

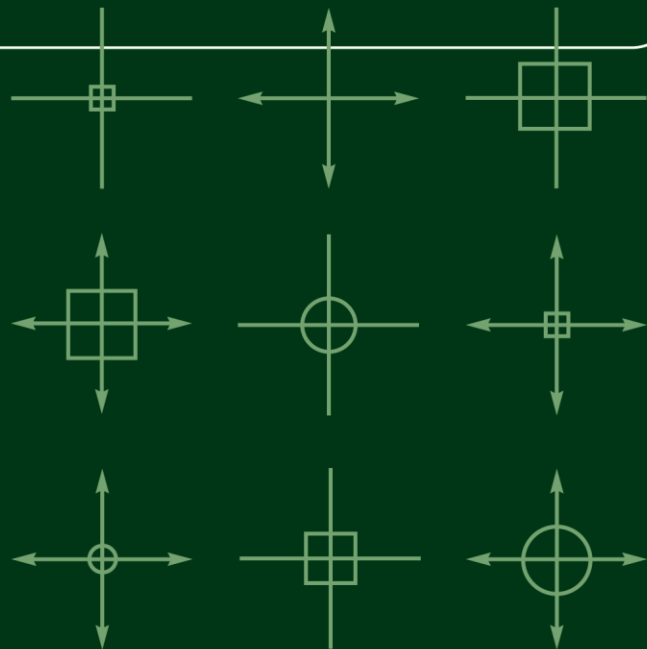
CHNT 24

International Conference on
**Cultural Heritage and
New Technologies**
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Monumental Computations
Digital archaeology of large urban
and underground infrastructures

Proceedings of the 24th International
Conference on Cultural Heritage and
New Technologies 2019.
CHNT 24, 2019

Edited by
Wolfgang Börner | Christina Kral-Börner | Hendrik Rohland



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**Proceedings of the International Conference on Cultural
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The majolica collection of the Museum of Bargello

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Abstract: Nowadays art exhibitions cannot just show art objects, they need to involve visitors emotionally. Museum users are not just scholars and experts looking for facts; many visitors want emotions and multidisciplinary experiences. These new requirements, together with the need to protect art collections from possible dangers (such as effect of time, natural disasters, and human attacks), mean that technology needs to play a crucial role in the design of an exhibition layout, which requires the involvement of many different technical and artistic fields of knowledge. This research is focused on the design of the majolica collection exhibited in the Bargello Museum in Florence, which was founded in 1865 as the first national museum in Italy. The current curators have to deal with a double need: *i*) to refresh the exhibition, in order to preserve the high profile of the museum, and to optimize the expressive potentiality of each exhibited object; and *ii*) to protect the art collections, ensuring each item's safety. The Majolica Room is the next exhibition room to be renewed in the museum. The display dates from the 1980s and thus does not comply anymore with the current administrative requirements. The design of the new exhibition requires special attention, due to the fragility of the items and to their variety in terms of shape, dimensions, and relevance. The experience was developed within the RESIMUS research project (Viti and Tanganelli, 2019), focused on the resilience of art collections, and it involved didactic activity with students from the School of Architecture in Florence.

Keywords: *Museum of Bargello—Majolica collection—design of Museums staging—seismic safety of art collections*

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Introduction

Art collections are a crucial part of the cultural identity of communities, and also of their economic assets. Florence, as well as many other towns in Italy and the rest of the world, owes its fame to its architectural and artistic heritage. It hosts several art collections, both private and public, most of which are displayed in historical buildings. The use of monumental palaces as art museums does enhance the potentiality of art exhibitions; nevertheless, it forces the designer to make a choice about the relationship between the collections and the architecture, as each deserves the whole attention of the viewer.

Moreover, visitors' expectations regarding art exhibitions have grown a lot in these past years. The ability to see art exhibitions in books, on websites, and other global platforms makes people more demanding and abler to appreciate the quality of the setting. This ever-increasing standard requires a similar ever-increasing attention to an exhibition's display design.

This paper presents a didactic experience whose objective was to propose a new display layout for an art collection, but also to enhance the participating students' background by asking them to immerse themselves in a complex and multidisciplinary experience. The teaching contents included not only design, but also technology (for an accurate selection of materials and technical devices) and structural engineering (to ensure the collections' seismic safety). The design work was focused on the Majolica Room of the Bargello Museum in Florence. The interest in the room arose not only from the museum curators' specific request, but also from the challenge posed by the fragility and the multitude of the works and the consequent difficulty in achieving a safe and effective display.

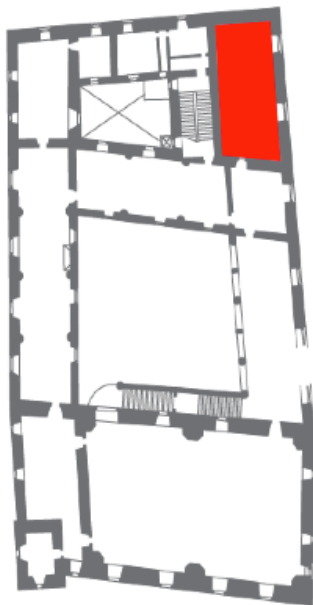
The building that hosts the museum, shown in Fig. 1, is one of the oldest in Florence. It dates back to the middle of the 13th century and played a crucial role in the political and social development of the town until it became the first Italian National Museum (Giorgi and Matracchi, 2006) in 1865. Since then, many exhibitions have been on display; at present, the museum hosts some of the most valuable marble sculptures of the Tuscan Renaissance, besides the majolica and the ivory collections, and many other art objects.



Fig. 1. Museum of Bargello: external views (© authors).

The current layout of the Majolica Room, situated in a corner of the first floor of the building (see Fig. 2a), was established in 1983, even if it has been modified since then. The room has a quadrangular shape, with a decorative pattern of coats of arms at the top of the walls, along the entire perimeter (see Fig. 2b).

The entrance is on one of the smaller sides, while on one of the longitudinal walls there are two big windows. Even the ceiling has an important impact on the aesthetic feeling of the room—it is coffered, with big, ancient timber beams.



a



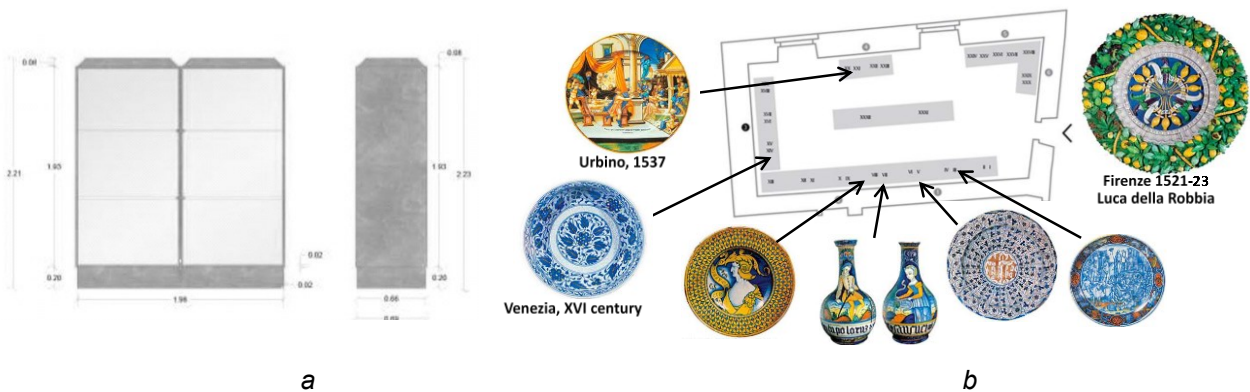
b

Fig. 2. Majolica room at the Museum of Bargello of Florence: a. position of the room within the Museum plan b. view of the room (© authors).

The current setting and its main shortcomings

A comprehensive analysis of the current setting was undertaken before the design stage. The curator of the collection was available to help the students during this phase, providing information on the museum operators' discontent with the majolica staging.

Fig. 3 shows the current arrangement of the display. The staging devices consist of brass and glass cabinets (Fig. 3a) placed along the walls and in the middle of the room. The collection comprises all types of ceramics, from apothecary jars to tableware and decorative pieces, including some items of the rare “Medici porcelain” and a group of pieces from Urbino (see Fig. 3b).



a

b

Fig. 3. The majolica collection: a. One of the shelves of the room, b. some of the artifacts shown in the collection (© authors).

The analysis of the current display highlighted three main aspects for improvement. The first concerns the exhibition layout, which is antiquated, as it follows the criterion of showing as many pieces as possible. Such logic is acceptable for an audience of scholars, since it fulfills the need to provide comprehensive documentation, but it is not satisfactory as regards the emotional impact of the collection and the involvement of a generalist visitor according to the most recent museographic trends. It is necessary to create an “artistic path” for the items’ display, which currently has no proper hierarchy and thus visitors cannot understand, without a dedicate effort, which are the most precious objects of the collection.

Another aspect regards the lighting of the room, which is in part natural, coming from the two windows, and in part provided by lighting devices (Fig. 4).

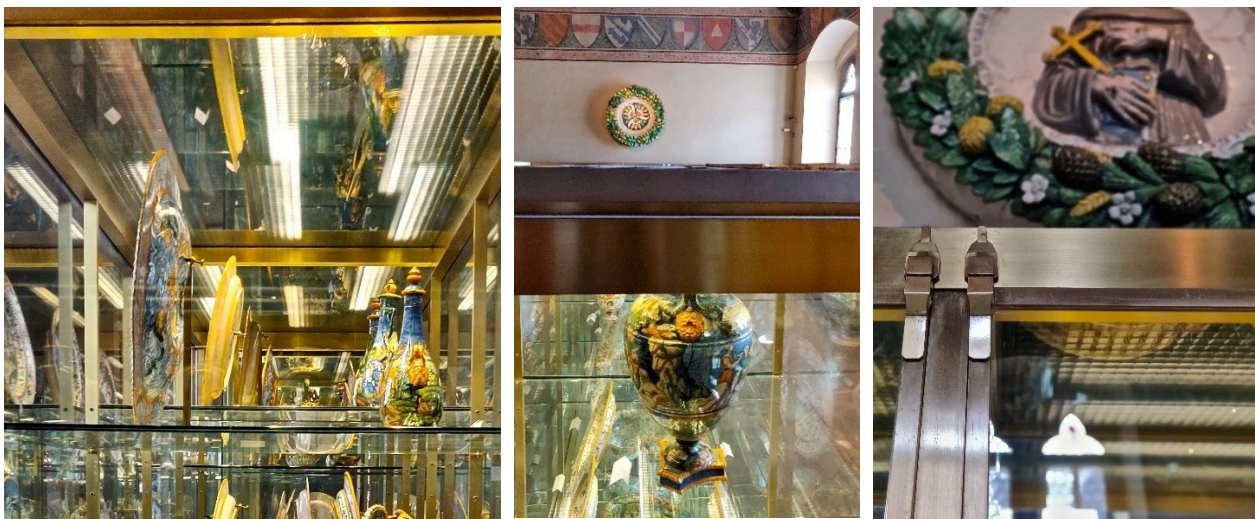


Fig. 4. Lighting of the majolica staging (© authors).

The sources of artificial light are diffused and homogenous, not calibrated on individual objects and without a correct chromatic tone for the best color result. The soft light, without shadow contrast, does not help visitors appreciate the collection and does not enhance the most important pieces. The natural light, meanwhile, depends on the season, the weather, and the hour of the day and it cannot be controlled to offer appropriate viewing conditions. For this reason, in many museums natural light is used in few spaces only for specific art pieces. Furthermore, the cabinets containing the items do not comply with the current standards. They have glass shelves and mirror backdrops that do not provide a proper background for the objects (see Fig. 5), and they are difficult to manage, as they are very heavy. They are located along the walls and in the middle of the room, according to the criterion of maximizing the exhibiting space, but without any balance with the architectural and evocative characteristics of the room.

The final aspect concerns the information apparatus. The descriptive captions consist of paper labels placed near the objects, according to a widely used method. However, these labels are not consistent with the general setup, they create visual confusion, and are not reader-friendly. There are no multimedia devices or information panels either.



Fig. 5. Reflection effects of the staging (© authors).

The proposals for the new display

The design proposals were developed within the class considering the shortcomings uncovered during the analysis. Before starting individual work, the students were required to discuss all the issues together, in order to provide some common guidelines for the project.

The students reiterated the idea that in contemporary museum spaces the simple function of showing must be combined with an emotional experience of reading about and understanding works of art—a fundamental element of the design process. Museum visitors are an increasingly large and differentiated community that is less and less starkly divided into scholars and amateurs. Consequently, museum design must adopt a variety of techniques that attract the visitor's interest on multiple levels. The need to renew an exhibition theme is also associated with the need to safeguard its artistic heritage. These two strategic aspects must be part of a unitary design and intervention philosophy, involving a multiplicity of technical and artistic skills.

Space design skills must be integrated and enriched with a technical dimension aimed at safeguarding the art works and with the resilience of the museum system in terms of catastrophic events. This methodology can be easily applied in new museums, but for museum structures housed in historical buildings. It is more difficult to do so. However, there are examples of excellent achievements, such as the Opera Duomo Museum in Florence refurbished in 2015 (<https://duomo.firenze.it/en/discover/opera-duomo-museum>).

The students' brainstorming session uncovered several specific issues:

- The staging devices should be independent from the architectural context; a lack of continuity between the staging and the walls was chosen to limit the interactions between the two systems; this discrepancy between the architecture and the display could be achieved by introducing an "artificial" floor, which—according to standards—could stabilize the exhibition system, besides introducing a damping layer below the staging devices to improve their stability.
- The new "artificial floor" should be fully accessible from the room entrance through a platform with a slope of 3–5 %.

- Lighting should be provided by proper devices only and exclude the natural light coming from the windows, to improve the final result and to better calibrate the light amount depending on the type of exhibition and items.
- Proper backdrops, selected on the basis of their color and material, should be introduced to reduce reflection issues, enhance the visual perception of the ceramic objects, and valorize the masterpieces.
- The materials and the design of the staging must match the historical context accurately; they should have a contemporary look but, at the same time, be compatible with the wooden ceiling and the painted frame around the walls.
- The shelves should be easily accessible for cleaning the artifacts and changing their position. Furthermore, they must be designed so as to avoid the mutual shading of the ceramics.
- A new information system should be designed and positioned near the entrance door and in the most relevant parts of the exhibition to introduce the thematic areas of the staging.

The selection of the shelf materials and of the lighting devices required a collective effort from the students. When the general guidelines and the materials to use in the project were agreed upon, each student was required to develop his/her own proposal for the display.

The process of developing a concept to achieve a definite presentation is not easy to complete in few weeks; however, this had to be finished within one semester. Therefore, it was decided to group individual proposals into a few main concepts. The final choice ran between two proposals, differing from each other in terms of space and layout, through both were based on simple and symmetrical geometric schemes.

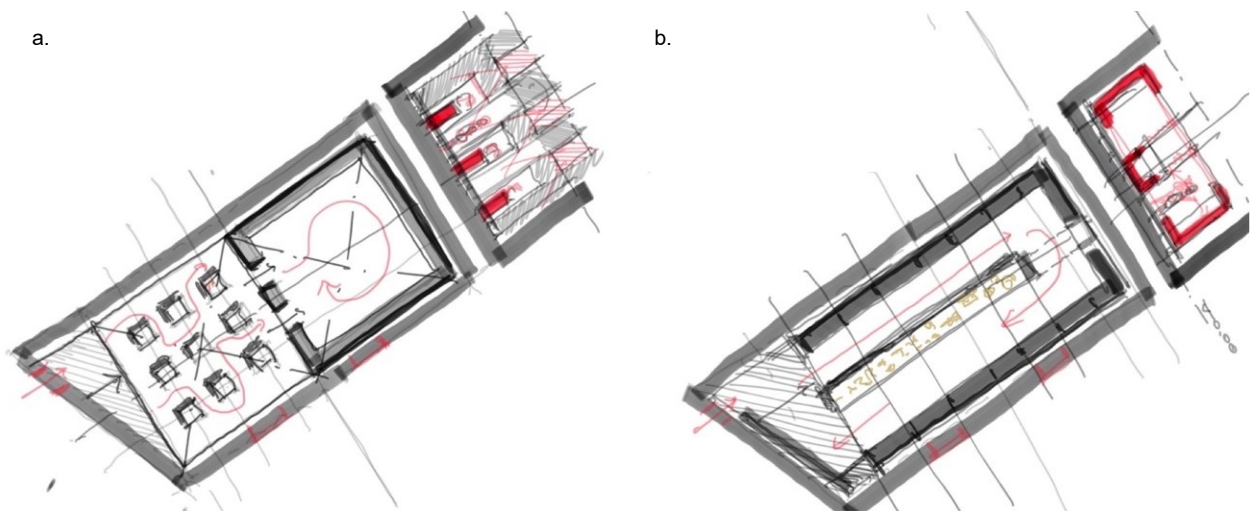


Fig. 6. Layouts of the two display proposals (© authors).

The first concept, shown in Fig. 6a, proposed the functional organization of classical temples and split the room into two square spaces, the “pronaos” and the “cell,” dimensionally equal to each other and based on a modular grid of 60 × 60 centimeters, but differing in terms of exhibited collections and proposed experiences.

The first square room consists of 9 columns that evoke the space in front of the entrance to a temple. Each column is encased in a glass box mounted with silicone joints to minimize the visual

impact of the frames. The rectangular glass cases are lit up by big lampshades made of brass net, hanging from the ceiling. The lampshades have the same shape as the glass cases to suggest the image of continuous columns going straight from floor to the ceiling. The visiting experience in this part of the exhibition is an unobstructed walk around the objects displayed inside the column cases.

The surrounding walls are painted in opaque dark gray tempera. On the wall to the right of the entrance, there are general information texts and the map of the room indicating the position of the collections, with letters applied directly on the wall surface. The floor plans and titles are in gold, the body text in light gray. Next to the texts there is a multimedia screen with a touchscreen for more extensive information on each collection, and films about the history of the main ceramic manufactures, their places of production, and origin.

The second room is more “intimate” and contains the most precious items of the collection. The showcases are placed all along the perimeter of the “cell” surrounding the visitors and involving them in an emotionally engaging experience. The exhibition space is dark and the art objects are enhanced by the scenic lighting. All the elevation elements are made of wood painted in opaque black and emerge, like a section design, from cuts in the solid brass of the artificial floor. False ceilings and lampshades are made from brass net to dissimulate the lighting system. In this part of the room there are no video devices, so as not to alter the perception of immovable sacredness imparted by the objects on display.

The second concept, shown in Fig. 6b, uses the whole room as a single space, with an elongated display that evokes the Medicis’ table and their convivial environment. The central display is a single “ribbon” which emerges from the floor and ends on the front wall of the room, becoming a vertical case for plates and flat artworks. All around the walls there is a continuous staging system, based on a module that is repeated to create the entire device setup. The showcases are deployed along the room perimeter with a big “C” section. The elementary geometric form is designed to solve the main needs of the exhibition: fixing the shelves and holding the LED lighting systems. The exhibited items are protected by full-height frameless glass windows.

The finish of the display structure and background surfaces is opaque concrete gray resin (gray is one of the most compliant colors with the brilliant color palette of antique ceramics) that resembles the typical Florentine gray stone, the *pietra serena* used by Filippo Brunelleschi for his Renaissance buildings (Vasari, 1550). The wooden structure of the artificial floor is covered with raw iron sheets—a contemporary finish with a medieval flavor.

The general information panels are on the back wall and are visible from the entrance to the room. On the sides of the central display case, in a vertical extension of the showcase located in the middle of the room, there are two recessed interactive video screens. To avoid the TV-like effect, they are integrated, as if they were images, into the text on the wall. Regarding the information system, neither proposal goes beyond identifying locations for the texts and multimedia equipment, and describing their basic style. In fact, these aspects were pushed back to a more advanced stage of the design, as they required further discussions with the curator and the management as well as more information on the quality and type of contents or visit itineraries they would suggest.

Another issue faced during the class was the seismic safety of the collections and their displays. The most common interventions for protecting art works from seismic hazards can be carried out at different levels (Lowry et al., 2007, Podany, 2015; McKenzie et al., 2007): i) at item level, by preventing the collapse/overturning of each item through proper devices; ii) at window/staging level, by changing the dynamic response of the showcases, avoiding the acceleration and displacement of the items; and iii) at building (foundation) level, by controlling the dynamic response of the building and avoiding any acceleration and displacement in the content.

In this project, the seismic performance of the building was not considered, since its complexity would be beyond the participating students' knowledge. The seismic protection of the items, therefore, had to be handled either at item or window/staging level. The most suitable approach consisted of introducing a base isolation system under the floor of the display.

Both setup proposals are in fact conceived as a single large exhibition where the different elements are connected with each other, but only in a subsequent executive design phase can this concept be perfected by studying sliding connections and resilient joints that use techniques and systems already widely available on the components market. Indeed, an intervention at object scale would be, in this case, difficult to pursue, due to the large number of objects and their shape and dimension diversity. Instead, isolating the staging between the floor and the walls would be compatible with the students' choice to keep the display separated by architectural context.

The two concepts were the basis for a subsequent discussion with the museum management and the curators. The details, as well as the graphic and multimedia information and the cost evaluation, will be established at a later stage, once the preferred layout is agreed with the client. After all, real-life operations development takes longer and requires more specialized and advanced skills. This method has been applied to research currently conducted by the authors with other museums, confirming the need for a much more extended commitment over time and with an additional effort from students. Fig. 7 and 8 show, respectively, the drafts of the two proposals.

Conclusive remarks

This paper has presented a didactic experience carried out with students from the School of Architecture, whose objective was to propose a safe and formally adequate layout design for an art collection exhibited in the Majolica Room of the Bargello Museum in Florence.

A comprehensive analysis of the current staging of the room was carried out with the cooperation of the exhibition's curator, which uncovered several negative aspects, such as the lighting, the display criteria, and the reflection effects related to the glass shelves and the mirror backdrop.

The analysis of the current display was a starting point for proposing alternative design concepts. After a brainstorming session involving all the students and a further stage of individual work, two designs were proposed, differing from each other in terms of space and general layout. The seismic safety of the display was checked at the end, and several possible interventions aimed at increasing the seismic safety of the collections, compatible to the proposed displays, were identified.

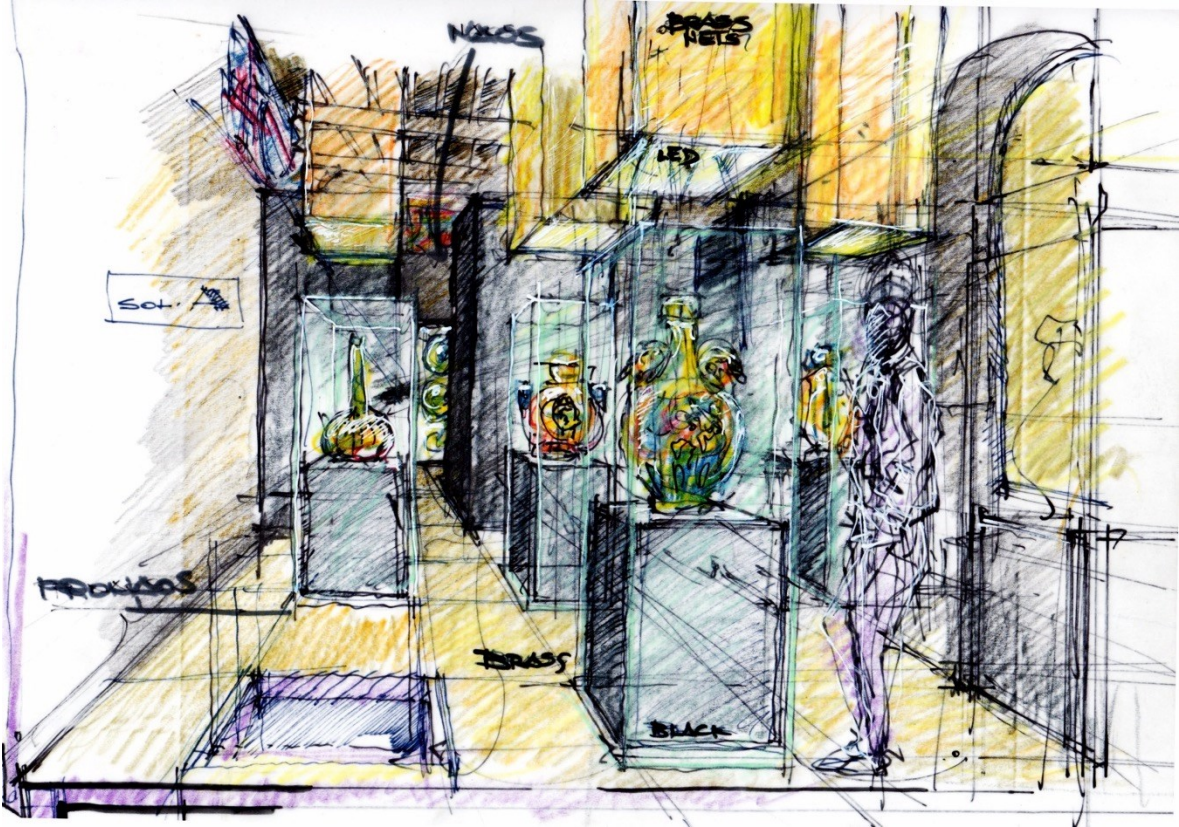


Fig. 7. Draft of the first proposed layout (© authors).



Fig. 8. Draft of the second proposed layout (© authors).

The proposed experience should be considered as the first step of a multiple years' activity. After the work carried out at a preliminary level, the next year's phase should involve prototyping a part of the proposed design to test various aspects of the staging. This activity should be carried out with the support of the Architettura e Autocostruzione Laboratory (Capestro and Zaffi, 2018), an equipped space of the Architecture Department of the University of Florence, where the students themselves could produce some components.

In this first phase, the didactic activity gave the students the opportunity to experience, through a holistic approach, the complexity of a strategic and important theme such as the design of an art collection exhibition and solve the main issues. The final proposals are didactic products, but they are a proof of the awareness achieved by the students during this activity.

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