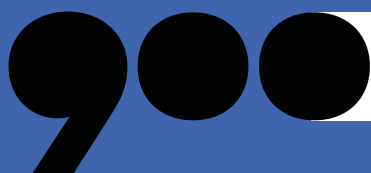
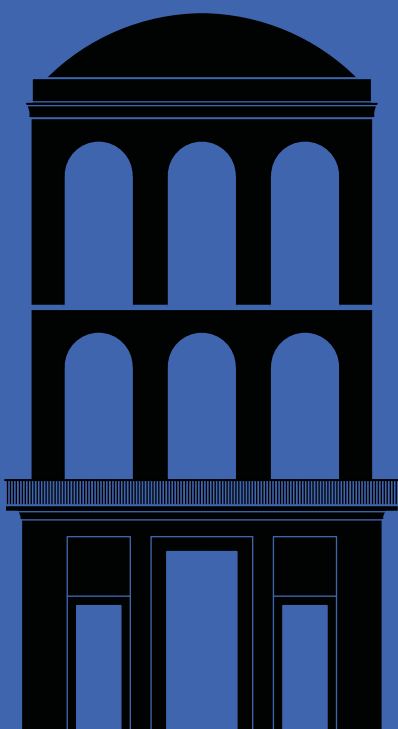


NOVECENTO PIÙCENTO

INTERNATIONAL DESIGN COMPETITION



PIÙCENTO

NOVECEN**T**OPIÙ**C**ENTO

INTERNATIONAL DESIGN COMPETITION

PRELIMINARY DESIGN DOCUMENT



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FOREWORD

Ten years after inauguration of the Museo del Novecento, the Municipality of Milan is launching “Novecentopiùcento”, an international design competition for the extension of the museum that is currently housed inside the Arengario in Piazza del Duomo - specifically in the east tower and in the so-called Manica Lunga - and in the rooms on the second floor of Palazzo Reale.

Over recent years, partly as result of the extraordinary combination of art and architecture most clearly represented by the spiral ramp and by the room housing the Neon artwork by Lucio Fontana, both designed by Italo Rota & Partners, the museum has become one of the symbolic locations of Milan. Born with the aim of spreading the knowledge of twentieth century art, today the museum displays almost four hundred works, with a further six thousand in storage, presenting to the public collections that the city has inherited and acquired over time. The intention is to bolster the idea of a living museum in a process of continual transformation, the culmination of which is the extension, subject of this competition.

“Novecentopiùcento” means exhibiting a further 100 works to the public, completing the chronological and thematic narrative of the 100 years of the twentieth century and shifting the focus to the start of the twenty-first century. “Novecentopiùcento” also means implementing services according to a new idea of museum that, together with the typical and established functions of conservation and display of the heritage, aims to enrich its cultural offer and to engage the community.

From an architectural and urban standpoint, the main purpose of the intervention is to convert into a museum space the building called in this document “Second Arengario”, which currently houses municipal offices, differentiating it from the “First Arengario” which houses the current Museo del Novecento.

The aim is to improve the entire Arengario, which was designed in the 1930s by Griffini, Magistretti, Muzio and Portaluppi as the monumental entrance to Piazza del Duomo, mirroring the arch of the Galleria Vittorio Emanuele II. The square will thus regain a sense of completeness and balance.

It will also fortify the image of the Museo del Novecento as an active cultural space and a symbol of modernity and change, the symbol of a city that never sleeps and that recognises innovation as central and offers plenty of space for contemporary art and culture.

For all these reasons, it has been concluded that the design of the new museum should be the result of a competition that focuses on enhancing and consolidating its role as an international exhibition space, while simultaneously confirming the role of Milan as a centre of attraction for the best Italian and foreign minds in the construction of the city’s future.

1. OBJECTIVES OF THE COMPETITION

The idea behind the “Novecentopiùcento” competition is the conversion and incorporation of the Second Arengario into the exhibition itinerary of the Museo del Novecento, in order to **create a single, large exhibition complex dedicated to modern and contemporary art**, with a standard in terms of collections, exhibitions spaces and services that place it among the most innovative museums in the world. In detail, the objectives being pursued by the Municipality of Milan in launching this competition are:

- extend the exhibition spaces to complete the history of twentieth century art and beyond, up to the present day;
- develop additional services, such as a conservation laboratory, a cafeteria, a bookshop and a new auditorium that can also be used independently and attract members of the public interested in events relating to music, cinema, dance and the performing arts.

The conversion of the Second Arengario will, in fact, increase the museum spaces and its addition will result in a reinterpretation of the museum itinerary that will include several spaces inside the First Arengario.

The new spaces must be characterised by their public function and particular emphasis must be placed on the link between the surrounding urban context and the building itself, in order for it to become a driving force of activities associated with contemporary culture.

2. FRAMEWORK

The Arengario, subject of the competition, is located in Milan city centre, in Piazza del Duomo, the city’s most iconic location and its “beating heart”, a meeting place for citizens and the destination of visitors and tourists from all over the world. The rectangular square has an area of around 17.000 m² and its design is based on the project by architect Giuseppe Mengoni, winner of the competition held by the Municipality of Milan in 1863.

As will become clear in the following sections, the project was never completed and this led to a lengthy process of redefinition that ended in around the mid-1950s, with the construction of the two towers of the Arengario (fig. 1).



fig. 1 Piazza del Duomo with the two towers of the Arengario.

2.1 The urban context

Over the last decade, the city has experienced a major demographic and a socio-economic growth, making it increasingly attractive from both a national and an international perspective. This growth has been accompanied by a lively process of physical transformation, from an architectural and urban standpoint, linked not only to the new “skyline”, but also to the rediscovery and improvement of public spaces. In detail, numerous publicly and privately funded interventions have been undertaken or are close to be completed in the city centre, to consolidate and extend the pedestrian areas, such as Piazza Castello (the project for this area was the result of an international design competition), Piazza Missori, Piazza Liberty, Piazza Cordusio and Piazza San Babila.

One of the sectors that has benefited the most from the growth of the city is tourism, contributing to highlighting the commercial nature of the city centre, already characterised by the major

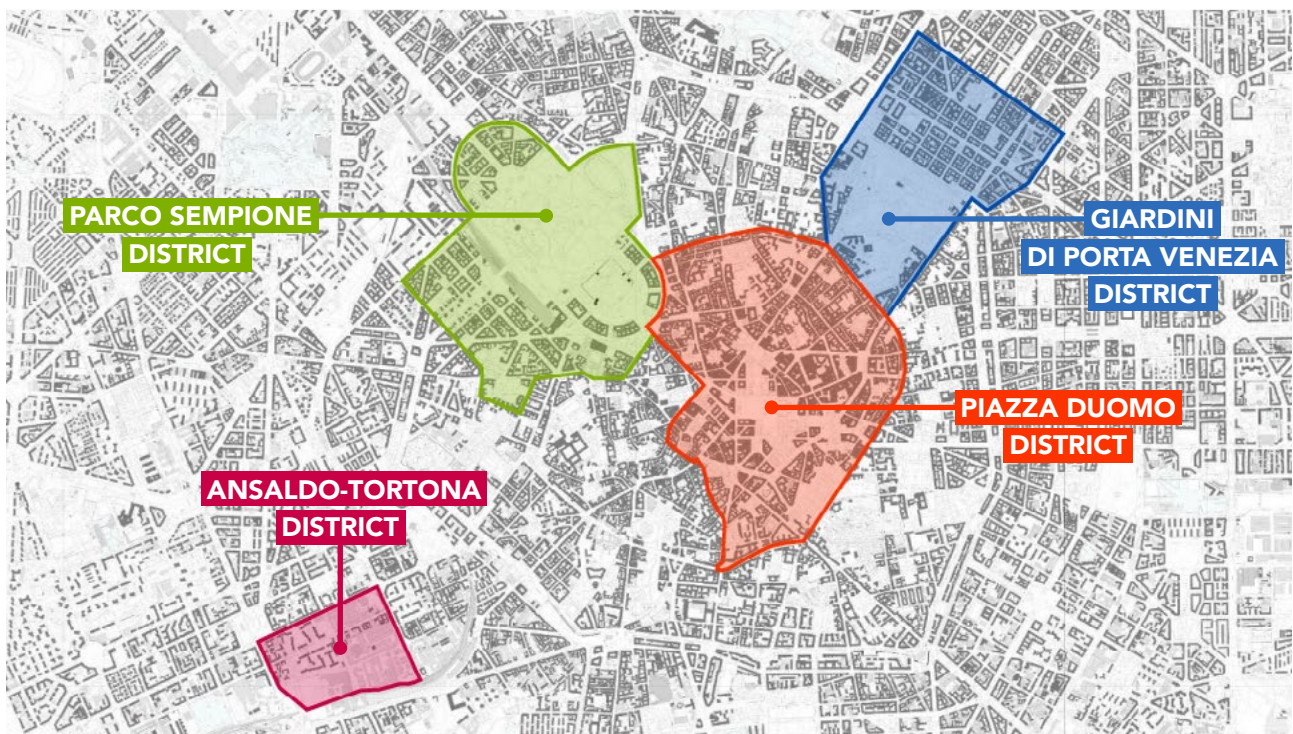


fig. 2 The four cultural districts.

presence of the service industry.

The attractiveness of the city centre is also closely associated with the role of culture, which the Administration is strengthening through the **“Una città, venti musei: quattro distretti” project**¹, the purpose of which is to forge a closer link between museums and territory and between institutions and providers of cultural initiatives in the city. Parco Sempione, Piazza Duomo, Giardini di Porta Venezia and Ansaldo-Tortona (fig. 2) will be the four independent districts, with four specific identities, characterised by a diversified range of initiatives.

In detail, the “Piazza Duomo District” will include Palazzo Reale and the Museo del Novecento, together with Palazzo della Ragione and the other major civic museums located around the square, including the one dedicated to the Risorgimento in Palazzo Moriggia, the fashion, costume and image museum in Palazzo Morando and the “Francesco Messina” studio-museum. Other prestigious exhibition institutes stand alongside the civic museums, including the Pinacoteca di Brera, the Museo Poldi Pezzoli, the Museo Bagatti Valsecchi, the Gallerie d’Italia and the Pinacoteca Ambrosiana.

The purpose of adding the Second Arengario to the Museo del Novecento is to create an integrated system of permanent displays, temporary exhibitions and innovative services for the public: a large cultural complex for the city, providing a showcase for modern and contemporary art and combining visual arts, photography, cinema, music and performing arts.

¹ For information, go to the link <https://www.comune.milano.it/aree-tematiche/cultura/distretti-museali>



fig. 3 Piazza del Duomo and the most important buildings.

2.2 Piazza del Duomo

Several of major architectural landmarks of Milan overlook Piazza del Duomo (fig. 3).

The most important, and the symbol of the city, is the **Duomo**, the cathedral of the Archdiocese of Milan dedicated to Santa Maria Nascente, located where the ancient Basilica di Santa Maria Maggiore once stood. The construction started in 1386, at the behest of Gian Galeazzo Visconti, who set up the Veneranda Fabbrica del Duomo, the organisation that would supervise its design and construction over the coming centuries and that remains responsible for its restoration and conservation to this day. The specific features of the Duomo are the use of Candoglia marble and its Gothic style.

Standing alongside the Duomo is **Palazzo Reale**, a building with extremely ancient origins and one of major art exhibition spaces in Milan. Known in the Middle Ages as Arengo (or Broletto Vecchio), it was linked to the governance of the city. Meetings were held there and justice meted out. At the end of the thirteenth century, it became the permanent seat of the Duchy of the ruling Visconti family. After it was plundered and destroyed in the first half of the fourteenth century, Azzone Visconti had it rebuilt in a manner similar to a fortress. The building, seat of civil power during the period of the Duchy, became the setting for sumptuous court life over the centuries and under the subsequent foreign rules. In 1771, Giuseppe Piermarini was assigned to

improve the exterior: he had the north wing demolished to leave room for the Duomo, created Piazzetta Reale in front of the cathedral and had work performed on the façade, giving the building its current neoclassical appearance. With the proclamation of the Kingdom of Italy in 1861, Palazzo Reale became the property of the Savoy royal family, who transferred the building to the Municipality of Milan in 1920. Part of the building, and particularly the Hall of Caryatids, was damaged in the bombardments in August 1943. The restoration work was started in 1980, under the supervision of architect Alberico Belgiojoso, and completed in 2008. However, the rooms were already being used to host major exhibitions in the 1950s, such as the one on Pablo Picasso in 1953, during which the painter exhibited his *Guernica* precisely in the Hall of Caryatids. Since then, the Palazzo Reale has continued to play a major role in art in the city, attracting an extremely high number of visitors every year.

Facing the Duomo is **Palazzo Carminati**. The building, built in 1867 on commission of a wealthy industrialist, also forms the backdrop to Piazza dei Mercanti.

On the north side, there are the **northern arcades**, with the monumental entrance into the **Galleria Vittorio Emanuele II**, which links Piazza del Duomo to Piazza della Scala. The cruciform gallery, with its cast iron and glass roof, is based on the project by architect Giuseppe Mengoni and was built between 1865 and 1877. It almost immediately became the meeting place of the Milanese bourgeoisie, earning the nickname of “salotto di Milano” (“Milan’s drawing room”) and, even now, is home to elegant shops, restaurants and cafés.

The **southern arcades** stand on the other side of the square, flanked by the two towers of the **Arengario**, which will be described in detail in paragraph 2.4.

The passage between the two towers leads onto **Via Marconi**, which links Piazza del Duomo to Piazza Diaz. The area between Piazza del Duomo and Via Dogana (fig. 4) was redeveloped in 2014: new granite paving slabs were laid in a continuous pattern - several engraved with the words “900 Museo del Novecento” - with linear metal inserts running in the direction of laying.



fig. 4 Stretch of Via Marconi between Piazza del Duomo and Via Dogana, redeveloped in 2014.

fig. 5 Stretch of Via Marconi between Via Dogana and Piazza Diaz, redeveloped in 2017.

The area between Via Dogana and Piazza Diaz (fig. 5) was redeveloped in 2017, putting an end to the illegal parking there. This work, performed in a public-private partnership, created a more harmonious setting for the tramway and improved the public space with the laying of a new level granite paving, with no architectural barriers, and the creation of a new green area.

The view created by the perfect correspondence with the gallery is completed by **Piazza Diaz**, with the 64-metre-high **Torre Martini**, designed by architect Luigi Mattioni and built in 1958. The rectangular square has the INA building by architect Piero Portaluppi on the western side, an underground car park at the centre and a park on the roof at ground level, where the monument to the Arma dei Carabinieri by Luciano Minguzzi stands.

2.3 Historical events

With the Unification of Italy and the end of foreign rules, the urban reorganisation of Milan became necessary, particularly of its central areas (fig. 6; fig. 7).

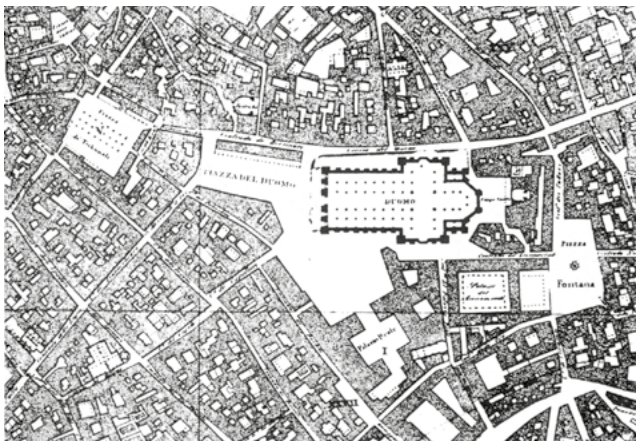


fig. 6 Detail of the layout of Milan city centre in 1814.

fig. 7 The Rebecchino neighbourhood, in front of the Duomo, before its demolition in 1875.

The need for a direct link between Piazza del Duomo and Piazza della Scala, which was created in 1858 by demolishing the buildings facing the Theatre, was particularly felt by citizens, to the extent that, in 1860, King Vittorio Emanuele II held a lottery to collect funds to replace the old sacristy with a new square that would lend a certain dignity to the cathedral. While awaiting the funding, citizens were invited, that same year, to submit proposals, which, after being examined, were used by the jury to prepare a plan containing the indications for the subsequent competition: the projects were to envisage a porticoed rectangular square, a gallery (or a street) linking Piazza della Scala and Piazza del Duomo and a building facing the cathedral.

The competition was held in 1861. The jury gave an award to four of the eighteen projects submitted, although they were not judged to be entirely valid. The project submitted by architect

Giuseppe Mengoni, with two alternative solutions (one with a gallery and one with a street) did not receive an award, but nonetheless met with a considerable approval.

A new competition was held in 1863, in which only the three architects who had received the highest number of votes participated: Mengoni, Pestagalli and Matas. At the end, the project by Mengoni was indicated as the winner (fig. 8).



fig. 8 Project of Giuseppe Mengoni. Axonometric representation.

In the project approved by the Municipal Council, the imposing façade of the Duomo was balanced by the presence of two monumental arches (fig. 9), one at the entrance to the Galleria Vittorio Emanuele II and the other in the Loggia at the end of the Manica Lunga of Palazzo Reale. The two arches were arranged along the north-south axis, which thus became as important as the main east-west axis of the square.

The sudden death of Mengoni was decisive for the fate of the project, which was never completed, with the exception of the Galleria and the northern and southern arcades. The subsequent death of Vittorio Emanuele II and the decision to place a statue of the king on horseback at the centre of the square prevented the construction of the building that was to face the cathedral (Palazzo dell'Indipendenza) and the project was abandoned, as was the one for the Loggia Reale.



fig. 9 Project of Giuseppe Mengoni. Perspective view.

In the 1930s, with the adoption of the new Town Plan (1934), the urban reorganisation of the city centre continued, involving the construction of the new Piazza Diaz and the consequent “gutting” of the neighbourhood to the south of Piazza del Duomo, the alteration of the palazzo mengoniano (southern arcades) and the demolition of the Manica Lunga. The plan was to build a tower in place of the Manica Lunga, serving as Arengario, which was subject of a competition held in 1934. Three of the projects submitted were selected, but none was indicated as the winner. The Manica Lunga was demolished in 1936 (fig. 10) and a variant to the Town Plan was introduced in 1937, according to which Piazza Diaz was to be constructed on-axis with the Galleria and the visual link was to be highlighted by two symmetrical buildings (fig. 11).

A new competition was held in the same year², in which the participants were asked to develop a project for the Loggia-Arengario on the site previously occupied by the Manica Lunga, for the building facing the Duomo (Palazzo delle Corporazioni) and for the extension of the southern arcades. Twenty-nine projects were submitted.

Only the architects Beltrami, Canino and Baciocchi and the group formed of **Griffini, Magistretti, Muzio and Portaluppi** were admitted to the second phase of the competition. In 1938, the project for the Arengario of Griffini, Magistretti, Muzio and Portaluppi was chosen as the winner³. As will be seen below, the construction of the Arengario (fig. 12), which started in 1939, was halted because of the Second World War and only completed in 1956, almost twenty years after the first design documents were prepared, by which time both the objectives and the functions had changed.

² For further details, refer to the annex “Bando di concorso per il progetto di sistemazione definitiva della Piazza del Duomo”.

³ For further details, refer to the annex “Relazione concorso II grado”.

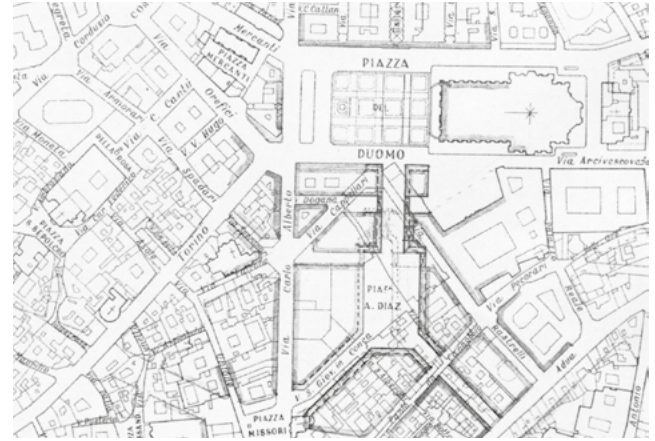


fig. 10 (on the left) The Manica Lunga of Palazzo Reale before its demolition in 1936.
 fig. 11 (on the right) Detail of the layout plan, with indication of the 1937 variant to the Town Plan.
 fig. 12 (at the bottom) View of the Arengario from the Main Spire of the Duomo after the war.

2.4 The Arengario

The Arengario, which completes the southern side of Piazza del Duomo, is formed of two twin buildings, the First Arengario to the east and the Second Arengario to the west, facing the square and creating a contrasting view with the arch of the Galleria Vittorio Emanuele II.

The east building extends further in the floor plan, with the narrow Manica Lunga extending towards Piazza Diaz on only two of the three levels of the tower. The stairway (fig. 13) facing Piazzetta Reale leads to the Hall of Caryatids of Palazzo Reale and continues as far as the loggia level of the tower, where the Arengo (public assembly balcony), from which the King or Mussolini would speak to the crowd, looked out onto Piazza del Duomo, before being demolished in 1947. The visual impact of the two buildings created a monumental city gateway: the designers' idea was, in fact, for the two buildings to form the *“propylaea to access the modern neighbourhood of Piazza Diaz, currently being constructed to the south of Piazza del Duomo”*. In continuity with the buildings forming the perimeter of the two squares, the vaulted and open porticoes of the two towers were conceived as genuine public spaces. The partial closure of the portico of the First Arengario, which prevents its use, dates to the 1950s.

The bearing structure of the two buildings is formed of reinforced concrete pillars on a slab foundation, brick infill walls and a pavilion roof.

The façades of the two towers are covered in Candoglia marble and have a double set of semicircular arches on the first and second levels. It was intended to place statues of the heroes of Milanese history on the final level. The arches rest on the base of the buildings, which have rectangular portals decorated with a plant motif and high-relief sculptures by Arturo Martini (Fig. 14). The Fascist-era architecture of the Arengario leaves little space for decoration.

After the original function had been abandoned and the subsequent adaptation of the interiors based on the project by Melchiorre Bega in the 1950s, the First Arengario became home to the National Tourism Agency. Subsequently, as part of the plan of reorganisation of civic museums, the building was restored in 2010 and is now home to the Museo del Novecento, which houses part of the broad heritage of contemporary and modern art of the city of Milan.

The Second Arengario houses municipal offices and is home to the Municipio 1 – Centro Storico Council.

2.4.1 The First Arengario - Museo del Novecento

The Museo del Novecento is based on the project presented by **Italo Rota & Partners** in the competition for ideas held in 2000. The plan for the recovery and transformation of the First Arengario into an exhibition space for the art collections of the Municipality of Milan dating from around 1900 to 1975 had three basic objectives:



fig. 13 The external stairway and entrance to the Museo del Novecento from Piazzetta Reale.

fig. 14 The portals in the base of the First Arengario tower.

1. organise, inside a restored historical building, a simple and linear museum and distribution system that optimises use of the available spaces;
2. restore a strong and simultaneously attractive image to the building and to the new institution, in order to transform it into one of the top cultural locations in Milan;
3. restore all the heavily dilapidated parts of the building that no longer correspond with its new function as a museum and simultaneously restore dignity to the interstitial courtyard facing the fifteenth-century façade of Palazzo Reale.

Several minor alterations unrelated to the original project have been made over the years to meet the needs of the museum itself. The Museo del Novecento is currently formed of the following buildings (fig. 15), inside which the visitor itinerary is laid out (fig. 16):

- A. the monumental tower on Piazza del Duomo and Piazzetta Reale;
- B. the connecting building with the passage between Via Marconi and Piazzetta Reale;
- C. the Manica Lunga along Via Marconi;
- D. the block of vertical connections located in the interstitial courtyard between the Manica Lunga and the fifteenth-century façade of Palazzo Reale;
- E. the rooms on the second floor of Palazzo Reale.

- A Monumental tower
- B Connecting building
- C Manica Lunga
- D Block of vertical connections
- E Rooms of Palazzo Reale

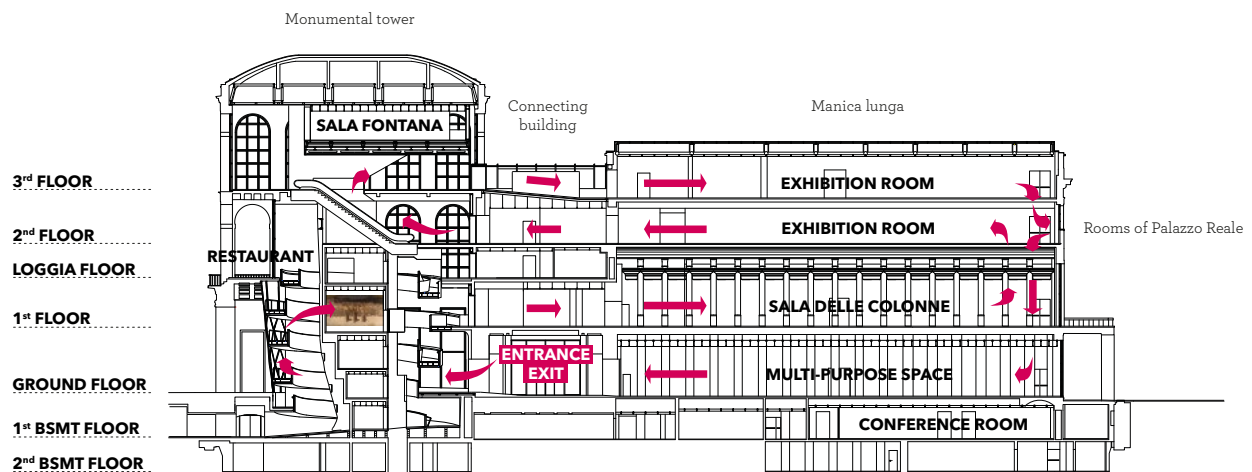
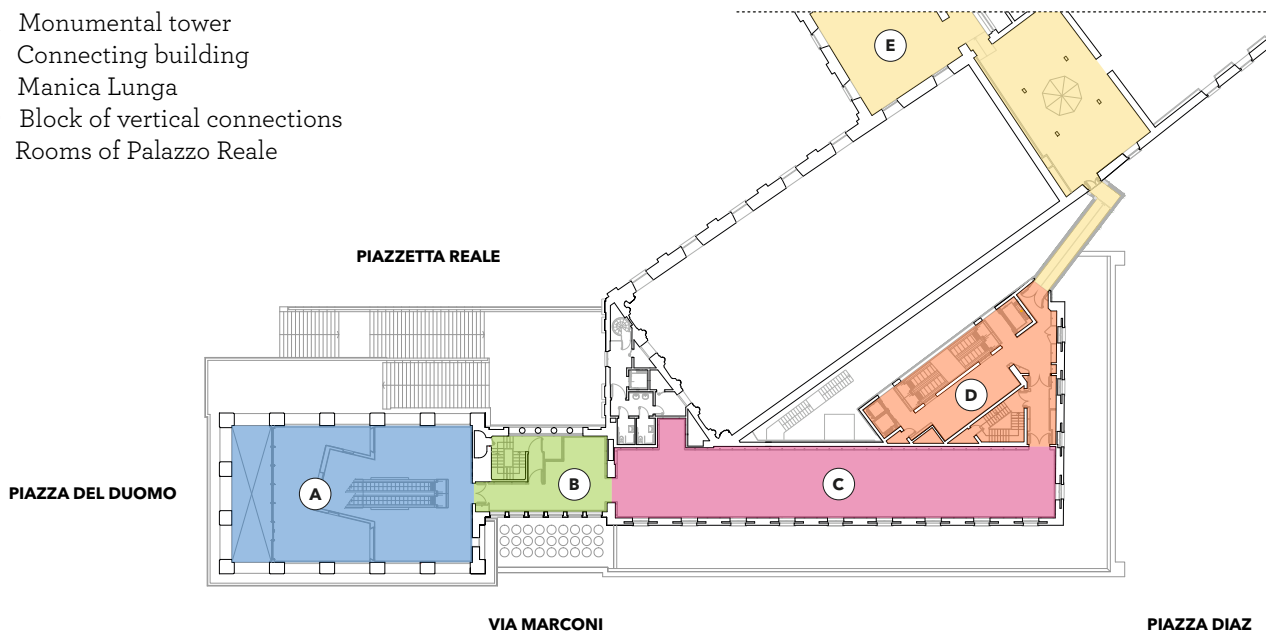


fig. 15 The buildings of the Museo del Novecento.

fig. 16 The visitor itinerary of the Museo del Novecento.

Monumental tower (A)

The building A, after removal of all the superfluous elements and mezzanine floors added in the 1950s, houses the spiral ramp directly visible from the outside through the monumental arches (fig. 17). On the first basement level there are the original sculptures of *Bagni Misteriosi* by Giorgio de Chirico (fig. 18); walking up, the ramp leads to two small rooms for exhibitions and the reception area, up to the ground floor, where the didactical lab is located. Continuing upwards, there is a third room housing *Il Quarto Stato* by Giuseppe Pellizza da Volpedo, a symbolic work of the twentieth century and introduction to the collections, beyond which, continuing upwards again, there are the Sala delle Colonne (entrance to the visitor itinerary) and the restaurant on the last level of the ramp. The ramp has separate foundations, since the Arengario was not strong enough to support the new structure, which is therefore entirely independent of the

existing one. The ramp (fig. 19) has been designed as public space and can be visited without a ticket. The final large room at the top of the tower, which is separate from the ramp and included on the museum visitor itinerary, houses the Lucio Fontana collection (fig. 20; fig. 21).

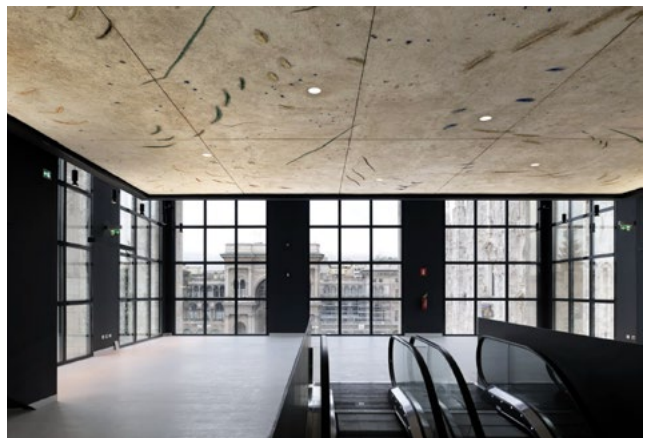
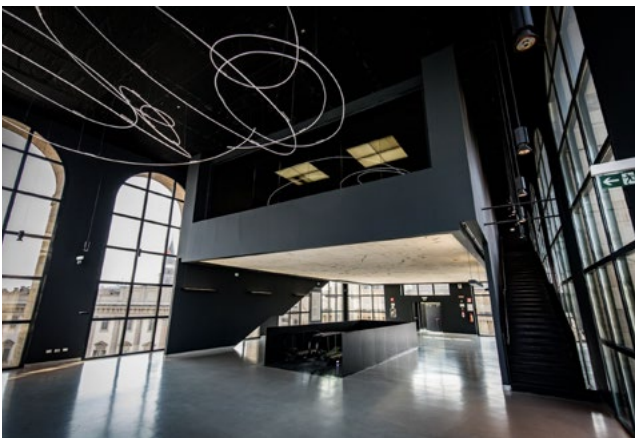
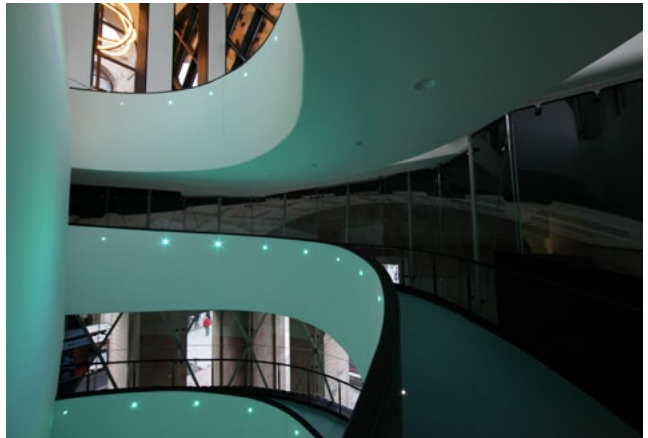
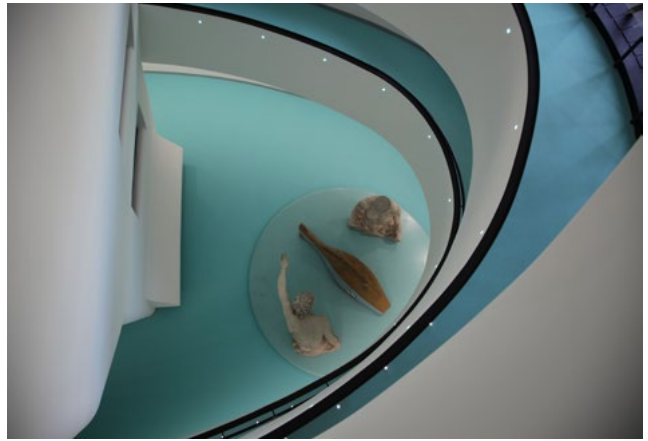


fig. 17 (at the top, on the left) Night-time view of the First Arengario tower from the outside.

fig. 18 (at the top, on the right) Internal view of the ramp, with the *Bagni Misteriosi* sculpture by Giorgio de Chirico.

fig. 19 (in the center, on the right) Internal view of the ramp with the restaurant at the top.

fig. 20 (at the bottom, on the left) Third floor of the First Arengario (view onto Piazza Diaz).

fig. 21 (at the bottom, on the right) Third floor of the First Arengario (view onto Piazza del Duomo).

Connecting building (B)

Between the tower and the Manica Lunga, in the space where the tramway originally passed and now entirely enclosed within large glass panels, there are the entrance hall with reception services, such as the ticket office (fig. 22) and cloakroom (fig. 23) on the ground floor, exhibition rooms and connecting spaces on the upper floors and the kitchen and part of the restaurant at the loggia level of the tower.



fig. 22 Entrance into the Museo del Novecento from Via Marconi.

fig. 23 Interior of the entrance with the ticket office.

Manica Lunga (C)

The first basement level of the Manica Lunga houses the conference room (fig. 24), the room for the visually impaired which is used as a multi-purpose room (fig. 25), the bathroom facilities and the storeroom.

The multi-purpose space is on the ground floor and the main exhibition rooms of the museum



fig. 24 The conference room on the first basement level of the Manica Lunga.

fig. 25 The multi-purpose room on the first basement level of the Manica Lunga.

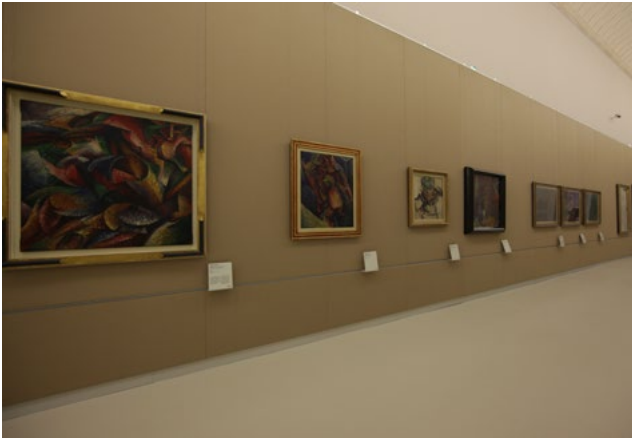


fig. 26 Sala delle Colonne on the first floor of the Manica Lunga (east wall).



fig. 27 Sala delle Colonne on the first floor of the Manica Lunga (west wall).

start on the first floor. The monumental setting of the Sala delle Colonne, at double height, houses the section dedicated to Futurism: it has been entirely restored through a conservation work on all the structural elements. The internal perimeter walls have been covered with panels to separate the display mounting system from the original walls (fig. 26; fig. 27).

Above the Sala delle Colonne, the demolition of the structures looking over the interstitial courtyard as far as the level of the current eaves has allowed the construction of two completely new exhibition levels with a metal structure, which have been attached to the existing ones, looking onto the fifteenth-century façade of Palazzo Reale.

The gallery on the second floor has the section dedicated to the 1920s-1940s (fig. 28), while the works of the 1950s are displayed on the third floor (fig. 29).



fig. 28 Exhibition room on the second floor of the Manica Lunga (before the new arrangement).



fig. 29 Exhibition room on the third floor of the Manica Lunga (before the new arrangement).

Block of vertical connections (D)

Looking onto the internal courtyard, the building D houses the vertical connections for the public and the works - panoramic lifts, escalators (fig. 30), goods lifts - and a set of rooms for temporary collections and exhibitions. The suspended footbridge connecting the First Arengario to Palazzo Reale is on the second floor of the building D (fig. 31): structurally the walkway is supported by the Arengario only, in order to avoid placing weight on the fifteenth-century building.

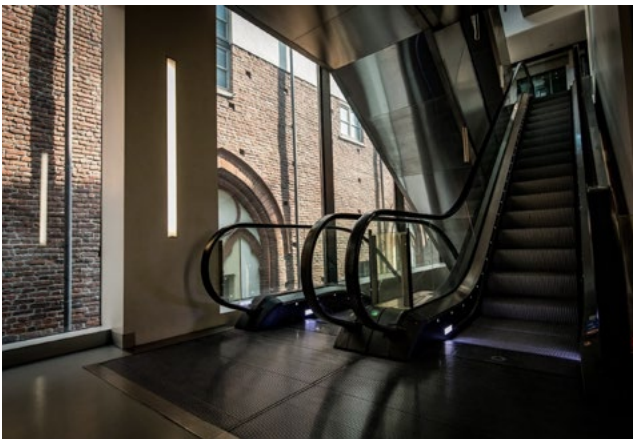


fig. 30 Escalators with a view onto the fifteenth-century façade of Palazzo Reale.

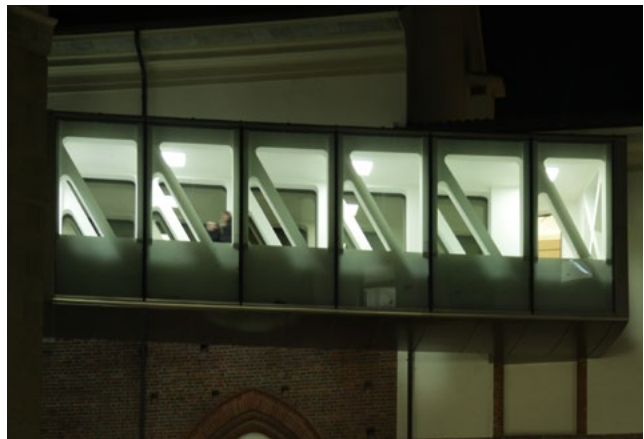


fig. 31 Outside view of the suspended footbridge connecting to Palazzo Reale.

Rooms of Palazzo Reale (E)

The second floor of Palazzo Reale has two rooms for temporary exhibitions and a permanent section dedicated to the 1960s-1980s.

The second basement level of buildings A, B, C and D house systems and installations and general storerooms for display mounting materials.

The Museo del Novecento currently houses a selection of almost four hundred fifteenth-century works, from the Milanese collections of the twentieth century, plus exhibitions and focus events dedicated to the collections stored there or to recent acquisitions⁴. The **“Nuovi Percorsi” project** for the new arrangement of the entire collection was started in 2019. The part dedicated to the 1960s-1980s has already been inaugurated, the renewed rooms dedicated to the 1920s-1950s will open in January 2021 and the Futurism room by the end of 2021. The exhibition itinerary follows a chronological and thematic narrative that starts with *Il Quarto Stato*, then continues with the Historical Avant-Gardes, with Umberto Boccioni and with the leading exponents of the Futurism. Continuing upwards, on the second floor of the Manica Lunga, there is the art from between the two World Wars and the passage from twentieth-century Figurative Art to Abstract Art. The turning point of the itinerary is the spectacular room dedicated to

⁴ For information, go to the link <https://artsandculture.google.com/partner/museo-del-novecento>

Lucio Fontana and looking onto Piazza del Duomo, which houses the *Struttura al Neon per la IX Triennale* in Milan, the *Soffitto Spaziale* and a series of spatial concepts. The Informal painting of the 1950s and 1960s is housed on the third floor, including further insights into Piero Manzoni and Alberto Burri. Heading back down to the second floor, along the footbridge that connects the Arengario to Palazzo Reale, the art forms of the subsequent decades are exhibited, with the rooms dedicated to the Kinetic Art, the Pop Art, the Arte Povera movement and the Conceptual Art, up to the beginning of the 1980s.

2.4.2 The Second Arengario

The Second Arengario (fig. 32) has a less complex construction history than the First Arengario and, according to the original project of Griffini, Magistretti, Muzio and Portaluppi, was supposed to house the offices of various associations. The ground floor was to have an open porticoed space, while the two upper floors were to have large rooms with sizeable vestibules. The offices of the Tourist Agency were to be housed on the first basement level of the building, with large rooms for information, luggage storage, hairdressing salons, bathroom facilities, ironing room,



fig. 32 View of the Second Arengario from the outside.



fig. 33 Municipal office inside the Second Arengario tower.

fig. 34 Council room inside the connecting building.

etc., while the second basement level was to house the heating and air-conditioning systems and the storerooms. It was planned to connect the tower and the palazzo mengoniano via a lower building with a large stairway towards Piazza del Duomo on the ground floor, leading to the offices of the Tourist Agency, and a second stairway towards Via Dogana with access from the porticoed space, leading to the upper floors.

The transformation of the interior of the tower (similar to the one of the First Arengario), with division into two floors of each of the two upper levels housing the municipal offices (fig. 33), probably dates to the 1950s. The connecting building, facing towards Piazza del Duomo, houses the Council Room (fig. 34) and the offices, with the stairs and lift, facing towards Via Dogana. The basement levels of the tower and the portico levels of the connecting building were recently granted under concession to third parties and contain shops and a bar.

2.5 Archaeological finds

Between 1989 and 1991, several surveys were carried out on the area close to the Arengario, between Piazzetta Reale and the Duomo, and provided a set of information on the building Azzone Visconti had built in the first half of the fourteenth century and, specifically, revealed two large parallel walls, which were, in all likelihood, the perimeter walls of the north wing, gradually demolished to make space for the cathedral. The current Palazzo Reale, in its eighteenth-century form, does, in fact, retain part of the Visconti's building⁵.

In 1999, during repaving of Piazza del Duomo by the company MM Spa, further archaeological investigations were carried out close to the Arengario. The two investigations - Trench 1 and Area 1 - uncovered the ruins of the walls, confirming what had been found in 1991 and providing useful information for at least partial reconstruction of the foundations of the north wing of the

⁵ For further details, refer to the annex "NSAL 1991".

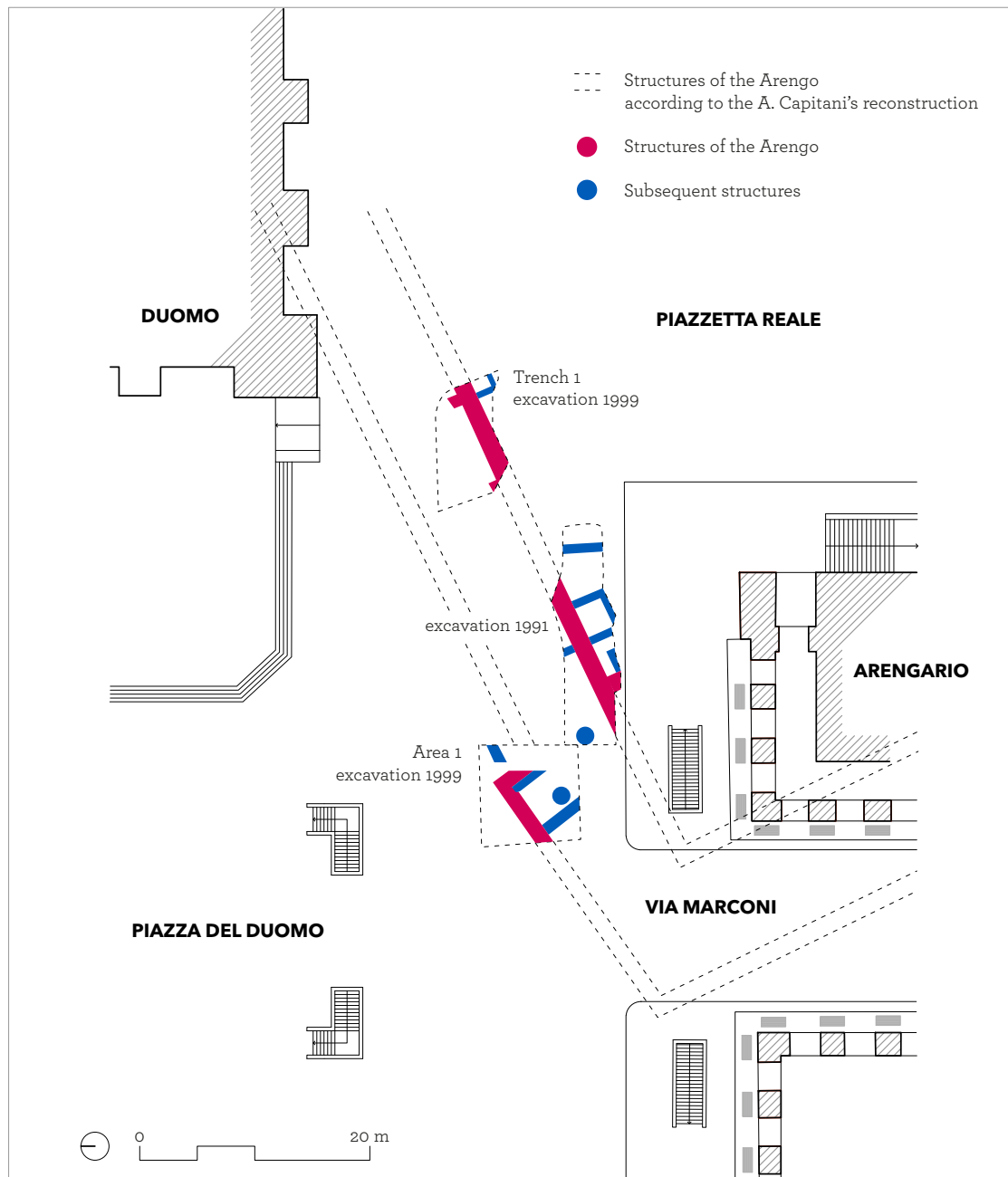


fig. 35 Location of the archaeological investigations carried out between 1991 and 1999.

Visconti's building (fig. 35). However, uncertainties remain over the actual size of the building⁶. A further investigation was conducted between 2008 and 2009 in the internal courtyard of the Arengario, close to the east wing of Palazzo Reale, during creation of the Museo del Novecento, and confirmed that the area has been used continuously from Roman times up until the present day⁷.

⁶ For further details, refer to the annex "NSAL 1999-2000" and "Indagini archeologiche in Piazza del Duomo a Milano 1996-1999".

⁷ For further details, refer to the annex "Notiziario della Soprintendenza per i Beni Archeologici della Lombardia 2008-2009".

2.6 Accessibility

Piazza del Duomo is a major interchange point on the public transport system of Milan. The “Duomo” station on lines M1 and M3 of the Metro is situated in the square and the following tram stops are within a 200-metre radius:

- Tram 1 Greco - Roserio;
- Tram 2 Piazzale Negrelli - Piazzale Bausan;
- Tram 3 Duomo - Gratosoglio;
- Tram 12 Molise - Roserio;
- Tram 14 Cimitero Maggiore - Lorenteggio;
- Tram 15 Duomo M1 M3 - Rozzano (Via G. Rossa), with terminus in Via Dogana (fig. 36);
- Tram 16 San Siro M5 - Via Monte Velino;
- Tram 19 Lambrate FS M1 - Piazza Castello.



fig. 36 The tram terminus in Via Dogana.

3. SUBJECT OF THE COMPETITION

3.1 Scope of the intervention

The area to which the competition relates is defined in annex “3.2 Tavole con perimetrazione area di concorso” and is divided into two fields of intervention.

3.1.1 Perimeter 1- Technical and Financial Feasibility Project

Perimeter 1 (fig. 37), marked in red, includes the Second Arengario, part of the palazzo mengoniano (southern arcades) and part of the First Arengario, for a total surface area of around 8,000 m². Within this perimeter, competitors are asked to develop a technical and financial feasibility project for the creation of a single large exhibition complex dedicated to modern and contemporary arts, which contemplates the extension of exhibition spaces and the development of additional services.

Competitors are asked to design an aerial connection for transit between the two buildings. The solution must be designed to maintain physical continuity and also ensure the best possible visual continuity between the Galleria Vittorio Emanuele II and Piazza Diaz. The choice of positioning of the aerial connection is left to the competitors (refer to indications contained in paragraph 4.4). The technical and financial feasibility project must also relate to the offloading area inside the First Arengario, which is not specifically identified in perimeter 1. This area must not be positioned in the spaces under concession to the restaurant.

In view of the importance and uniqueness of the context in which the Arengario is located, competitors are also asked to prepare a design variant, in which there is no physical connection between the two buildings, in order to allow greater flexibility in the subsequent project phases. The project must comply with the indications of paragraphs 4.1, 4.2, 4.3, 4.4 and 4.5, the key points of which are:

1. the Museo del Novecento, in the two buildings, must be considered as unique and consistent with the governance and the cultural mission⁸;
2. the Museo del Novecento must recount the history of art in the twentieth century and also investigate the artistic experiences and practises of the twenty-first century;
3. the new museum must have sufficient spaces and services for a broad range of cultural initiatives and dynamic use, such as a functional and modern new auditorium, a cafeteria and a bookshop.

⁸ Refer to the annex “Carta dei Servizi Museo del Novecento”.

It is specified that cafeteria and bookshop services are already present within perimeter 1 and graphically indicated as “**area with function integrated into the museum**”: these areas are currently under concession to third parties, with whom synergies with the Museo del Novecento will be sought. The project for the links between these areas must be flexible, as it could undergo changes: the Administration reserves the right to change this perimeter, without altering the overall nature of the assignment and notifying each competitor promptly, in order to guarantee that all participants in the competition are able to prepare their technical and financial bid in full knowledge of all aspects.

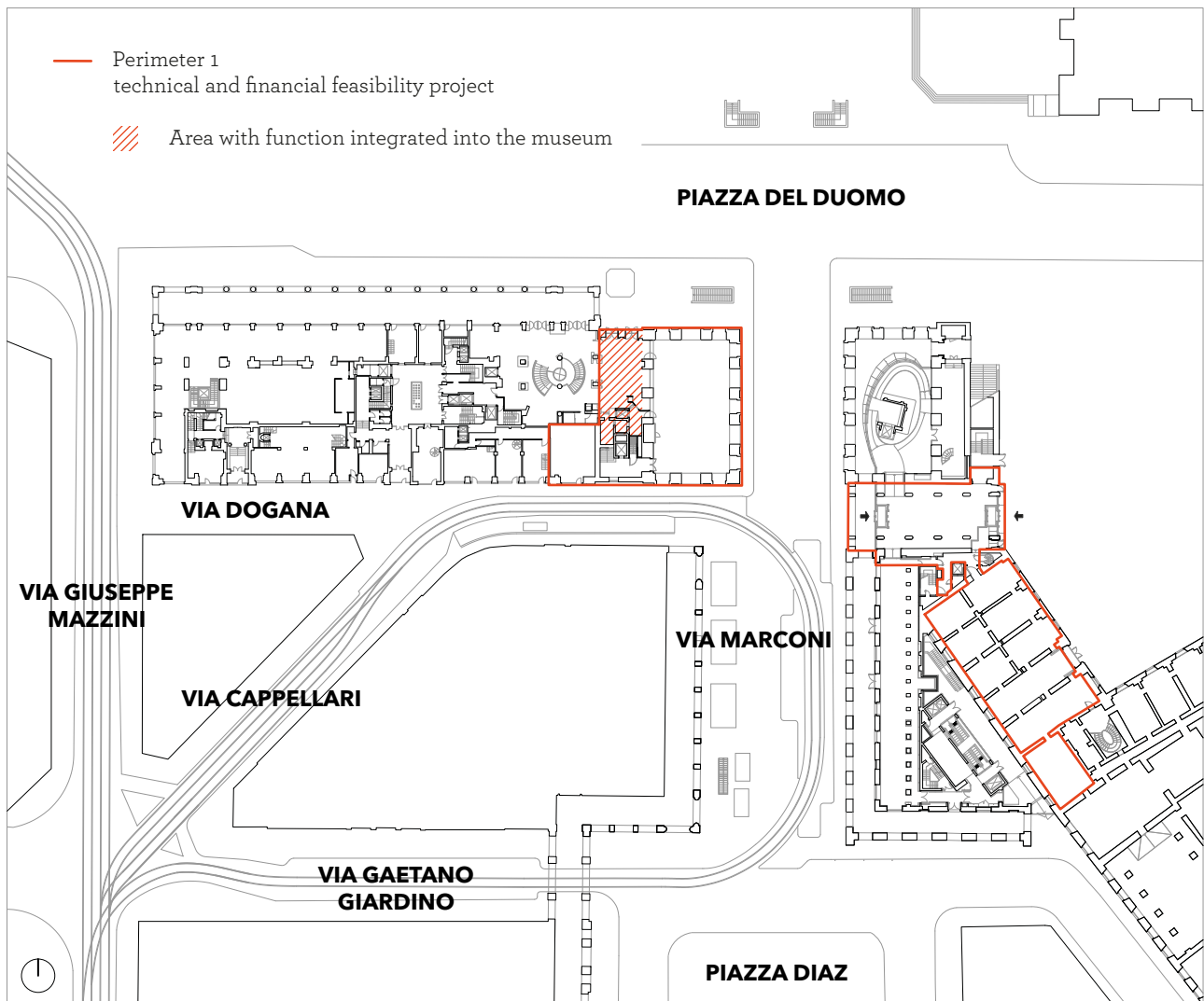


fig. 37 Perimeter 1 on the ground floor level.

3.1.2 Guidelines

The **Guidelines** are required for the public areas around the blocks to the south of the Second Arengario, which corresponds, indicatively, with the stretch of Via Marconi between the two

towers, Via Dogana, Via Cappellari, Via Giuseppe Mazzini and Via Gaetano Giardino. A project complying with the guidelines is required for the public area, in order to ensure that extension of the Museo del Novecento is fully integrated into the urban context. Particular attention must be focused on access, imagining a redevelopment of the public areas, reflecting the vocation as a pedestrian area of the city centre.

The area is not delimited with a precise perimeter, but general indications are provided. Extension will, in fact, be at the designer's discretion. The choice must be justified and consistent with the objectives it is intended to pursue.

The stretch of Via Marconi between Via Dogana and Piazza Diaz, which is already a pedestrian area and was redeveloped in 2017, is excluded.

3.2 Restrictions

3.2.1 Monumental restriction

The project must focus particular attention on the identity of the location, in compliance with restrictions laid down by Legislative Decree no. 42/2004 ("Cultural heritage and landscape Code, pursuant to Article 10 of Law no. 137 of 6 July 2002"). Although no express measure pursuant to Art. 13 of Legislative Decree no. 42/2004 has been passed, the Arengario must nonetheless be considered as a protected cultural asset pursuant to the combined provisions of Arts. 10 and 12 of the Code, according to which real and moveable property owned by the State, the regions and other territorial agencies are legally subject to protection, as are those of any other public entity and institute, non-profit private legal entities, including civilly recognised ecclesiastical entities, when they are of artistic, historical, archaeological or ethnological-anthropological interest, they are the works of a deceased author and they were built over seventy years ago⁹.

It should also be noted that Piazza del Duomo, onto which the Second Arengario looks, is the subject of a protective measure issued on 27 July 1995, pursuant to Legislative Decree no. 42/2004¹⁰.

The project will therefore be subject to the prescriptions, recommendations and indications formulated by the Department of Superintendency of Archaeology, Fine Arts and Landscape for the Metropolitan City of Milan, which must be taken into consideration during the phases of development and completion of the technical and financial feasibility project.

⁹ Refer to the annex "20140210 - Parere della Soprintendenza per i Beni Architettonici e Paesaggistici di Milano".

¹⁰ Refer to the annex "19950727 - Vincolo su Piazza Duomo".

3.2.2 Restrictions on the Arengario

Competitors are asked to maintain the integrity of the historical building, enhancing the façades and their features, without compromising the recognisability and uniqueness of the original architectural and urban project of Griffini, Magistretti, Muzio and Portaluppi.

Restrictions on the First Arengario - Museo del Novecento

Design choices for the First Arengario must take into consideration that Administration has invested resources in improving the permanent exhibition itineraries of the Museo del Novecento over the last decade. In pursuing the objectives of redesigning and reorganising the exhibition itinerary, interventions on the existing structures should be avoided, where possible, as they are sufficiently functional. It is also specified that there must be no changes in the intended use of the exhibition areas of the First Arengario, with the exception of the area facing the entrance to the Sala delle Colonne, with a view to enhancing the outside terrace (refer to paragraph 4.5).

Restrictions on the Second Arengario

Design choices for the Second Arengario must aim to preserve the distinctive character that links it to the First Arengario.

Floors must be strong enough to support the new function as exhibition space (1,200 kg/m²). They may be replaced with new elements that, in line with the proposed distribution project, allow interior spaces of the original building to be recovered or new ones to be created. New floors may cover the existing surfaces, even partially, through the use of balconies or mezzanine floors, provided that the areas needed for the complete development of the exhibition itinerary are provided. The existing roof of the building cannot be used for anchoring. It is also emphasised that, due to the change in intended use of the building and the plan to increase the loads, current regulations require the seismic adaptation of the structure.

The project must envisage the restoration of the original architectural elements of the façades and external doors and windows and also the replacement of the parts that no longer comply with the air conditioning, comfort and safety requirements laid down by current regulations, similarly to what has been done for the First Arengario. It is also specified that some of the windows, on each level of the building, must be openable, to allow the use of external platforms to introduce large objects into the museum.

The portico on the ground floor may be closed and provided with a new purpose. It is recommended not to position infill walls flush with pillars on the outside, in order to maintain the recognisability and uniqueness of the original façades. The solution must be in harmony with the glass walls on the ground floor of the First Arengario. If it is planned to perforate the coffered vault ceiling of the portico (fig. 38), competitors are invited to consider the possibility



fig. 38 The vault ceiling of the portico in the Second Arengario.

fig. 39 The coffered ceiling of the loggia in the Second Arengario.

of proceeding as in the First Arengario, where part of the existing vault ceiling was maintained between perimeter pillars and the glass casing containing the ramp. They are also asked to consider the possibility of maintaining the existing lighting fixtures hanging from the portals, as in the First Arengario.

Furthermore, in order to preserve the unitary character of the two towers, the possibility of maintaining the coffered ceiling (fig. 39) of the loggia should be considered, and also the external balustrade around the Second Arengario, with any necessary adaptation to regulations. In any case, the design criteria that the competitor intends to follow in the restoration, conservation and consolidation of the original parts of the building must be indicated and briefly described in the report. Similarly, the choices for replacement must be equally justified, both for purposes of adaptation to regulations and/or improvement of the comfort of the internal environment and for purposes of consistency with the proposed design solution.

3.2.3 Restrictions on public space

Insofar as concerns surface work on the stretch of Via Marconi between the two towers, competitors are permitted to propose new street furniture and are asked to consider the possibility of retaining the existing stone paving. If it is proposed to redesign this stretch of road, it is requested that the paving stones be preserved and returned to the Administration, as they were only laid relatively recently. No work should be planned on the tram tracks in Via Cappellari, Via Dogana, Via Marconi and Via Giardino.

The project must take into consideration the underground utilities in the area and either maintain or relocate them. Comprehensive documentation is provided for this purpose (refer to the annex “3.6 Tavole sottoservizi”).

4. DESIGN INDICATIONS

A set of indications that competitors must take into consideration in the design phase are provided below.

4.1 Identity and relationship with the context

The conversion of the Second Arengario into a museum space offers a unique possibility in terms of architectural and urban improvement. The ideal set of Piazza del Duomo, which the construction of the Arengario in the 1930s was supposed to provide, would have a complete sense and clear balance with the connection of the second tower to the Museo del Novecento, illuminating what was defined as the “dark side of the square” at the start of the last century.

The project for the stretch of Via Marconi between the two towers must be considered as an essential element of the perspective view in north-south direction, connecting the Leonardo da Vinci monument in Piazza della Scala to the Torre Martini in Piazza Diaz.

The aerial connection between the two buildings must have a precise architectural identity, while still being light and having a minimal impact on its surroundings. The view along the north-south axis of the square must be considered (fig. 40; fig. 41) and, insofar as possible, must be enhanced and not distorted, not even by any elements resting on the ground, which must not interfere with the use of the underlying public space under any circumstances. As will be specified in greater detail in paragraph 4.4, the aerial connection must be in a recessed position with respect to the façades looking into Piazza del Duomo, in order to reduce the visual impact and avoid compromising the recognisability of the two towers.

The designer is asked not only to enlarge the exhibition areas and develop additional services but also to create a symbolic link between the building and the public space and the community: the architecture must reflect the intention to engage citizens, who must feel that they are invited to enter the museum not just to view the collections and attend presentations, conferences, film projections, concerts and performances, but also to take part in the “behind the scenes” research and improvement activities.

For this purpose, designers are asked to amplify the visual link between the surrounding public space and the newly designed elements, from the Second Arengario to the aerial connection.

Any services planned on the ground floor must have a direct access from the public space, to be modulated according to needs. In detail, the auditorium is requested to have a direct view onto Piazza del Duomo.

The relationship between the museum and the city will be enhanced through the proposed guidelines for the redevelopment of the public space. In particular, competitors are asked to improve access to the museum, by enlarging the pedestrian areas and, where possible,



fig. 40 The view south from Galleria Vittorio Emanuele II.



fig. 41 The view north from Via Marconi.

eliminating the architectural barriers. An increase in green areas, based on the redevelopment model adopted in 2017 along Via Marconi, could be proposed assessing the density of pedestrian traffic in the area.

4.2 Concept museologico

“Novecentopiùcento”, as explained in the foreword, means exhibiting a further 100 works to the public, completing the chronological narrative of the 100 years of the twentieth century and shifting the focus to the start of the twenty-first century. Another aim of the project is to supplement the existing museum services with a new concept of museum that, together with the typical and established functions of conservation and exhibition of the heritage, aims to enhance its cultural offer and to engage the community. The conversion of the Second Arengario into a museum means rethinking the itinerary, whereby the Museo del Novecento is a single space formed of two buildings, ideally connected to each other.

This concept of museum satisfies the need of providing the city with a museum that is not only broader in terms of space and chronology, but also has services that make it a modern and multi-purpose cultural institute that actively interacts with citizens.

Key points:

1. the Museo del Novecento, in the two buildings, must be considered as unique and consistent with the governance and the cultural mission;
2. the Museo del Novecento must recount the history of art in the twentieth century and also investigate the artistic experiences and practises of the twenty-first century;
3. the new museum must have sufficient spaces and services for a broad range of cultural

initiatives and dynamic use, such as a functional and modern new auditorium, a cafeteria and a bookshop;

4. the Second Arengario, ideally dedicated to the last twenty years of the twentieth century and to contemporary art, must be flexible enough to allow frequent renewal of the displays. It is intended, in this sense, to propose a kind of “collections workshop”, in which the solution of temporary displays is combined with the works of the collection through loans from other institutes, private citizens and artists;
5. the top room of the Second Arengario, which will house the work of an internationally renowned artist, must carry on a dialogue with Sala Fontana in the First Arengario.

Exhibition itinerary:

Starting in 2019, with the “Nuovi Percorsi” project, the Museo del Novecento began a review of the story told by the museum, with the intention of providing a new interpretation of the art from the Historical Avant-Gardes to the early 1980s. In line with this project, the extension of the exhibition spaces will allow to display the works of the collection relating to the art of the last forty years, together with new acquisitions and loans. This last section, which will be primarily theme-based, will be housed in the Second Arengario and will mark the transition between the current itinerary, telling a broader story geographically speaking, thanks to a dynamic display that can be continually renewed.

Functionality of the spaces:

The spaces must be designed to be flexible and modular, to satisfy the various needs:

- they must be suitable to house works of different types, paintings of various sizes, sculptures, videos, installations or performances, in view of their planned frequent rotation;
- the design of a new dedicated and exclusive area for educational services is not planned. Rather, with a view to “universal teaching”, it is imagined that visits, workshops and other activities will be held on a daily basis in the museum rooms and in the service rooms, which thus become “multi-purpose”;
- the Museo del Novecento in its entirety is intended as a lively cultural space open to citizens, a place for active participation and a sign, in the city centre, of an attention focused on the different forms of the contemporary culture.

4.3 Functional program

The functions that must be designed are indicated below:

Exhibition spaces (around 700-1,000 m²). See paragraph 4.6 for further details.

Additional services:

- **Auditorium**, with an independent entrance. This must be a flexible and multi-purpose space capable of housing various types of events (conferences and presentations, concerts and shows, performances, film projections, etc.). For this reason it must be modular and usable in two different modes: as an open space (in the case of a performance, for example) or as a grandstand (min. capacity of 120 places), on which the public can sit comfortably for lengthy periods of time. Competitors are asked to offer a lean and functional solution that guarantees different scenarios with minimum effort. The auditorium must also have a control booth, a film projector and a cloakroom. The ground floor of the Second Arengario is suggested as location, in order to create visual interaction between the inside of the museum and the square. The possibility of acoustic insulation and total darkening should be considered as well as the proposal of an original solution for the technical ceiling that satisfies the needs of the different planned scenarios;
- **Cafeteria**. This must have a kitchen area to allow the serving of hot and cold food in the Second Arengario. It must also operate as a catering point next to the auditorium (see “area with function integrated into the museum” - point 3.1.1);
- **Bookshop**. This is currently located on the ground floor of the Manica Lunga in the First Arengario and has movable and modular furnishings. It must be moved into the Second Arengario, preferably at the end of the visitor itinerary (see “area with function integrated into the museum” - point 3.1.1).
- **Conservation laboratory** (around 200 m²), to be intended as an area for minor interventions on the works (frames, passe-partout, cleaning, etc.) and for the drafting of condition reports on their state of conservation on occasion of temporary loans. It must be located on the first basement level of the Manica Lunga (building C), in the areas currently occupied by the conference room and the storeroom, as these are close to the goods lift. It must be equipped with cupboards, tables, diffused lighting and grids on the walls to hang the works. The infill walls between the pillars, between the current corridor and the new laboratory areas, must have transparent surfaces, in order to allow visitors to see the activities being performed there and to achieve the goal of allowing people to see what goes on “behind the scenes” at the museum.
- **Cloakroom** (around 50 m²). This is currently located at the entrance to the Museo del Novecento (building B) and is not large enough for the number of visitors. It must be moved

to the first basement level of the First Arengario (building A), in the area currently destined for use by “third parties”, reusing the existing systems for the lockers (see “perimeter 1”).

- **Bathroom facilities.** It is requested that part of the areas used for the staff changing rooms with attached bathrooms on the first basement level of the First Arengario (building A) be destined for the new visitor bathroom facilities. The staff facilities must be partly relocated to a portion of the current visitor bathroom facilities on the first basement level of the Manica Lunga (building C).
- **Changing room with storeroom** (around 100 m²), to be provided for use by the security staff, currently located on the first basement level of the First Arengario (building A), in the area allocated to “third parties”. This must be relocated to the first basement level of the Manica Lunga (building C), where the multi-purpose area is currently located. It will generally be used to store non-bulky materials. It must have tables, chairs, shelves, benches, coat racks and lockers.
- **Storeroom.** Competitors are asked to consider the availability of spaces in the Second Arengario for various museum services (such as furniture and information panels, materials for “universal teaching” activities, cleaning materials, safety materials and safety signs).

The rooms on the second basement level of the Second Arengario must be destined partly to the building’s technical systems and installations.

A **goods lift** (min. dimensions of 300x250 cm) must also be planned for moving the works. It is suggested that it could be positioned in the palazzo mengoniano, in the space on the lower floors currently occupied by the shops looking onto Via Dogana and on the upper floors by the municipal offices. It must be considered that, for handling of bulky objects (furnishings, mounting materials, artworks, sculptures, etc.), some of the windows must be openable on each level of the building to allow use of external platforms (see point 3.2.2).

4.4 Connection to and relationship with the First Arengario

The connecting structure to the First Arengario must be positioned extremely carefully, considering the impacts on both the inside and the outside of the current Museo del Novecento and must not be positioned in the areas currently under concession to the restaurant. The new aerial connection must be not only a connecting structure, but also an observatory onto the area between Piazza del Duomo and Piazza Diaz and must potentially house artworks. Competitors are asked to pay particular attention on the lower part of the structure and the role it will play in such an historically important area of the city. Competitors must propose technical solutions that guarantee the utmost transparency of the new structure and that offer sufficient comfort in this suspended space between the two Arengario towers. Competitors are invited to submit a

proposal for a night view of this structure, which must blend with the Neon by Fontana and the new room on the top level of the Second Arengario .

The design of the connection between the two buildings must guarantee the integrity of the façade of the two towers. The structures must be independent from the existing ones and the structural joint must be of appropriate dimensions to the movements envisaged by the project. The vertical structures may also be housed inside the current walls of the Arengario, after removal, cataloguing and subsequent repositioning of the existing coverings. For the new foundations, interferences with the existing underground utilities and the geometrics of the existing foundations of the Arengario must be assessed.

4.5 Museum itinerary

The museum itinerary must be reorganised in a manner to join the new exhibition areas of the Second Arengario with the existing ones inside the First Arengario to create a single visit experience. The intervention on the First Arengario for purposes of reorganisation of the itinerary is permitted, with the following provisos:

- an exit must be planned onto the terrace of the Manica Lunga looking out onto Via Marconi (fig. 42), through a French window opening, which must be positioned in the space facing the entrance to the Sala delle Colonne, with the aim of enhancing the terrace, which could also be used for installations and temporary events. The levels of air conditioning and the security of works must be maintained in all circumstances. The exit must fit harmoniously into the surroundings and blend with the façade of the Manica Lunga;
- the entrance to the temporary exhibition rooms on the ground floor leading onto Piazzetta Reale must be redesigned, by opening a passage in the current portion of the hall adjacent



fig. 42 The terrace of the Manica Lunga.

to the entrance from Piazzetta Reale. For this purpose, it is planned to demolish the wall beside the reception desk, which separates the hall from the space for connection with the rooms. These interventions must be planned in full compliance with the original design of Italo Rota & Partners;

- the bookshop and the cloakroom must be relocated (see paragraph 4.3);
- with the new auditorium, the conference room on the first basement level of the Manica Lunga will no longer be necessary. This space will house the conservation laboratory (see paragraph 4.3);
- the bathroom facilities on the first basement level must be partially reorganised (see paragraph 4.3).

The visitor access to the Museo del Novecento is currently through two entrances: the first one at 1 Via Marconi and the second one at 8 Piazza del Duomo (Piazzetta Reale). There are various reception services in the hall: the information desk, the museum ticket office and the exhibition ticket office, a sale point for the Museums of Lombardy Season Ticket, an audio guide rental point and a cloakroom. The museum spaces must be organised in a manner to allow visitors:

- to enter from the hall and to visit, without a ticket, the *Il Quarto Stato* (this must remain free of charge);
- to visit the temporary exhibitions, after collecting their ticket;
- to start the museum itinerary, after collecting their ticket;
- to access the didactical lab from the hall;
- to access the restaurant and the new services (auditorium, bookshop and cafeteria) without entering the visit itinerary.

In outlining the new visitor flows, it is necessary to consider the need to be able to separate the visit itinerary from additional services, in order to allow independent access to the auditorium, the cafeteria and the bookshop. In the areas intended for services, it must be possible to perform activities and events that are managed independently and at different times to the opening times of the museum itself. This will reduce the impact of activities “outside opening times” on the museum staff and simultaneously allow temporary hiring to third parties and thus contribute to supporting the activities of the museum.

Insofar as concerns the vertical connecting systems, the current position of the set in the Second Arengario appears to be satisfactory, but competitors could plan to replace it with a new set. Competitors may also submit a new proposal for the reorganisation of the stairs, the goods lift/lift for the disabled people, the safe area, the signs and anything else needed to guarantee the correct functioning of the Second Arengario.

Competitors are asked to assess whether to eliminate the horizontal structures between the first and second floors of the Second Arengario, to allow positioning of large works along the perimeter walls and in the free space of the room, which is to be equipped to house works of various natures (installations, performances, etc.). The need to use, at least occasionally, solid walls that are strong enough to hold heavy works must also be taken into consideration.

The glass in the central vaulted arch on the first floor on Via Dogana must therefore be maintained, to allow the passage of natural light between Piazza del Duomo and Via Dogana.

The last level of the Second Arengario is an evocative panoramic point onto Piazza del Duomo and, like the Sala Fontana in the First Arengario, could house monumental installations to carry on a dialogue with the Neon by Fontana and a mezzanine floor that is recessed with respect to the façade onto Piazza del Duomo, to be used as an exhibition space. Particular attention must be focused on the night-time effect of this space, which must highlight the artworks being displayed and ensure they have sufficient light, in harmony with the First Arengario.

Competitors are asked to highlight the terrace that looks onto Piazza del Duomo on the roof of the connecting structure between the Second Arengario tower and the palazzo mengoniano (fig. 43) - on the third floor of the Second Arengario tower - as an exceptional element along this visit itinerary. Competitors should assess partial covering and positioning of a vertical connection through use of light structural systems and transparent surfaces between the third and fourth floors of the tower; this connection is intended to improve management of visitor flows inside the building and could become a distinctive architectural element. If present, these interventions should be planned in the most recessed portion with respect to the façade, to avoid altering the current appearance for anyone observing the building from Piazza del Duomo.

The possible need to adapt the height of the current external stone balustrade to safety regulations must also be considered.



fig. 43 The terrace over the connecting structure, looking onto Piazza del Duomo.

The visitor experience must be designed to ensure that the visitor flows along the itinerary are clearly understandable, fluid and continuous.

The access to the exhibition itinerary and museum services must be guaranteed for all users, ensuring that people with reduced or impaired mobility and senses can reach the building, enter easily and use all the areas safely and independently. Current regulations on architectural barriers must therefore be considered as minimum requirements on which to improve. In particular, competitors are asked to consider the objectives of inclusion, by ensuring, insofar as possible, that the flows of different categories of users coincide, are not separated and are independent, allowing the museum to be visited with the minimum amount of assistance possible.

4.6 Exhibition spaces

The Second Arengario must be versatile and “neutral”, creating the idea of a fluid and changeable space, in which artificial light and natural light from the outside coexist harmoniously. Since this is an extension of the current Museo del Novecento, it is essential for the project to carry on a dialogue between the two towers, not only in terms of the museum itinerary and chronological and scientific consistency, but also from a visual and architectural viewpoint.

It is important for the exhibition rooms to be suited to continual changes in the temporary exhibitions and displays, also taking into account the need to mount works of different types and sizes. The Second Arengario must be characterised by the creation of large spaces, capable of housing large works and works created using intangible mediums, such as moving images, sound and performance art. Competitors should therefore envisage the presence of both large walls and large open spaces, equipped with technical ceilings strong enough to hold the different types of exhibits and, if necessary, works that need to be suspended, as well as areas destined for the supporting technologies, which can be centralised and controlled from a single control room. The proposed system must be easy to use and to maintain.

The project must be innovative in the choice of structural systems, through use of construction devices that transform the visual perception of the space into a unique visit experience: versatile materials and structural elements that allow the glass wall to be easily “transformed”, to the point of emptying it entirely and opening the view onto glimpses of the surrounding urban context that allow the visitor to participate in it.

The project must take into consideration the small spaces of the Second Arengario, avoiding invasive interventions that reduce them even further and leaving space, primarily, for the works themselves and for a “lightweight”, simple and minimalist architecture.

4.7 Materiali e finiture

The **floors** of the Second Arengario should be neutral, easy to maintain and highly resistant to the continuous passage of visitors and the transport of heavy materials.

The **floor structure** must contain, on all levels:

- structures for manoeuvrability of modular walls;
- load-bearing ribbing on the ceiling for attachment of suspended installations, with a load-bearing capacity up to 500 kg;
- a ceiling structure to house the lighting system and electrical wiring, digital devices and connections for video installations;
- retractable structures in the floor for supplying electricity to the works.

The **walls** must have neutral colours that ensure maximum flexibility in surface treatment, in order to allow use of different types of materials that can be easily replaced and restored.

4.8 System engineering

The systems and installations of the building, as a whole, must be consistent with the design solution proposed, comply with the budget indicated and with regulations on safety and operation. The building must be equipped with a single energy supply for each type of system to be connected to the public networks. In particular, if there are businesses inside the structure, they must have their own separate utilities, thus avoiding the presence of concealed final customers, as required by current regulations. Energy must be supplied according to the indications of the public network providers.

For the **electrical systems**, the environments must be classified according to current technical regulations to define the protection measures against direct and indirect contacts. In order to increase resilience and limit any disruptions affecting the entire building, the electrical systems must be designed with “by zone” or “by floor” architectures, where “zone” means environments with the same intended use. The individual zones must have separate protections on the different and separate circuits, such as the lighting circuits and the terminal sockets. The surface area of each zone must be suited to the design solution, with indicative maximum dimensions of 600 m² (m² for each floor). The distribution of energy must be designed to guarantee systems maintenance after installation and to allow safe access to all components. A certain degree of flexible distribution must be guaranteed, in order to ensure the systems meet the museum’s requirements. The installations must have a minimal visual impact and be totally retractable. The terminal circuits must satisfy the criteria of subdivision of utilities, functional to activities

and to reduction of service due to failure or malfunctioning.

The **lighting systems** must be identified adopting criteria and solutions to reduce energy consumption, compatibly with the need to have lighting appropriate to a museum. In detail, the choices must aim towards a contemporary minimalism that retains the architectural features of the existing building and exploits the natural light filtering through the large glass panels. The lighting systems must be flexible, innovative and experimental, suited to conservation and enhancement and allow both diffused and pinpointed lighting. The lighting may also be dimmable, with the possibility of changing the colour temperature (from 3,000 to 4,000K) and different colours. The lighting must satisfy current technical regulations, both during ordinary functioning and in emergencies. The emergency lighting must be installed in all areas of the building containing devices on which it is necessary or possible to perform operations to restore normal operation.

The Second Arengario must also have a functional and easy-to-use **darkening system** (such as switchable smart glass).

The **automatic systems**, such as the one regulating opening of the main doors and the windows, must be designed to ensure easy maintenance. Priority must be given to the installation of complete systems that are commercially available, avoiding the use of automation devices requiring assembly.

The **electronic systems**, such as fieldbuses and regulation systems, must be designed using open systems with standard protocols. The open systems must also allow connection to the actuators and sensors of different component manufacturers. The electronic systems must also have separate cable ducts to the ones of the electrical wiring.

The building must have an **intrusion prevention system** in the spaces, at the entrances and critical points, with installation of sensors. The system must be designed on the basis of the security needs associated with the works displayed and kept inside the museum.

The building must also have a **video surveillance system** in the spaces, at the entrances and in the critical points, with installation of video cameras. The CCTV system, in terms of both its system engineering and operation, must be designed to satisfy privacy regulations. In both cases, the technology used must be compatible with the existing technology and must be integrated into and centralised on the single management system, with the possibility of remote control with the existing software.

The museum must have both LAN and Wi-Fi coverage.

In view of the different intended uses, it should be assessed whether to equip certain areas with sound diffusion systems for congresses and/or conferences. The microphones must be the wireless type, to guarantee flexibility of the amplification system.

The **heating and air-conditioning systems** must be identified using criteria and solutions that limit the energy needs of the building. The systems must be capable of maintaining the stability of temperature and relative humidity within the correct parameters for the museum ($20^{\circ}\text{C} \pm$

5; 45% RH ± 5). Heat pump systems should be preferred. The validity of the proposed solution must be certified through the calculation methods envisaged by regulations. The system engineering must guarantee limited noise and noise levels that comply with regulatory limits in any case. The system must be divided into homogeneous areas, adopting the same criteria used for the electrical systems, and must have systems of automatic regulation of the internal thermo-hygrometric conditions that guarantee conditions compatible with the intended use of the environments. Particular attention must be focused on the positioning and choice of components, in order to limit malfunctions caused by unauthorised handling by users. These components must also be camouflaged in a manner to blend in and to give greater prominence to the works on display. The proposed solution must allow operators to perform maintenance on all components in safety. Functional subdivision must be such as to limit the disruption caused by faults and/or malfunctions of the equipment. Furthermore, a remote management system must be provided and subsequently made available the administration: the presence of a district heating network¹¹ within a distance of less than one kilometre from the Arengario makes its preparation for connection mandatory. It will be opportune to assess the possibility of this connection being carried out according to the specifications of the service provider.

The **ventilation systems** must be designed adopting the same criteria used for the heating and air-conditioning systems. Their continued operation even in emergencies must be guaranteed, maintaining sufficient technical and functional capabilities.

The **fire protection systems** must comply with current regulations. It must be possible to interface the fire detection systems with the specific equipment subsequently provided by the Administration. The fire extinguishers should be positioned in a flexible manner that is also based on the different exhibition needs and modularity of the areas.

4.9 Environmental sustainability

In accordance with the Climate Action Plan (CAP) and the Sustainable Energy Action Plan (SEAP), which the administration has undertaken to prepare as part of the European Commission initiative entitled Covenant of Mayors, and with the commitment of the Municipality of Milan on the C40 Cities network in the fight against climate change, competitors are asked to pay particular attention on both the use of innovative and sustainable materials and on the sustainability of the entire operation to renovate the Second Arengario. Attention must also be focused on the issue of energy saving, identifying particularly high-performing passive solutions. Sustainability is supposed to be one of the key features of the Second Arengario and should allow it to be held up as an example for other interventions in this area. It must be functional and demonstrative, without impacting on the visual space of the art.

¹¹ Refer to the annex “Rete teleriscaldamento - progetto esecutivo”.

The requirements of the current Territory Government Plan (PGT) must also be taken into consideration, with the indications on environmental sustainability and urban resilience contained in the Rules Plan in terms of reduction of climate-altering emissions and improvement of the ability to adapt to climate changes.

The solution submitted must comply with the Minimum Environmental Criteria (CAM) approved with the Ministerial Decree dated 11 October 2017. In order to demonstrate that the CAM are satisfied, the solution may use the GBC Historic Building international sustainability protocol for buildings or another equivalent national or international protocol. The solution submitted, in accordance with the Minimum Environmental Criteria (CAM), must guarantee the search for and choice of solutions that have the lowest environmental impact possible throughout the entire life cycle, providing significant proposals in relation to the following issues:

- Energy consumption: improved energy performance of the building through an energy upgrade of the building enclosure and by adopting standard museum solutions corresponding with the external factors (exposure, ventilation, etc.). To this end, the building must embody a concrete and innovative example of the integrated use of available technologies in application of national and European regulations on safety and energy efficiency for redevelopment of buildings.
- Bioclimatic design: study of the standard solutions and performance of the technological systems that correspond most closely with the environmental and climatic characteristics of the site and that allow conditions of well-being to be achieved inside the buildings, harmonising the power of the systems and installations. These objectives must therefore be pursued through a thorough study of the site and in use of the available resources.
- Quality of the internal environment: this aspect, intended as the set of characteristics of lighting, air quality, electromagnetic pollution, acoustic and thermo-hygrometric comfort, must be one of the key factors in choice of the finishes, but also in the type of air-conditioning, ventilation and lighting systems.
- Domotic design: the proposal must guarantee coordinated, integrated and computerised management of the technological systems (air-conditioning, water, gas and energy distribution, security), the IT networks and the communication networks, in order to improve flexibility of management, comfort, safety and energy saving of the building..

It must also be guaranteed that at least 15% in weight on the total of all materials used in the intervention is formed of recycled or recovered materials.

5. FINANCIAL LIMITS AND ESTIMATED COSTS OF THE INTERVENTION

The maximum cost of the intervention (financial framework, including the cost of the works, design cost, works supervision, testing, safety costs, expenses for the competition and sums available to the contracting authority) is **€ 29,000,000.00** including VAT.

The part relating to the work is established as **€ 18,702,630.00** (excluding VAT), inclusive of external safety expenses of **€ 600,000.00** (excluding VAT).

Within the aforementioned sums, the categories included in the works are outlined in the following table, which shows the composition of the work and correspondences between:

- classification according to Decree of the President of the Republic (D.P.R.) 207/2010;
- classification according to Law 149/1949, as subsequently amended and supplemented;
- classification according to the Ministry of Justice Decree dated 17/06/2016.

Amount of the works	Classification according to D.P.R. 207/2010	Classification according to Law 149/1949	Classification according to Ministry of Justice Decree dated 17/06/2016
€ 10.224.880,00	OG2	IE	E.22
€ 717.750,00	OS3	IIIA	IA.01
€ 1.581.650,00	OS28	IIIB	IA.02
€ 2.962.850,00	OS30	IIIC	IA.04
€ 261.550,00	OS4	IXB	S.05
€ 1.263.870,00	OG2	IG	S.03
€ 1.090.080,00	OG2	IXB	S.04

TOTAL AMOUNT OF THE WORKS: € 18.102.630,00

EXTERNAL SAFETY EXPENSES: € 600.000,00

6. REGULATORY FRAMEWORK

The main technical and procedural regulations to be taken into consideration in designing the intervention to which this competition relates are listed below. The list is purely indicative. It is the responsibility of the competitors to comply with Italian technical regulations applicable to the intervention, also in relation to the nature and specific features of the design choices.

Building regulations

Ministerial Decree of 17/06/2016 – Approval of the fee tables commensurate to the quality level of design services adopted pursuant to Article 24, paragraph 8, of Legislative Decree no. 50 of 2016;

Legislative Decree no. 50 of 18/04/2016, as subsequently amended and supplemented – Implementation of directives 2014/23/EU, 2014/24/EU and 2014/25/EU on the awarding of concession contracts, public procurement and on procurement by entities operating in the water, energy, transport and postal services sectors, and also reorganisation of current regulations on public contracts relating to works, services and supplies;

Decree of the President of the Republic no. 207 of 05/10/2010, as subsequently amended and supplemented – Regulations on performance and implementation of Legislative Decree no. 163 of 12 April 2006, containing the «Code of public contracts relating to works, services and supplies, in implementation of directives 2004/17/EC and 2004/18/EC»;

Decree of the President of the Republic no. 380 of 06/06/2001, as subsequently amended and supplemented – Building laws and regulations consolidation act.

Local regulations

Territory Government Plan (PGT) of Milan Municipal Council;

Building Regulations of Milan Municipal Council;

Hygiene Regulations of Milan Municipal Council.

Regulations on museums

Ministerial Decree of 21/02/2018 – Adoption of standard minimum quality levels for publicly-owned museums and places of culture and activation of the National Museum System;

Ministerial Decree of 30/06/2016 – Criteria for opening to the public, surveillance and security of State-owned museums and places of culture;

Decree Law no. 146 of 20/09/2015 – Urgent measures for use of the national historical and artistic heritage, converted with amendments by Law no. 182 of 12 November 2015;

Ministerial Decree of 23/12/2014 – Organisation and operation of State-owned museums;

Legislative Decree no. 42 of 22/01/2004– Cultural heritage and landscape code, pursuant to Article 10 of Law no. 137 of 6 July 2002;

Ministerial Decree of 10/05/2001 – Guidelines on the technical-scientific criteria and standards of operation and development of museums (Art. 150, paragraph 6, Decree Law no. 112/1998).

Regulations on health and safety in the workplace and in museums

Legislative Decree no. 81 of 09/04/2008, as subsequently amended and supplemented – Implementation of Article 1 of Law no. 123 of 3 August 2007, on health and safety in the workplace;

Ministerial Decree of 10/05/2001 – Guidelines on the technical-scientific criteria and standards of operation and development of museums (Art. 150, paragraph 6, Decree Law no. 112/1998).

Structural regulations

Regional Circular no. 1 of 28/01/2020 – Application profiles in works or construction and relative monitoring of seismic areas, as referred to in Regional Law no. 33/2015, following entry into force of Law no. 156/2019, Regional Law no. 21/2019 and Regional Council Resolution no. XI/2584/2019;

Ministerial Circular no. 7 of 21/01/2019 – Instructions for the application of the «Update of the “Technical regulations for constructions”» referred to in the Ministerial Decree of 17 January 2018;

Ministerial Decree of 17/01/2018 – Update of the “Technical regulations for constructions”;

Regional Council Resolution no. X/2129 of 11/07/2014 – Update of the seismic zones in the Lombardy Region (Regional Law no. 1/2000, Art. 3, p. 108, lett. d);

Organisational Unit Director’s Decree no. 19904 of 21/11/2013 – Approval of the list of types of buildings and infrastructural works of strategic interest and those that may be relevant for the consequences of a potential collapse, in implementation of Regional Council Resolution no. 19964 of 7 November 2003

Regional Council Resolution no. 8/7374 of 28/05/2008 – Update of the «Criteria and guidelines for definition of the geological, hydro-geological and seismic component of the Territory Government Plan, in implementation of Art. 57, p. 1, of Regional Law no. 12 of 11 March 2005», approved with Regional Council Resolution no. 8/1566 of 22 December 2005;

Regional Council Resolution no. 8/1566 of 22/12/2005 – Implementation of Consolidation Act no. 380 of 06/06/2001 – Structural and Anti-seismic Adaptation;

Regional Law no. 12 of 11/03/2005, as subsequently amended and supplemented - Prevention of geological, hydro-geological and seismic risks;

Law no. 1086 of 05/11/1971 – Regulations governing works in normal and pre-stressed reinforced concrete and to metal structures.

Energy saving regulations

Organisational Unit Director's Decree no. 176 of 12/01/2017 – Update on the provisions concerning energy efficiency in buildings and the relative energy performance certificate, replacing the provisions approved with Decrees no. 6480/2015 and no. 224/2016;

Regional Council Resolution no. VIII/5018 of 22/12/2008 – Decisions relating to energy certification of buildings, in implementation of Legislative Decree no. 192/2005 and Arts. 9 and 25 of Lombardy Regional Law no. 24/2006;

Regional Law no. 24 of 11/12/2006 – Regulations on prevention and reduction of emissions to safeguard health and the environment;

Legislative Decree no. 192 of 19/08/2005, as subsequently amended and supplemented – Implementation of Directive 2002/91/EC on the energy performance of buildings;

Decree of the President of the Republic no. 412 of 26/08/1993 – Regulations on the design, installation, functioning and maintenance of building heating systems for energy saving purposes, in implementation of Art. 4, paragraph 4, of Law no. 10 of 9 January 1991;

Law no. 10 of 09/01/1991, as subsequently amended and supplemented Regulations on the implementation of the National Energy Plan, concerning national use of energy, energy saving and development of renewable energy sources.

Minimum Environmental Criteria (CAM)

Ministerial Decree of 11/10/2017 - Minimum environmental criteria for the assignment of design services and work for new construction, renovation and maintenance of public buildings;

Intermediate Decree of 11.1.2017 - Adoption of minimum environmental criteria for interior furnishings, for the building sector and for textile products;

Ministerial Decree of 5.2.2015 - Minimum environmental criteria for the purchase of street furniture products.

Regulations on the elimination of architectural barriers

Architectural Barriers Elimination Plan of Milan Municipal Council (P.E.B.A. MI)

Guidelines for the preparation of the Architectural Barriers Elimination Plan (P.E.B.A.) in museums, museum complexes, archaeological areas and parks;

Decree of the President of the Republic no. 503 - 24.07.1996 - Regulation on the elimination of architectural barriers in public buildings, spaces and services;

Regional Law no. 6 of 20.02.1989 - Provisions on the elimination of architectural barriers and technical prescriptions for implementation.

Fire safety and prevention regulations

Ministerial Decree of 10/07/2020 - Technical regulations on prevention of fires in protected buildings pursuant to Legislative Decree no. 42 of 22 January 2004, open to the public, destined to house museums, galleries, exhibitions, displays, libraries and archives, pursuant to Article 15 of Legislative Decree no. 139 of 8 March 2006;

Ministerial Decree of 03/08/2015, as subsequently amended and supplemented - Approval of the technical regulations on fire prevention, pursuant to Article 15 of Legislative Decree no. 139 of 8 March 2006;

Ministerial Decree of 07/08/2012 - Provisions on the methods of filing applications concerning fire prevention procedures and documents to be attached, pursuant to Art. 2, paragraph 7, of the Decree of the President of the Republic no. 151 - 1 August 2011;

Decree of the President of the Republic no. 151 of 01/08/151 - Regulations on simplification of the rules for fire prevention procedures, pursuant to Art. 49, paragraph 4-quater, of Legislative Decree no. 78 of 31 May 2010, converted with amendments by Law no. 122 of 30 July 2010;

Legislative Decree no. 81 of 09/04/2008, as subsequently amended and supplemented - Implementation of Article 1 of Law no. 123 of 3 August 2007, on health and safety in the workplace;

Ministerial Decree no. 569 of 20/05/1992 - Regulations on fire safety rules for historical and artistic buildings destined to house museums, galleries, exhibitions and displays.

Estimates

2020 Regional Price List of Public Works - Lombardy Region - vol. 1.1, 1.2, 2.1, 2.2 and technical specifications vol.;

Rules for measurement and assessment contained as an integral part of vol. 1.1, 1.2, 2.1 and 2.2 of the aforementioned 2020 Regional Price List of Public Works.

And also:

Legislative Decree no. 17 of 27/01/2010 - Implementation of Directive 2006/42/EC on machinery, amending Directive 95/16/EC on elevators;

Ministerial Decree no. 37 of 22/01/2008, as subsequently amended and supplemented - Regulation on implementation of Art. 11-quaterdecies, paragraph 13, letter a), of Law no. 248 of 2.12.2005, on the reform of the provisions on installation of systems and installations inside buildings;

Ministerial Decree of 01/04/2004 – Guidelines for use of innovative systems in environmental impact assessments;

Decree of the President of the Republic no. 462 of 22/10/2001 – Regulations on simplification of the procedure for reporting installations and apparatus protecting against lightning strikes, earthing of electrical systems and hazardous electrical systems;

CEI Standard 81-10/2 (EN 62305-2) – Electrocution risk assessment;

UNI Standard 9801 – Regulations on lifting systems for people with disabilities;

CEI standard 648 - 11/17 - Regulations on electrical systems;

ISO 9001 – Quality system certification;

Specific UNI standards for special services planned for project processing or materials.

The project will be completed with the opinions required by law, including, but not limited to, Healthcare Agency (ATS), Fire Service, etc.

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