

Rediscover the residential function through the restoration of a monumental palace.

A fascinating restoration that has brought to light the construction history of a medieval architecture, between archeology, technological innovation and the complexity of structural consolidation.

Type of intervention

Restoration Rehabilitation / Renovation

Concerned elements on the intervention project

- 1. Foundations and underground structures
- 2. Vertical structures
- 3. Horizontal structures and vertical connections
- 4. Roof and terraces
- 5. Façade and building envelope
- 6. Finishes and completion elements
- 7. Integrate services
- 8. General strategies for building recovery

Site	Galletti di Santamarina Palace, Celso street n. 21, Palermo, Sicily, Italy
Objectives	Restoration of a palace in the historic centre and reuse as luxury suites, little archaeological museum.
Property	Private: Santamaria Luxury Suites Company
Designer	Architectural designer: Arch. Francesco Miceli Construction company: Napoli Benedetto Srl
Date	January 2018 - October 2020



Fig.0: Detail of façade along Celso street in Palermo. © Project Designers

Designers:

Architectural designer: Arch. Francesco Miceli

Structural advisor: Eng. Teotista Panzeca

Geologist consultant: Dr. Pietro Montanelli

Historical-architectural specialist consultant: Arch. G. Rubbino

Archaeological specialist consultant: Dr. F. Ianni, and Dr D. Laudicina

Restoration specialist consultant: Dr. M.F. Mulè

Construction company: Napoli Benedetto Srl

Systems company: COLD IMPIANTI Srl (PA)

Wooden structures company: Mirrione Legnami Srl.

Background to the intervention

Galletti of Santamarina Palace's first layout dates back to the XIV century when the ancient walls lost their defensive role and the Cassaro main street (the current Corso Vittorio Emanuele) became a privileged place for founding the main aristocracy's palaces. (Figure 1).

Galletti of Santamarina Palace stands in the *neighbourhood* called "*Monte di Pietà*", close to the *Vigliena Square* intersection. Today it consists of a substantial portion of the block limited on the East by *Maqueda Street*, on the South by *Celso Street*, on the West by *Santamarina Descent* and on the North by *Candelai Street*.

Its origin is very old: in the first twenty years of the XIV century,



Fig.1: *Galletti di Santamarina* Palace. Façade views along Celso Street and inside the internal courtyard. ©Francesco Miceli

a noble family's house (*hospicium*) was built in the northern part of the Cassaro ancient walls under the will of a member of the *Crispo House*, probably named *Rinaldo*, who was ambassador of Palermo from 1312 to 1313.

The possibility of building on the ancient defensive city walls has already been used in the Norman era since a new and wider defensive circuit that incorporated two distinct walls of *Cassaro* and *Kalsa* neighbourhoods. It had made these no longer indispensable to the defence of the city.

Description of the building

The original building, built by Rinaldo Crispo, was a parallelepiped block about 30 metres long, 11 metres high and 8 metres deep. The elevation on Celso Street (the *Cassaro's* northern ancient *shera*) was full of mullioned windows with limestone and volcanic stone ashlar (which were quite common in Sicily since the XII century). That was repeated in the horizontal bands and decorated the area above the springing line of arches and windows.

A decorative motif of evident continental ancestry (from Tuscan and Genoa) that can be found in other Sicilian examples of the XIV century.

In the first half of the XVII century the mansion passed from the property of the Crispos' to the Marquis of Santamarina one.

To the first Marquis of Santa Marina, governor of the Monte di Pietà district during the first years of the XVIII century, a baroque *facies's* palace was set. It was realised thanks to the supply of numerous renovations and unifications of different houses and little buildings used by Palermo's aristocracy between XVII and XVIII centuries.

At the end of the XIX century the palace, or at least a part of it, passed to Antonio Fortunato. He promoted in 1877 a dispute against the Palermo City Hall for the lack of interventions for the arrangement of the area overlooking the palace after the works of lowering the *Maqueda* Street.

The long history of the palace (at least seven centuries long) and the different Houses who owned it have determined the current configuration. That was also due to the fact that the original palace was erected on one of the most important urban nodes of the ancient *Cassaro*.

The changes made between the XVII and XIX centuries for the

elevation connection with the nearby *Maqueda Street (New Street)* and the damages caused by the improper use of the palace in the second part of the XX century have further complicated its reading. Now it is as a stratification of different areas and styles not always easily distinguishable.

Since 2008 the palace has been subjected to a meticulous campaign of geo-radar and archaeological investigations under the high surveillance of the Palermo Superintendence for the Cultural Heritage. An attempt was made to understand the different constructive stratigraphy which determined the present configuration. (Figure 2).

Recently, at the end of a long restoration yard, the palace was destined for residences, luxury hotels, with spa and gym, and a museum to show the archaeological excavations carried out as a result of the geo-radar campaign.

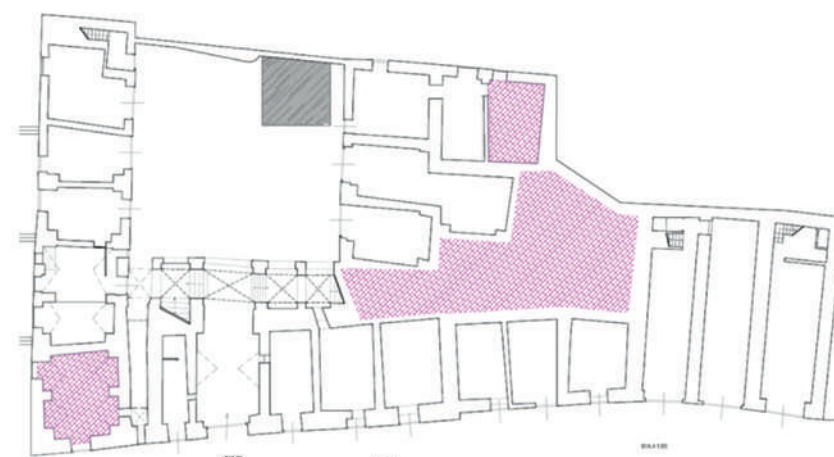


Fig.2: *Santamarina* Palace's ground floor plan. Highlighted pink, areas of the archaeological investigation. © Arch. Francesco Miceli

Galletti Santamarina Palace is a courtyard building with the main façade looking over Celso Street, close to the intersection with *Maqueda* Street. From the large gate, located at number 21 of the same street, there is the entrance to the internal quadrangular courtyard. In addition to that portal, from Celso Street there are series of entrances, originally used for shops and service spaces of the palace.

Three parts can be identified from the floor plan. (Figure 3). The first, further to the west and bounded by the elevation on the *Santamarina's* slope up to the edge with the embedded corner column, corresponds to a building consisting of three blocks arranged around the courtyard square. The entrance is from the main gate on Celso Street (which is currently decentralised to the west, as well as the courtyard, compared to the façade extension on Celso Street).

The second, immediately adjacent to the previous one, has slightly a back façade on Celso Street and inside there is an unclear configuration of settings, further complicated by the presence of compartments still to be excavated and the exception of some archaeological findings.

The third one, closest to the entrance on *Maqueda* Street, was damaged by the II WW bombs and has a regularity in the façade layout, highly different in the other two parts.

This portion has one floor less and shows, on the ground floor, a division of the space into three very elongated and parallel settings, which is also repeated on the first floor.

The configuration of the palace is very complex and articulated, due to the typical addition of parts that the nobility of Palermo did, often, to enlarge their palaces. On the noble floor (second floor above ground) and on the third floor, it is easily legible for the continuity of settings, both spatial and of the route. Instead,



Fig.3: Palermo City's detailed master plan, the three highlighted main blocks of Santamarina Palace. ©Comune di Palermo, portale cartografico, <https://www.comune.palermo.it/amministrazione-trasparente.php?grp=3&lev=4&id=173>

on the first floor, where the two palace wings are not horizontally connected, as on the ground floor, it is visible the disconnection from each other and they are standardised only by the view on the courtyard and on Celso's Street façade.

The façade's base portion on Celso Street, narrow way with strong slope (Figure 4), in the stretch adjacent to *Santamarina* descent, is characterised by the presence of a high stone block base of considerable size. This underlines the original ground attack of the palace and appears altered by the lowering of the

road to connect it to the level of *Maqueda* Street.

The main gate, probably built in the XVIII century, is inscribed inside an above polycentric large arch. Its ring is flush with the prospect level, it was not a relieving arch but, probably, it was a part of an ancient large portal that was subsequently partially closed.

Above this, always flush with the prospect level, it is visible a relieving arch for the arch below then of great amplitude. A similar arch, detected in the drawing of the Celso Street's façade and published by Spatrisano (Figure 5), similar in constructive technique and dimensions. It is located at the same altitude and at the last opening preceding the cantonal with the embedded column.

The current entrance door leads to a vestibule that, in the first part, is covered by a barrel vault with lunettes and a cross narrowed vault in the next portion connecting the court and to one of the two flights of stairs. Below, it was found an air raid shelter dating back to the Second World War.

This is quite articulated with two lift systems. A first staircase, parallel to Celso Street, is divided into short ramps interrupted by large boards, it goes up to the right (East) to the settings of the first floor. A second one goes up to the left (West), more monumental, with due parallel ramps, it runs along the vestibule's axis, perpendicular to Celso Street and leads to the first and other floors of the building. (Figure 6).

This staircase, different from the eastern one, has an architectural definition characterised by large arched openings. (Figure 7).

On the first floor, the western wing of the palace, erected by the *Santamarina's* descent, and the remaining part to the east of



Fig.4: Palace façade along Celso Street: from the laser scanner survey to the façade reconfiguration's design hypothesis. © Francesco Miceli

the vestibule are not horizontally connected. Walking along the staircase, to the right, the central and larger portion of the palace can be reached. Here the space is dominated by the presence of huge load-bearing structures, supported by a theory of arches, whose existence was hidden on the wall's thickness that delimited the settings. The space extends over three blind compartments found on the ground floor, made by limestone blocks of different colours and dimensions.

Walking along the second ramp of the western staircase, it can be reached the second floor, called the "noble floor" (residence of the owners). It can be easily recognized from the lodge's monumentality over the court that welcomes the staircase's arrival and the grandeur of settings that follow one another along the Celso Street's façade.

The loggia is opened by five arches: one, polycentric and wider, corresponds to the entrance vestibule, the other four, grouped in pairs, are round. The central arch constitutes the projection on the vestibule's loggia of the second floor, a complex masonry structure and a light roofing complex of elements that has been set inside what seems to be the first setting, starting from the west, of the original palace. This elaborated architectural "machine", of classicist taste, reveals its sticking character because of the partial collapses that have highlighted the light structure, revealing, among other things, the painted and carved wooden beams of the older slab. (Figure 8).

The hypothesis that it is one of the oldest parts of the palace is supported by the fact that this portion of the building corresponds to the Celso Street's façade characterised by mullioned windows and a masonry with bi-chromatic texture. The same could be said for the presence of a wooden slab with painted and carved elements. In particular, the shelves that accommodate the beams have numerous variations in shapes and in the wooden carving.

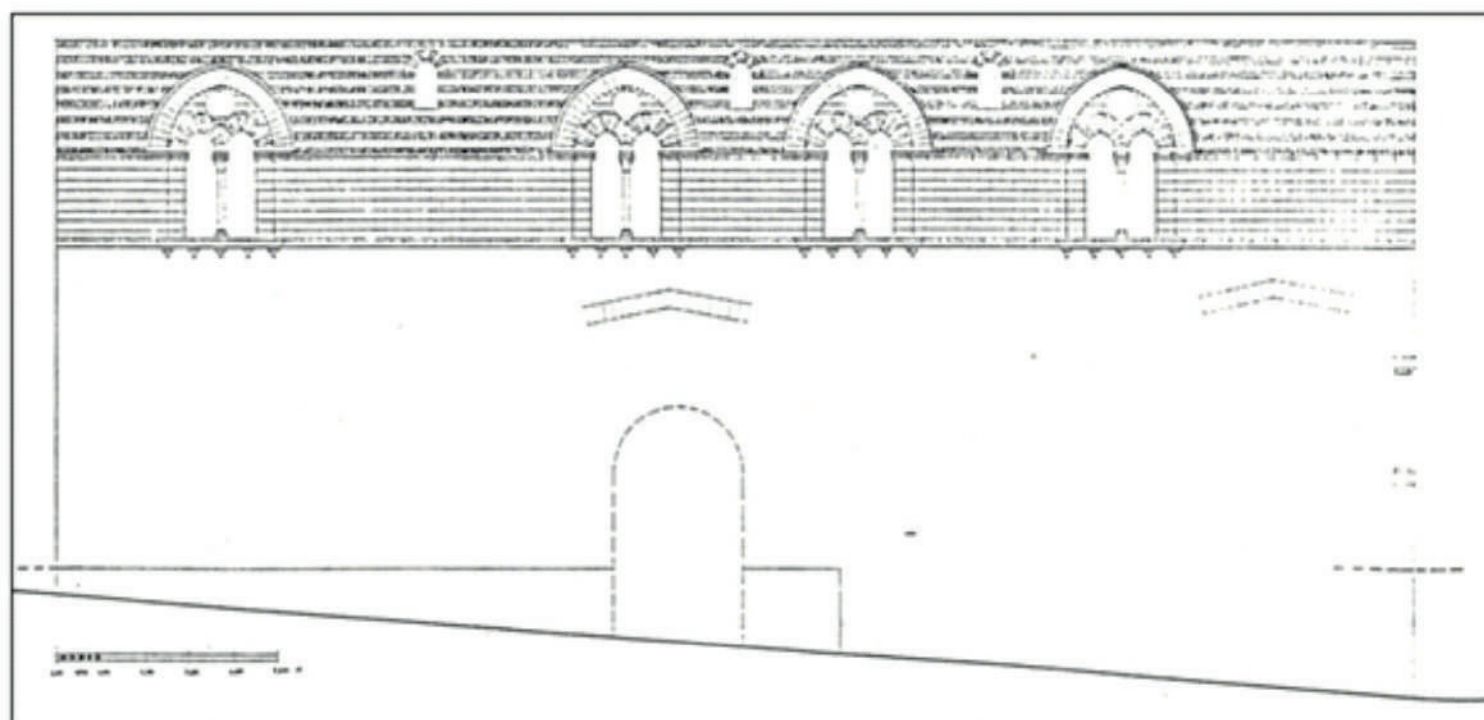


Fig.5: Galletti di Santamarina Palace, facade portion along Celso Street. Reconstruction hypothesis of the former façade. © Spatrisano 1972



Fig.6: Ground floor plan, State of fact before the restoration and spatial reorganisation. © Arch. Francesco Miceli

From the vestibule of the second floor there is access to the extraordinary sequence of settings of the noble floor, probably the oldest part of the palace. From the left side of the palace, one facing *Santamarina* descent, there is access to a short sequence of small settings, overlooking Celso Street.

On the wall of one of these settings there are the remains of a fresco depicting the Madonna and the Child, known as *Madonna del Latte* (trad. *Virgin of the milk*). In this floor the majesty of settings – especially in the three large rooms that overlook Celso Street – are fully detailed: the painted wooden beams, the carved and engraved shelves, the alternating arches in volcanic and light stone, the perimeter wall paintings in the room’s ceilings. It is precisely the different definitions of the ceilings that suggest a possible diachronic scan of these

settings. Techniques and decorative’ homogeneity of both the wooden and painting elements allow to identify the settings as follow:

The “room 1” has a deck consisting of a man structure made by large square beams that, in addition to the heads embedded in the masonry, rest on large carved shelves that increase the surface’s support.

The carving’s ornamental motifs are very diversified, but all of them can be traced back to a method of execution and a language that finds numerous references on Sicilian production. Dated in a time that goes from the Norman period to the end of the XV century and that surely had its maximum flowering in the XIV century.

Shelves’ carving still shows traces of the original colouration, while the beams have a light blue decoration with plant motifs on a white background that cover the purlins of the secondary structure and the band that runs along the perimeter’s deck of the room below.

This band is highly full of a jagged frame of classic taste that delimits the lower part.

Nowadays, “room 1” an “room 2” are a unique setting, at the height of the floor, due to the inexplicable demolition of the solid masonry that separated them, and that survives only in the upper part.

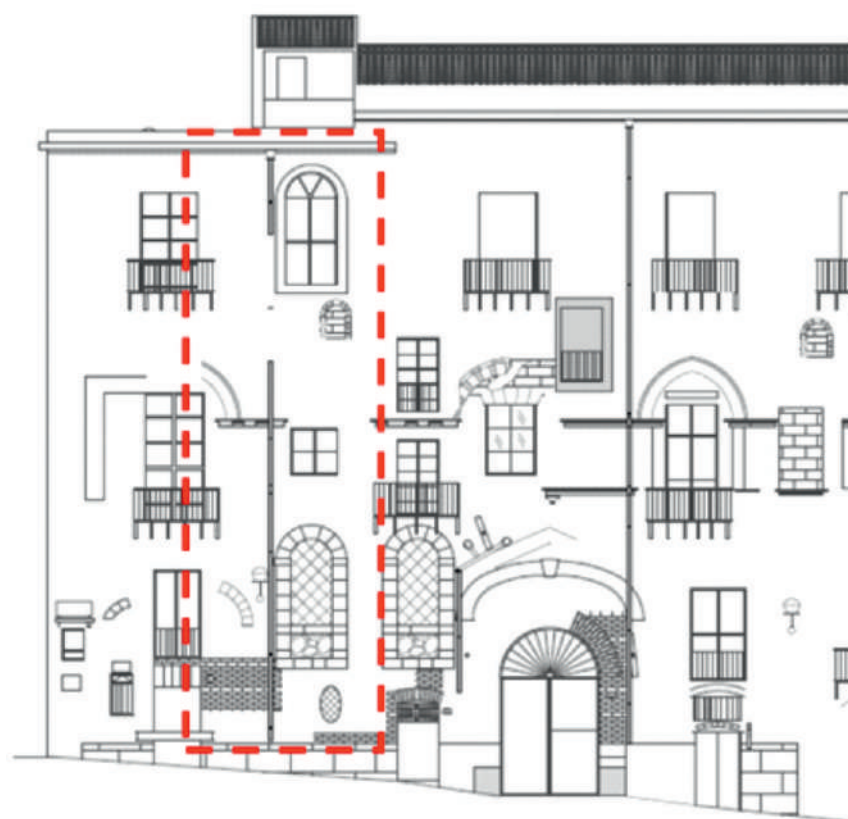


Fig.7: Façade on Celso Street. Façade's particular on the opening above the street and the monumental staircase. © Arch. Francesco Miceli

The lower surface deck's definition underlines the different identity; in "room 2" the decks are made with the same construction methods that can be found in the previous room with easels-struts. Shelves are carved with motifs that seem to belong to a later repertoire, as well as the decorative motifs of the paintings that cover the beams.

Frieze's paintings along the upper part of the walls are very different, with warm tones (orange and ochre) and white decorations that simulate stucco's reliefs.

The south-eastern vertex of this room corresponds to the edge

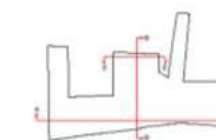
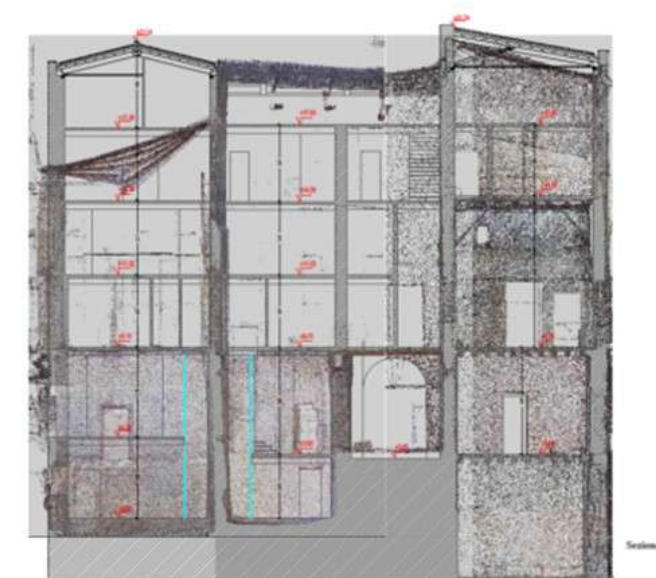
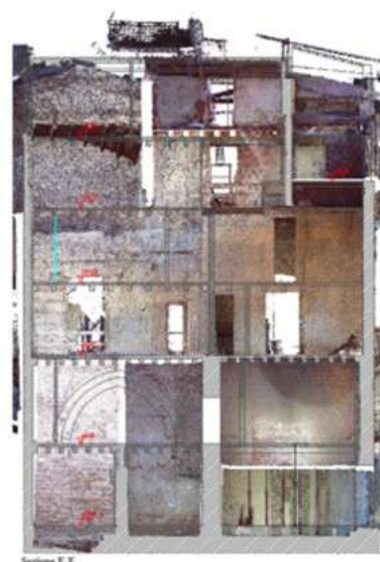


Fig.8: Palace's longitudinal and transversal sections, from which are deduced the units' complex amalgamations. © Arch. Francesco Miceli

of the original palace, that is the cantonal with embedded corner columns.

The large arched opening on the eastern wall, in fact, used to be a large window with an acute arch opened on the masonry that continued, on this front, the bichrome of the Celso Street façade. (Figure 9).



Fig.9: East wall of room 2 with wall and wooden decorations. © Arch. Francesco Miceli

The “room 3” has a pictorial decoration appearing very similar to that of the “room 2” (cherubs supporting coats of arms on a green background), while the deck, although using the same type of construction, is characterised formally and in different aesthetic features.

The “room 4” concludes the sequence of rooms of the noble floor overlooking Celso Street. It has a more elongated plan than the previous ones, a wooden coffered deck with the main structure made by slender beams and without any shelves.

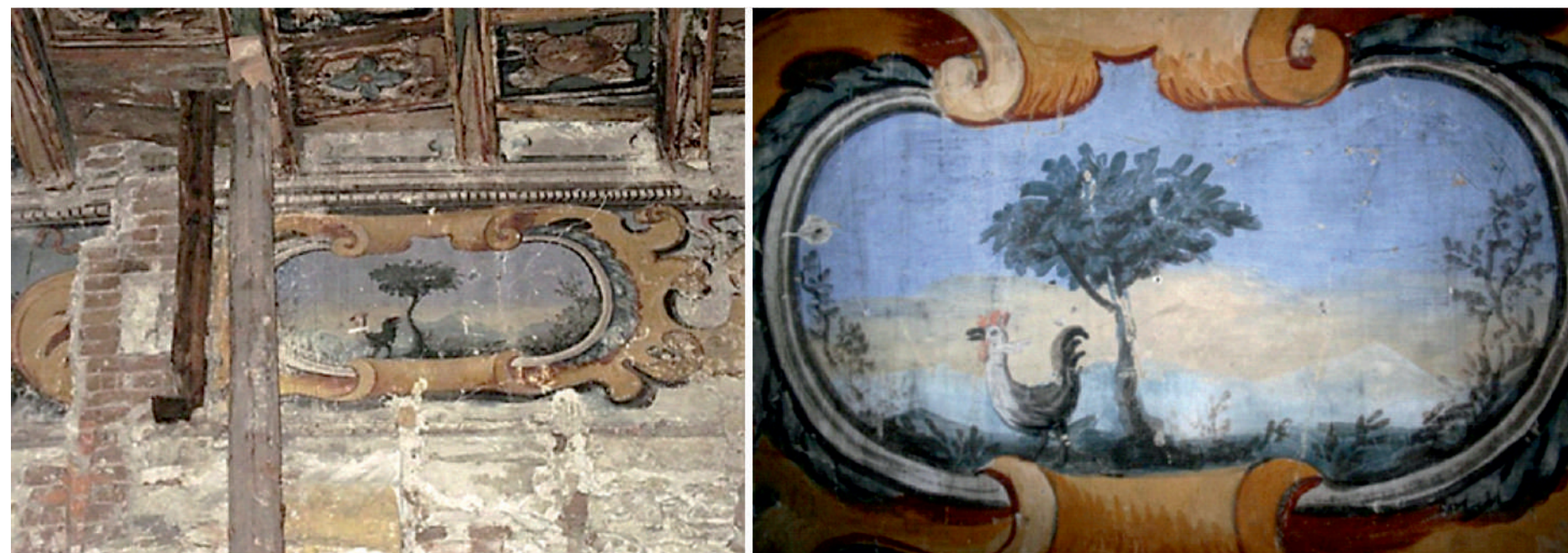


Fig.10: *Galletti* family's coat of arms in room 4. First and before the restoration. © Arch. Francesco Miceli

Also the pictorial decoration shows a language different from what it is shown in the first three rooms, while in correspondence of the above-doors, inside an oval frame, there is a “naturalistic” representation of the coat of arms of *Galletti* of *Santamarina* family. (Figure 10).

To make this articulated building homogeneous, its best application was in the interior façades of the court (Figure 11), unified by a classic design, which has been able to put together the needs for representativeness with the functional and distributive principles. Actually, there are three façades, because the fourth, corresponding to the northern side, does not show any traces of architectural definition and presents the disordered façades of the factories that have leaned against Candelai Street. However, they give to the building the image of a courtyard palace, as it is recorded in a synthetic way, by historical cartography.



Fig.11: Façades of the inner court. Evident cracks in the upper part before the interventions. © Arch. Francesco Miceli

The Diagnosis of the building (values and state)

The restoration project has highlighted the numerous and complex layers revealing the high historical and artistic value of *Galletti of Santamarina* Palace. The arches, of multiple dimensions and shapes, are present in all the palace's floors. In the oldest area, on the noble floor there are elements with a greatest value: painted wooden beams, carved and engraved shelves, bi-chromatic arches in volcanic stone and grey tuff, the perimeter wall paintings in the ceiling of the rooms, and especially the precious tempera painting depicting the *Madonna del latte*. The palace is characterised on the façade facing Celso Street by a rich motif of mullioned windows alternating with limestone and volcanic stone that are also present in the horizontal bands that decorate the area above the arches' line of the windows (Figure 12). A decorative motif of evident continental origin can be found in few other examples in Sicily.



Fig.12: Celso Street's façade. Arches and masonry's details of the planking. © Arch. Francesco Miceli

In the archaeological campaign of excavations, dated 2017, wells and walls of the III century. B.C. were found and are presently visible in the small museum located at the ground floor (Figure 13).

Fig.13: Archaeological museum. Details of the masonry of the III century B.C. and one of the present wells © Arch. Francesco Miceli



Restoration works

The building is, therefore, composed by the fusion of different volumes built in different times with very different construction techniques and materials, which involved a considerable effort in interpreting the framework of the instability, whose nature can always be attributed to two or multiple concurrent causes. The consolidation and restoration work developed on the fronts of the building and affected the structural wall components in the various areas in a widespread manner. In particular, the restoration of the main façade, in which some architectural elements that make the building complex so unique, such as the two-tone bands and the mullioned windows, have required a considerable effort to tackle the lesions.

The restoration project has highlighted the numerous and complex stratifications that reveal the high historical and artistic value of *Santamarina* Palace.

The arches, of multiple sizes and shapes, are present on all floors of the building. In the oldest area, on the main floor there are the elements with the greatest value: the painted wooden beams, the carved shelves, the two-tone arches in volcanic stone and limestone, the perimeter wall paintings in the ceilings of the rooms and above all the precious painting tempera reproducing the *Milk Virgin Mary*.

The numerous and complex restoration works that have been during a long and troubled period of work have concerned different categories of actions:

- Functional adaptation of the individual housing units, in order to improve the rooms' distribution and the assigned functions and the definition of the settings of the commercial shops on Celso Street. The re-functionalization of the complex involves the construction of 44 units with different uses, more precisely 7 with commercial purposes, 6 of which overlooking Celso

Street (Figure 14) and one with the access from the internal court on the right part of the palace. 37 units will have a residential destination (Figure 15).



Fig.14: New commercial functional destination for the ground floor along Celso Street © <https://www.palazzosantamarina.com/>

- Identification of the common parts, because of their historical and architectural importance, to allow the return and enhancement of the most valuable elements. In particular, it highlighted the polycentric arch and the space



Fig.15: Rooms' reorganisation located on several floors for residential use. © <https://www.palazzosantamarina.com/>

in front of it (Figure 16). For the polycentric arch, after the cleaning and restoration work, it has been completed through the choice of appropriate finishes and in tune with the setting in front of which performs the function of connection between the staircase system and the other residential units. The design hypothesis for the polycentric arch consists of a set of corten steel panels 4 mm thick with a horizontal development. It also has the function of concealing the metal structure previously built to consolidate the arch; *corten* panels are placed around the access door. The assembly of the aforementioned panels

has been arranged in such a way as to keep visible the line of the arch intrados without interfering with its original design. The wood was chosen for the entrance door. The space's paving in front of the polycentric arch was made of *cocciopesto*.

- Definition of architectural solutions of the inner façade over Candelai Street, to allow a restoration intervention between the different parts of the palace, not coeval and with different architectural characteristics.

On the second floor in the loggia overlooking the courtyard, the restoration of the walls and the elements of greater architectural value was done. In particular, the removal of finishes on the southern side highlighted the existence of a portal whose dating is certainly antecedent to the changes made in the XVIII century. Therefore, the task of the interventions has been to define unitary solutions even in the presence of different elements.

It has been given a central role to the paving prospecting two different solutions. The first is given by the continuity with the eighteenth-century staircase made of *Billiemi* grey compact limestone and, then, the pavement has a flooring of the same material also considering that the space of the loggia is configured as an element characterised by "outdoor space". Moreover, the pavement in "cement" made in the first decades of the XX century was restored and represents a partial testimony in the stop and arrival's elements of the main staircase (Figure 17).

- Distribution change in the basement of the court (air-raid shelter 's ancient locals) to be used as a spa. The choice was restoring, with particular reference to quotas, the original court's characteristics. However, it must be kept in mind that the construction of the bomb-shelter has partially

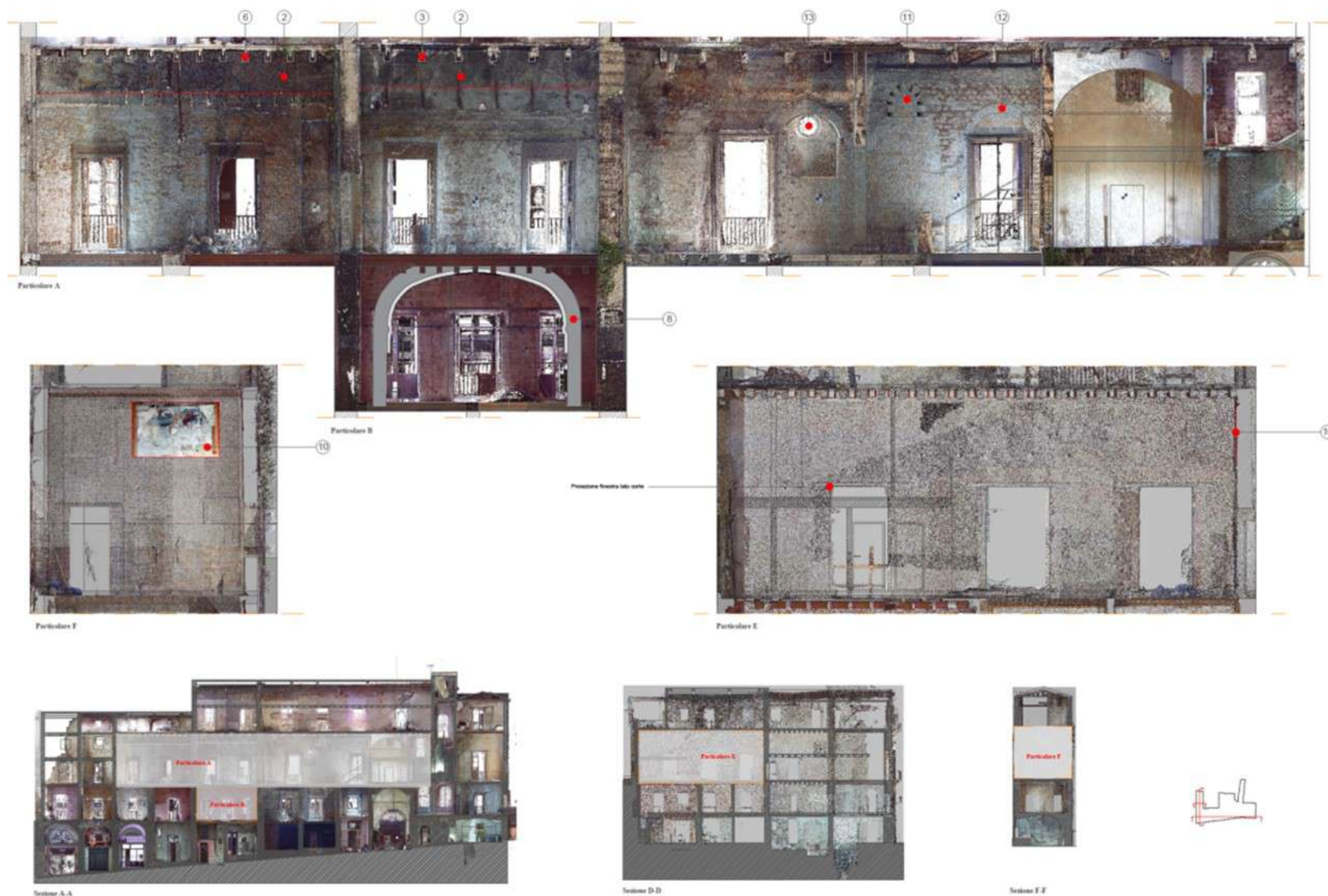


Fig.16: Useful section for identifying common parts, because of their historical and architectural importance. © Arch. Francesco Miceli

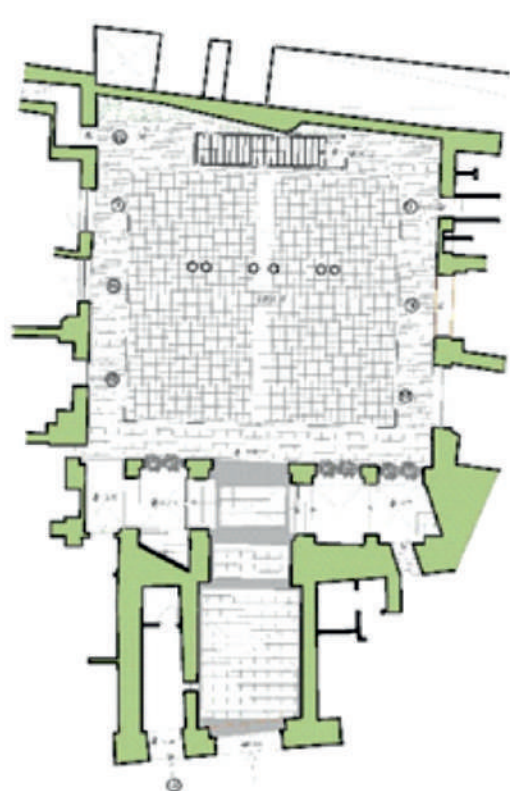


Fig.17: Courtyard's redefinition and staircase's view. © Arch. Francesco Miceli

modified the plan of the court: this causes an excessive slope between the access area from the entrance hall and the central part of the court that is located above the shelter. It was carried out in the construction phase, also in order to allow access to disabled people, it has maintained the natural trend of the slopes, useful for the rainwater disposal.

The courtyard design is characterised by great simplicity and defines the different areas of use. Around the perimeter, there is a light grey coloured floor, with elements of rectangular shape, which defines the space intended for access to the ground floor. This area is visually separated from the central one by a darker grey marble's frame that

delimits a central area with marble flooring of square shape.

On the court's north side, where there is the entrance staircase to the spa, it has been placed a steel and glass structure to protect the entrance.

Finally, also on the Northern side, in order to hide the presence of some incongruous elements that are part of the neighbouring buildings, a green wall was built, a green system that can be a scenic fifth in the context of the court. In the courtyard's central portion, solar tunnels, using the existing air vents, allow natural light to filter into the spa settings.

- Definition of the internal front facing *Candelai* Street. The intervention is the result of a long confrontation with the Palermo Superintendence. It has taken the starting point from the evaluation of the state of fact, as an interface between the two different parts of the palace. A difficult reading and reconstruction of the original architectural elements have occurred over time due to the additional and replacement interventions. The solution was entrusted to a vertical frame interrupted by horizontal bands on decks and, with minimal sections, to the opening points of the frame. The final result determines a formal division between the two different architectures, using a new language and method in the façade solutions of historical palace complexes (Figure 18).

For all the façades, encrustations were removed by engraver and micro-chisel, while for the superficial deposits a diffused brushing of the wall surface with broom brushes was done until a satisfying degree of cleaning was reached and ensured an adequate protection of the materials. Where the deposit was most tenacious, ammonium carbonate in paper pulp compresses was applied. For the reconstruction of the plaster package for a total thickness of not more than 3 cm, made by natural hydraulic lime, has been used with components in silica sand and quartz of decorative value (Figure 19).

Lintels in a very bad condition or with obvious lesions have been removed and replaced. The roof covering made with Sicilian tiles has provided for the recovery of the tiles still in good condition and for the integration with tiles of the same manufacturer. The rainwater disposal system has been verified, cleaned and integrated into the missing parts. Collars have been removed, also the brackets and the hooks attached to the masonry and it has been remade the



Fig.18: Palace's façade along Calderai Street: from the laser scanner to the project's hypothesis. © Arch. Francesco Miceli



Fig.19: View of the internal courtyard, during the restoring phase and after the restoration. © Arch. Francesco Miceli

layer of the below stucco. The PVC gutters and rainbows have been completely replaced and repositioned according to the new design façade's configuration.

A chromatic rebalancing of the façades was carried out by a glaze of the new layer of stucco on the façade in order to obtain a uniform colour by brushing, or with low pressure spray of lime water.

The reconstruction of the missing masonry was performed by the use of recovery sandstone calcarenitic ashlar, still present on site. Where necessary, lesions grouting and mending have been carried out, after structural consolidation, through the opening of the edges of the

lesions and the dusting with compressed air. Later it was used mortar-packed wetting and injection with hydraulic lime and fine aggregates, rinzeping with bricks or compact limestone and surface grouting with aerial lime mortar. It was made to maintain the same permeability to steam and not give rise to the formation of salts or alteration of the original chromatism.

- An important aspect of the intervention's work was determined by the structural, formal and chromatic redefinition of a vast sample of arches. These are located both in their own position and incorporated within the masonry, located at different altitudes of the palace. (Figures 20 – 21 - 22).

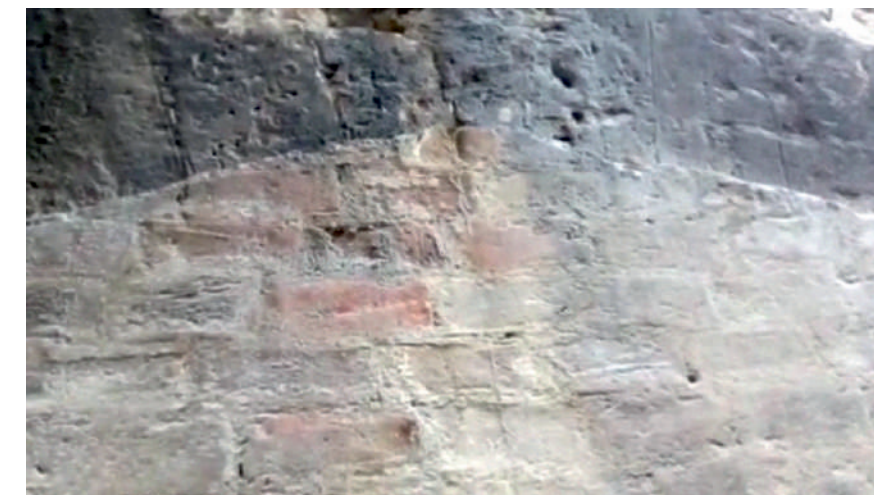


Fig.20: Crowning's examples of openings embedded in masonry at different levels. © Arch. Francesco Miceli



Fig.21: Arches' examples originally present on the elevations, then incorporated into the masonry at different levels. © Arch. Francesco Miceli

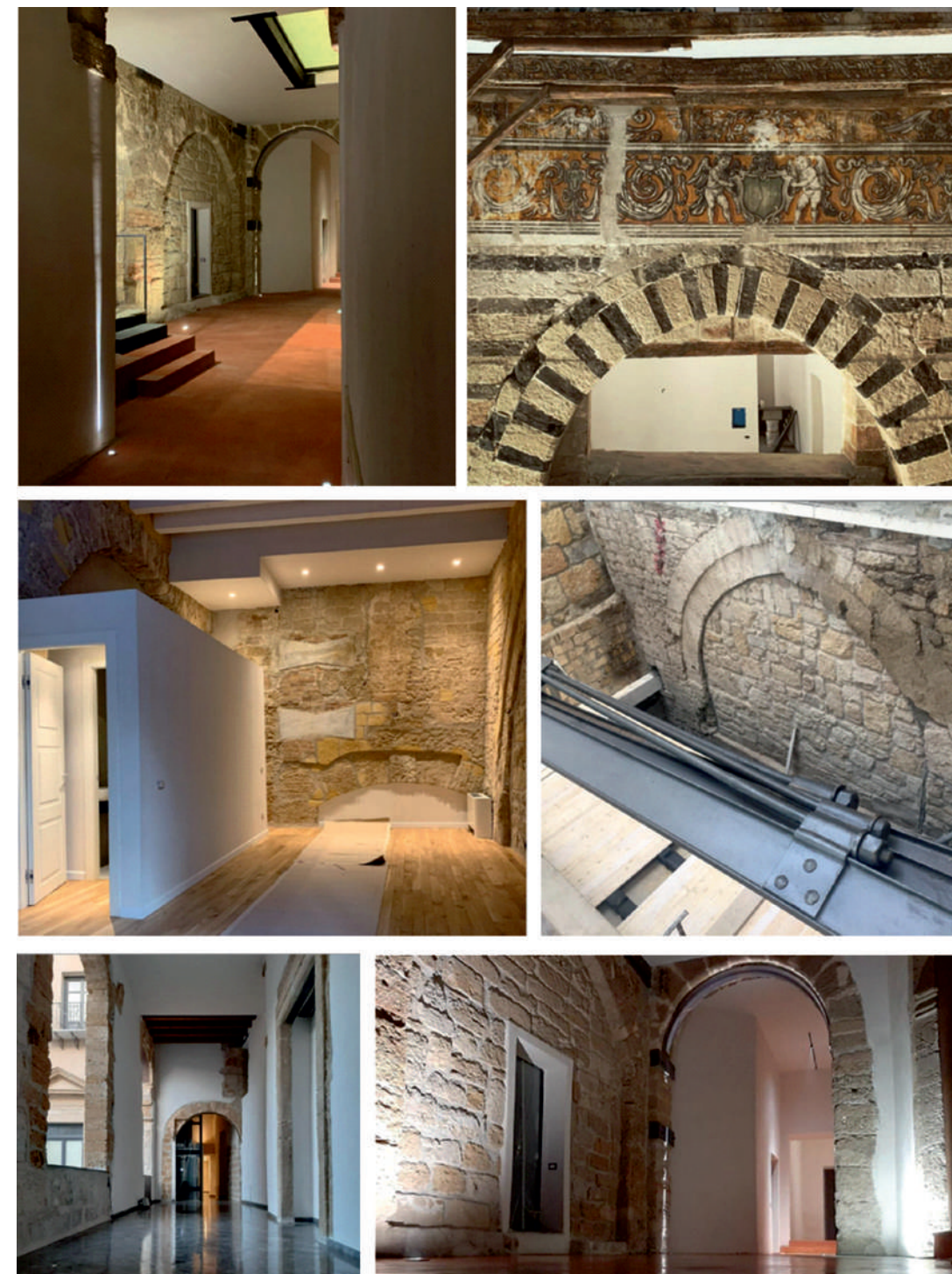


Fig.22: Examples of arches recovered according to different solutions. Whenever possible they have been reopened. © Arch. Francesco Miceli

- Restoration works of all the floors' wooden parts (decorated and carved beams, coffers) that in addition to a structural consolidation have been subject to consolidation and recovery of the pictorial surfaces (figure 23). Similar methodology has been applied for the restoration of painted wall surfaces that have been the subject of preventive analysis and successive phases of consolidation of the wall support and the painted surface (figure 24).

Replacing the floors while maintaining the wooden typology and maintaining the wooden beams of the floor on the main floor with precious carvings and decorations.

All the floors and roofs were made with a wooden structure with a main frame of different classes, chosen according to the spans to be covered, and panel in O.S.B. (oriented strand board).



Fig.23: Shelves, beams and wooden coffers inlaid and decorated with paintings before restoration. © Arch. Francesco Miceli



Fig.24: Painted wall surfaces, before restoration. © Arch. Francesco Miceli

Assessment of the results

Galletti of Santamarina Palace marks, together with Butera Palace, Palermo's rebirth in recent years. It is one of the most important and monumental palaces of Palermo. This large and imposing complex is one of the greatest examples of medieval architecture in Sicily.

The new residential destination with wellness and cultural facilities made it an emblematic example of the coexistence between the restoration of the historic residential destination and innovation. The use of contemporary languages and materials and towards new destinations such as the spa and the gym represent a virtuous example of synthesis between tradition and innovation. It combines the respect for the history and the typology of noble palace with the contemporary needs of residential spaces, commercial functions, museums, as well as having the technological innovation through:

- Use of O.S.B. panels (oriented strand board) for floor and roof structures;
- Innovative systems of reinforcements;
- Introduction of integrated services and disposal for design for all;

References

All the information contained in this sheet have been provided by reports (drawn up as a result of the restoration work) prepared by the designer, Arch. Francesco Miceli who is acknowledged for his kind cooperation and materials providing.

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