during the 90's, the cloisters have been restored. But one of the main challenges of restoration discipline is visible here: the methods evolution. Indeed, as time went on, the techniques progressed and the ones that were the most appropriate became obsolete the moment a more respectful one was discovered. The state of San Barnaba now after the last restoration works is a good example of this issue. On the façades, through the years, patches of plaster appeared. The restorers applied this layer of a non-fitting composition on the missing parts. The results 30 years later are discolorations of the silicate and decorative plaster and presence of stains, cracks and craquele on the surface. The restoration technique applied in this design project is a replacement of the whole plaster by a brick fitting plaster. Concerning the columns, their state is better than the plaster. The weather eroded them but they are still structural. Dust, deposit and some biological colonization are noticeable. Cleaning the surface with brushes is sufficient and won't remove

material. Layers of mastic from the 90's on the capitals are in a bad state. There is a strong presence of deposit and craquele which leads to detachment. It is removed and replaced by a more suitable mastic. The mortar on the bases of the columns is also removed and replaced.



Figure 29: View on the openings from Chiostro dei Glicini



Figure 30: View on Chiostro della Memoria from Chiostro dei Glicini

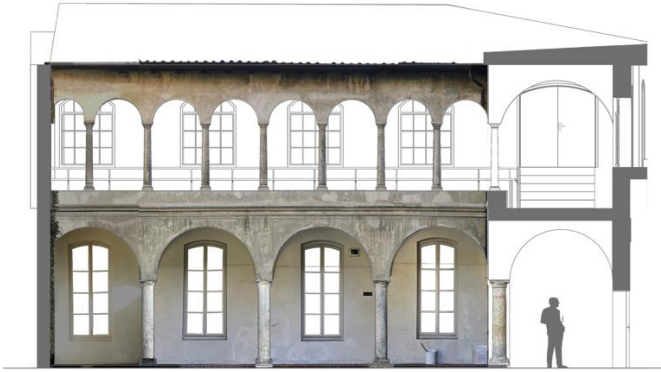


Figure 31: Orthophoto of the East façade of Chiostro della Memoria

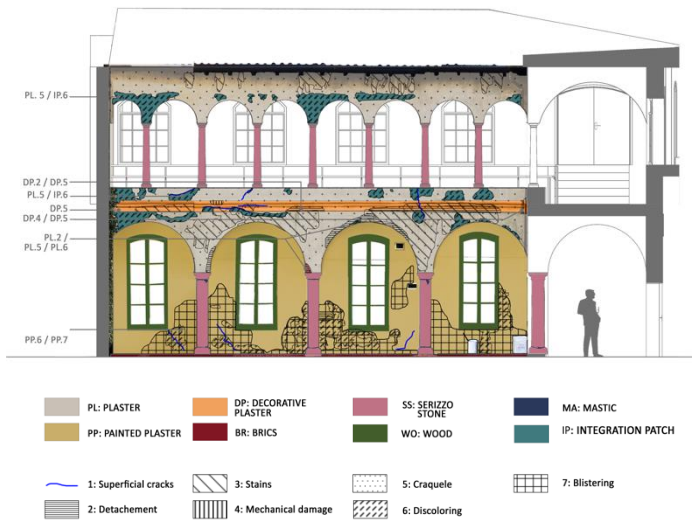


Figure 32: Material and decay mapping on the east façade of Chiostro delle Memoria

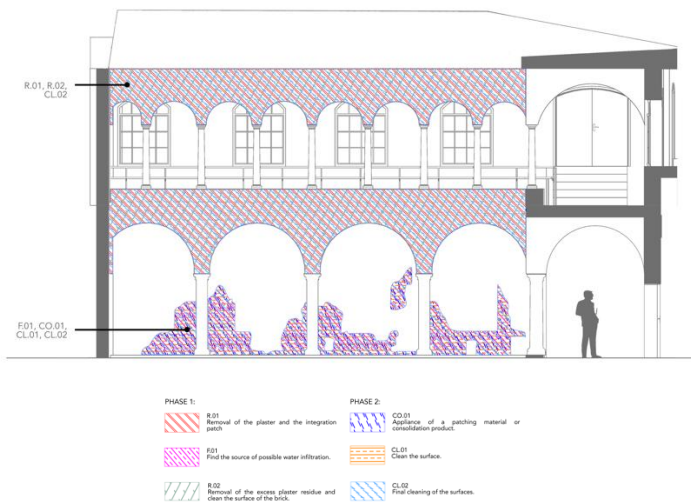


Figure 33: Restoration techniques mapping applied on the east façade of Chostro della Memoria



Figure 34: Material and decay mapping on a column of Chiostro della Memoria east façade



Figure 35: Restoration techniques mapping on a column of Chiostro della Memoria east façade

Introducing inclusive functions

