



# THE ART OF RENOVATION IV

*An experience through the ACS Group*



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An experience through the ACS Group

**Publisher**

FUNDACIÓN ACS

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SUMMA TRADUCCIONES

**Printed by**

GRÁFICAS MURIEL S.A.

D.L.: M-23015-2019

© 2019, FUNDACIÓN ACS

Avda. Pío XII nº 102, 28036 Madrid (Spain)

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# THE ART OF RENOVATION IV

An experience through the ACS Group

Published by

FRANCISCO MENOR MONASTERIO

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*Architect*





# Presentation

Publishing for dissemination is the maxim that the Fundación ACS has followed to achieve the objectives in one of the aims of the Foundation: “The promotion and restoration of artistic heritage assets, collaborating in their dissemination for better knowledge of them.”

With the aim of continuing to fulfil this end, the Fundación ACS has the honour to present Volume IV of the collection *The Art of Renovation*, in which the refurbishment and restoration of 51 works carried out by the ACS Group are analysed, all of them on assets of high heritage value. These actions cover various types and make different uses possible: old styles of architecture and engineering, buildings for religious, institutional and ceremonial use, spaces for work, industry and trade, spaces for culture, leisure and social services and accessible heritage through the elimination of barriers to favour persons with disabilities. All these transformations and new uses will undoubtedly be of great interest to the reader.

The four volumes of the collection *The Art of Renovation* have already documented 183 works of refurbishment and rescue of heritage assets with a high degree of protection. Most of these are catalogued as Assets of Cultural Interest (listed buildings in the Spanish Inventory of Architectural Heritage) and some of them have been recognised as World Heritage sites by UNESCO.

This publication, the 39th published by the Fundación ACS on the refurbishment of the historical heritage, shows the important role played by the ACS Group in the intensive process of rescuing our heritage in recent decades, thus joining the common effort of Spanish society, which has made it possible to highlight a significant part of its most outstanding monuments. Much still remains to be done in this area and the requirements for resources are very great, but without doubt the Fundación ACS will continue to contribute, within its possibilities, to achieving this objective.

Here, scholars and professionals of the arts applied to heritage refurbishment will be able to find, in a logical sequence, information on the origins of the heritage asset, the ends for which it was created, the process of deterioration suffered over time and its causes as well as a brief description of the techniques applied for its recovery.

The Fundación ACS wishes to thank the support of all the members of its trustees and the real protagonists of this publication, the human team of the ACS Group and, very specially, the authors of the projects, the works directors, the entire team who participated in preparing this edition and, especially, the ACS Group construction company Dragados and its subsidiary, Geocisa.





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Church of San Pedro, Avila.

# Buildings for religious use





# Sacristy and Chapter House of the Primate Cathedral

*Toledo*

## Promoter

Chapter of the Holy  
Primate Cathedral, Toledo

The Cathedral of Santa María de Toledo is outstanding among the monuments in the historic centre of the city of Toledo, declared a World Heritage site by UNESCO in 1986. It is the Primate Cathedral of Spain and one of the best examples of a Gothic cathedral in our country.

The restoration of its Sacristy and Chapter House recovered the decorative richness of its murals by Luca Giordano and Juan de Borgoña, emphasising the Toledo Cathedral's valuable pictorial collection.

## Historical background

The building of the Primate Cathedral started in 1227 under the influence of the French Gothic style, on the foundations of the old Visigoth cathedral of Toledo built in the 6th century and later re-used as a mosque.

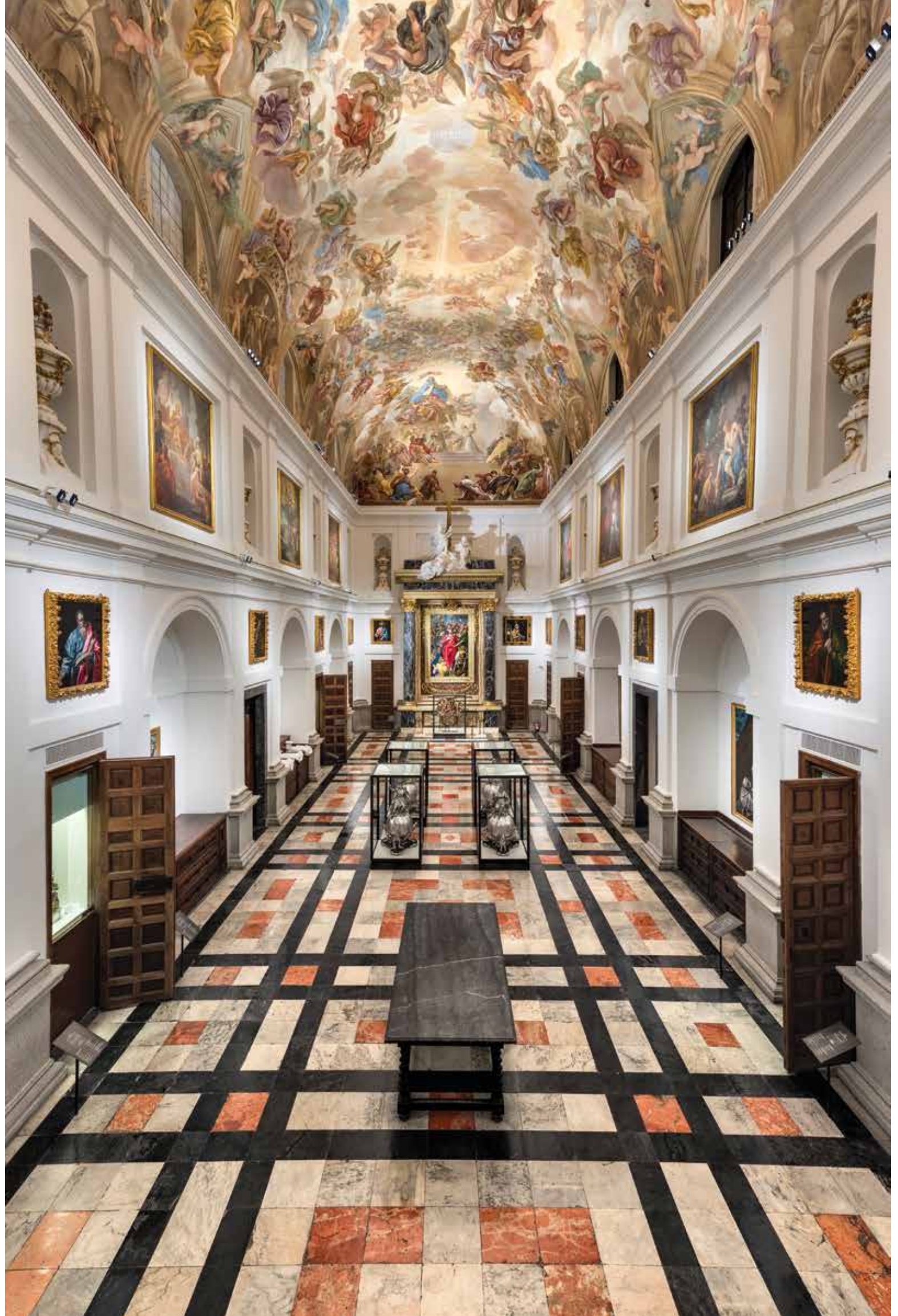
Its first architect was the master Martín, of French origin, responsible for the outline in plan and the start of the work at the chancel of the church in the 13th century. The side naves were not enclosed until the 14th century and the lower cloister and its outbuildings, including the San Blas chapel, were built. The San Pedro chapel was built in the 15th century and the last vault was erected in 1493, completing the construction. The polychromed wooden altarpiece, the upper part of the choir and the grilles were added in the 16th century and various modifications were made in its plan, such as the Chapter House, the Mozarabic chapel and the Reyes Nuevos chapel.

Its cruciform floor plan consists of five naves, the transept and the central nave being wider and higher than the side ones. The extension of these behind the main chapel, surrounding the presbytery, creates an ambulatory with a double semi-circular corridor. Outstanding among other spaces inside it are the Sacristy and the Chapter House.

## Sacristy

Construction of this new architectural complex in the Primate Cathedral started at the end of the 16th century although it continued for most of the 17th. The project, promoted by Cardinal Gaspar de Quiroga, included the Tabernacle anteroom, the Tabernacle chapel, the Reliquary or Ochavo and the Sacristy complex, consisting in turn of the Sacristy anteroom, the General Sacristy, the Archiepiscopal Sacristy, the Sacristy and the Treasurer's House.

Cathedral and Town Hall square.





*El Expolio (The Disrobing of Christ)* by El Greco on the altar in the General Sacristy.



The original outlines were designed by Nicolás de Vergara el Mozo between 1591 and 1604. After his death, the works continued under the supervision of various architects but always following the original design. The complex is considered to have a clear influence of Juan de Herrera, who left his imprint on Toledo with his work on the Citadel and on the City Hall.

The complex has a notable compositional rhythm which, in the General Sacristy and the Treasurer's House and especially in its courtyard, alternate the use of the semi-circular arch and the lintel, a resource clearly influenced by Serlio, the first person to theorise on this architectural use.

Between 1697 and 1698, Luca Giordano, the Royal painter who had also worked on the El Escorial monastery, was commissioned to paint the ceilings of the General Sacristy, for which he used ochre and yellow earth following the guidelines of the Roman painters of the era. Giordano's fresco painting technique shows the descent of the Virgin in *La imposición de la casulla a san Ildefonso (Saint Ildefonso Receiving the Chasuble from the Virgin)*.

The Sacristy was completed in 1800 with the building of an altar of rigorous academic classicism, the work of the architect Ignacio Haan, that includes the famous El Greco painting *El Expolio (The Disrobing of Christ)*.

General Sacristy with frescoes by Luca Giordano on its ceiling.





## Procedure

The restoration and refurbishment of the Toledo Cathedral Sacristy complex was promoted within the framework of the celebration of the 4th Centenary of the death of El Greco in 2014. The project arose from the need to reorganise the cathedral's painting collection, increasing the area dedicated to its exhibition and creating a new visitors route that included the Patio del Tesorero and the Capilla de Reyes.

The space required for the correct exhibition of the painting collection was achieved by specialising the area of the Sacristy complex as a picture gallery for which it was necessary to transfer the tapestries and clothing exhibited there to the old Children's School, which has housed the cathedral's Tapestries and Textiles Museum since then.

Thus the two contiguous rooms in the Archiepiscopal Sacristy were converted into picture galleries, one dedicated to the Virgin Mary and the other to Jesus Christ, leaving the General Sacristy for the works by El Greco and his school, following the original outlines plan by Vergara el Mozo that indicated its placement.

The adapting of the various spaces in the Sacristy complex required a careful restoration and refurbishment work on the various elements. Firstly, the walls, vaults, pavings, granite plinths, cornices and exterior carpentry in the complex were cleaned, restored and consolidated. Secondly, the furnishings, sculptures, decorative ornaments and gilding in the Sacristy complex were restored. It was also necessary to give these spaces fire protection, security, lighting and HVAC measures, which required renovating the alignment and design of all the installations. Notable was the installation of a new LED lighting system allowing the paintings to be appreciated with all of their colours without deteriorating them. Two levels of lighting were installed on the great vault, one for the frescoes and paintings at a higher level and another for the paintings at the lower level. Crossed lighting was also used for the frescoes, thus providing a general diffusion of light that gives great depth to the frescoes by Luca Giordano.

Finally, the frescoes by Giordano decorating the vault of the General Sacristy and the murals by Claudio Coello and José Jiménez Donoso in the Archiepiscopal Sacristy were restored.

Fresco by Luca Giordano on the ceiling of the General Sacristy: *La imposición de la casulla a san Ildefonso (Saint Ildefonso Receiving the Chasuble from the Virgin)*.





## Chapter House

The Chapter House in the Primate Cathedral was built at the wish of Cardinal Francisco Jiménez de Cisneros for a space for the Chapter meetings which, until then, had been held in a space in the base of the tower, preceded by a vaulted room.

The new space had to have the same layout as the previous one, that is, consisting of two concatenated areas, a hallway or anteroom and the Chapter House itself. The place chosen for its construction was the chancel of the church in the south-east sector. At the start of the 15th century, this place was known as the La Higuera corral and lay at a slightly lower level than the cathedral floor.

In 1506 this second level was covered with well-profiled stone masonry during the pontificate of Cardinal Cisneros, whose coats of arms can be seen on the exterior wall. The roof of the main room was finished with a coffered ceiling by Francisco de Lara. Its coffers were decorated by a team of painters and guilders consisting of Luis de Medina, Diego López and Alonso Sánchez.

The spectacular murals in the Chapter House were the work of Juan de Borgoña and his assistants between 1509 and 1511. They show the life of the Virgin on the north and south walls, the Passion of Christ on the east wall and the Final Judgement on the west wall, while the lower frieze is occupied by 72 figures of the Bishops of Toledo, painted by Juan de Borgoña.

## Procedure

The murals in the Chapter House, more than five hundred years old, required a procedure to ensure their long-term conservation and return them to the chromatic splendour of their pigments.

Numerous actions on the paintings have been documented since the first known ones by the painter Blas de Prado in the 16th century to the most recent ones in 1974. This succession of re-paintings hid the authentic painting by Juan de Borgoña so it was necessary to remove them.

The procedure followed a criterion based on prior knowledge of the surfaces to be treated and on respect for the materials and techniques used by the artist. For this, the previous additions were identified, objectively assessing the feasibility and suitability of their removal and in the progressive undertaking of treatments to maintain greater control over the development of the work. The final objective was to guarantee the stability of the paintings at all times and to conserve all the historical and documental information they provide without forgetting their artistic and aesthetic importance.



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Previous page: View of the Chapter House and its coffered ceiling after restoration.

*The Annunciation* on the southern wall of the Chapter House. Below part of the Episcopology with the portraits of the archbishops.

*The Final Judgement* on the western wall of the Chapter House. Over the door, *Justitiae Cultus Silentium*, a phrase from Isaiah 32,17 meaning “the work of righteousness shall be peace,” words reminding that silence is necessary so that the deliberations made by the members of the Chapter in the Chapter House are not to be discussed.



In light of the conclusions of the restoration team after the first tests of solubility and cleanliness and the results of the physical and chemical examinations, the cleaning of the pictorial layer was considered the most important and controversial treatment of the procedure, given the handling that the group had undergone over the years, which resulted in the presence of dense layers of protections and varnishes of different natures, re-paintings and aggressive cleaning.

Prior to cleaning, consolidation work was carried out, including the removal of an unstable fragment of paint that lacked support. After the consolidation, the various cleaning phases were carried out and the work of chromatic reintegration of pictorial gaps, wear and abrasion were undertaken.

The procedure was completed with the installation of a new LED lighting system consisting of 76 lamps on a floating rail, which allows the colours, depth and relief that could not previously be admired to be appreciated. All these installations were integrated in the room without affecting the architecture so that they pass unnoticed. It was thus possible to recover the colour and luminosity of the paintings, revealing the perspective study carried out by the painter, the three-dimensionality of his architectural spaces and landscapes and the taste for meticulousness in the details that define the scenes and characters of the scenes.





# Church of San Pedro

*Avila*

## Promoter

Avila City Council and the  
Diocese of Avila

The Church of San Pedro forms part of the group of monuments in Avila declared a World Heritage site by UNESCO in 1985 and extended in 2007 together with the old city of Avila, its walls and other churches and convents of Romanesque origin outside the walls.

Located in the Plaza del Mercado Grande opposite the gate to the Citadel, the church is a faithful example of Avila's Romanesque style which is why it was already declared a National Monument in 1914. In its atrium, the Catholic Kings and Carlos I swore to respect the laws of Castile, which shows the importance this church had within the city.

## Historical background

Its construction started in the second quarter of the 12th century and was completed in the 13th century after a period in which the work was paralysed. Both its sandstone architecture and its decoration show an incipient transition between Romanesque and Gothic.

The triple chancel of the church, with an apse at the end of each of the naves, unites a sculptural repertoire typical of the Romanesque style, based on plant life, wildlife and geometric motifs, as well as various Biblical scenes. In the 13th century the Romanesque naves were covered with barrel vaults and ribs with pointed arches that began to show Gothic trends. At this time the lantern was also erected over the intersection between the main nave and the transept, covered by a star-shaped vault.

The main façade is articulated in two bodies, the upper one, dominated by a large Cistercian rose window, and the lower one, which houses an entrance framed by six plain archivolts. In the southern entrance, the façade follows the same compositional scheme as the main one, although smaller. Finally, the northern access is the most elaborate, with five archivolts framing the front, two of which are decorated with the typical rosettes of Avila.

Inside, the panels decorating the side walls and the Renaissance altars as well as the altarpiece of the main chapel and its grilles are of outstanding historical and artistic value.

Main façade of the Church of San  
Pedro in Avila.



The walls of Avila, World Heritage.



Southern façade.

Plaza del Mercado Grande.

Romanesque chancel.



## Procedure

The refurbishment work focused on the urbanization of the open atrium surrounding the church, defined by a low stone wall and decorated with vases and rampant lions. The atrium dates from 16th century, having been the scene of important historical events such as the swearing, already mentioned, of the Catholic Kings and Carlos I and the judgments of heretics by the Inquisition on platforms erected for the occasion.

This urban space, of a public nature and in constant use, as it presides over the Plaza del Mercado Grande, showed serious deterioration of the paving materials, as well as the effects of its obsolete sanitation and water drainage systems, that caused humidity problems in the church, and deficient lighting installations that needed replacement. It was also necessary to adapt the environment to the new accessibility regulations.



Pointed arches inside the Church of San Pedro.

Star-shaped vault.

Southern façade and refurbished atrium.



To remedy these deficiencies, all sensitive decorative elements were protected and the original stone pavement was dismantled for subsequent replacement. Archaeological soundings were then carried out prior to the earthworks needed to house the new systems and installations, mainly ventilation and drainage chambers and a sewage and drainage system.

For the new pavement, reclaimed granite slabs were installed and grouted pavement areas were added, eliminating physical barriers and adapting levels and the topographical alignment to accessibility standards. Finally, a new and efficient lighting system was installed.

With this procedure, the Church of San Pedro and its atrium have joined the efforts made by the city of Avila to make its historical heritage accessible to all, an effort that was been recognised with the naming of the city as European Accessibility City in 2011.

North entrance and refurbished atrium.



# Collegiate Church of Santa María la Mayor

*Calatayud (Zaragoza)*

## Promoter

General Heritage  
Directorate of the  
Government of Aragon

The Collegiate Church of the Assumption of the Virgin in Calatayud, known as the Collegiate Church of Santa María la Mayor, is considered one of the most important architectural works of Aragonese Mudejar art. It was declared a World Heritage site by UNESCO in 2001 as part of the Mudejar architecture of Aragon, for its apse, cloister and octagonal tower.

Its construction combines Mudejar, Renaissance and Baroque elements, the result of a long history dating back to the years of the reconquest of the city of Calatayud by the Aragonese King Alfonso I.

## Historical background

Although the circumstances and specific date of its first founding are unknown, its construction is supposed to have started in the 12th century, on the site occupied by the city's largest mosque. Its founding could be linked to the reconquest of Calatayud by Alfonso I el Batallador, who could have already elevated it to the category of Collegiate Church. Santa María la Mayor was the scene of the first Calatayud Parliament in the time of King Pedro IV and it was here that the Emperor Carlos I and King Felipe III swore to the laws of the city.

The oldest existing documentation on the church is for the building consecrated in 1429 by the Bishops of Tarragona, Valencia and Tarazona and of which no remnant has been preserved. Only the apse, cloister and tower of the 14th century Gothic-Mudejar church are preserved, which underwent an important reform in the 17th century. These are the oldest parts of the Collegiate Church and are those that earned its recognition as a World Heritage site.

From the 14th century, the successive and unsuccessful attempts before the Holy See to elevate the Collegiate Church to cathedral status were started. Although this was not achieved, the church maintained its leading role within the city throughout history. In 1411, after the death of King Martin I without offspring, the General Parliament of the Crown was summoned to decide on the succession to the throne of Aragon, choosing Santa María la Mayor as its headquarters. And at the end of the century, Fernando el Católico took the church under his protection by decree on 22 July 1486.

Plaza and Collegiate Church of Santa  
María la Mayor.



Mudejar tower of Almohad influence.

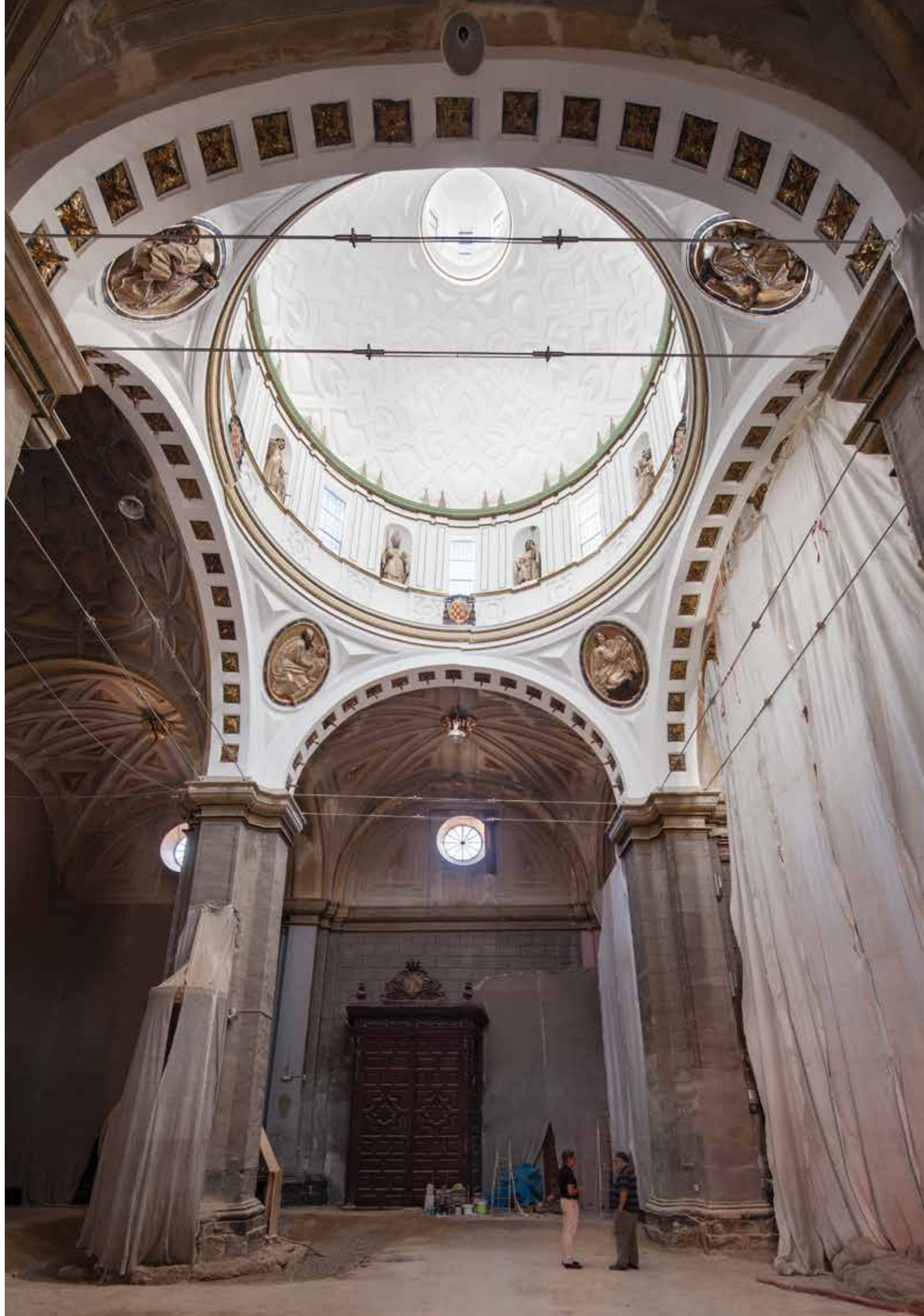




Decoration of the Mudejar apse and tower.



Renaissance entrance.



Detail of the lantern.  
© Diocese of Tarazona.



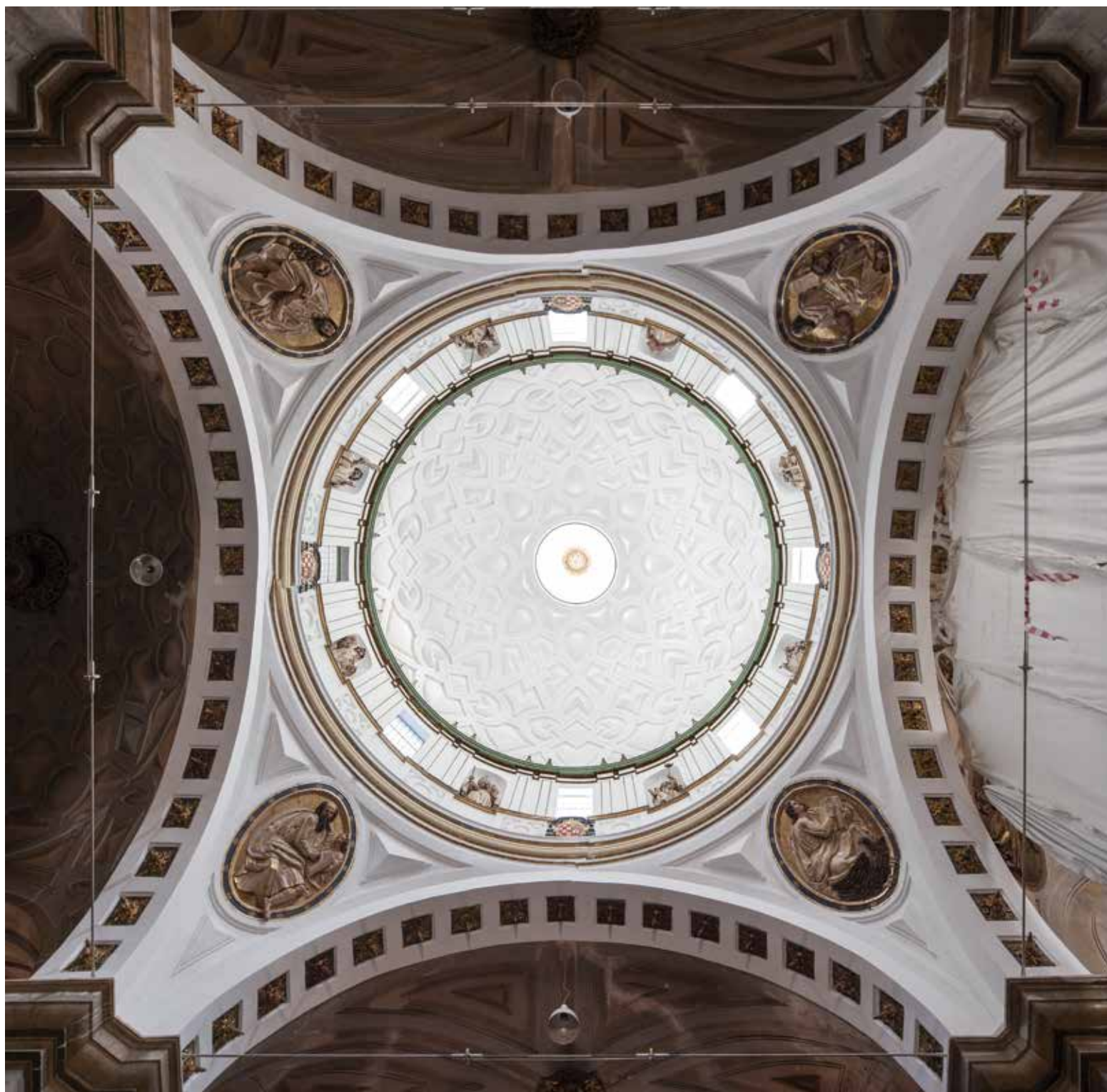
The southern Renaissance façade, completed in 1525 by the sculptors Juan de Talavera and Esteban de Obay, was added to the old church in the 16th century and the apse and the tower were enlarged with a new body of bells. The latter was completely renovated in the 17th century and in the 18th century its pyramidal steeple was replaced by a bulbous slate one. The side chapels of the church also began to be opened in the 17th century.

The floor plan of the church, with three naves of identical height divided into four sections plus the chancel, is a space in the form of a saloon floor, in which the crossing stands out for the greater depth of its sections. The naves are separated by cruciform pillars of Tuscan order. The side naves are covered with groin vaulting while the central nave is covered with elliptical caps on spandrels; a dome with a lantern on a drum rises over the central crossing.

The tower, almost 72 metres high, is one of the highest examples of the Aragonese Mudejar style. It is a minaret type tower of Almohad influence with a central body and, in the space between the tower's interior and exterior, brick stairs roofed with corbel vaults. On the exterior, the façade is decorated with protruding brick faces, pointed openings and buttresses with pilasters attached at the angles of the octagon.

After being declared an Asset of Cultural Interest, on 14 December 2001 UNESCO included it in its extension of the declaration as a World Heritage site of the Mudejar architecture of Aragon, being considered one of the main examples of Aragonese Mudejar art.

Cupola on drum over the crossing.  
© Diocese of Tarazona.



Transverse arches on which the dome rises over the crossing.  
© Diocese of Tarazona.

Detail of transverse arch and drum.  
© Diocese of Tarazona.



## Procedure

In the case of the Collegiate Church of Santa María la Mayor, an emergency procedure was proposed, due to the presence of various structural failures and mechanical type pathological processes (settlements, collapses, twists, etc) that affected the dome covering the crossing.

The most significant damage caused by these structural failures resulted in the displacement of the dome and the consequent cracks in the cap, the asymmetrical seating and displacement of the pillars and the southern wall, generating displacements in the abutments of the transverse arches and cracks and fissures in spandrels and the keystones of the arches.

The movements were seen to be related to diverse and complex factors. These included the heterogeneity and compressibility of the ground, the existence of crypts close to the foundations that affected their behaviour and the very diversity in the foundations and materials used in the construction. Added to this was the malfunction of a dome with drum on a saloon floor plan and the spatial configuration of the building, with an isotropic floor plan with asymmetries between the chancel and the rest of the volume.

Because of this, and after placing protections in naves, chapels and woodwork, a system of passive supports was installed under the transverse arches and the cracks in the arches as well as in the turns of pillars monitored with five fissure gauges and five convergences. Thus any movements that occurred and changes in temperature and humidity were monitored. This emergency procedure was the first phase in the restoration of the complex.



# San Vicente de la Roqueta Monastery

*Valencia*

## Promoter

Valencia City Council

A primitive church was built next to the Vía Augusta, in the place where the Deacon Vicente was martyred in the 4th century, to venerate his remains. After the conquest of Valencia by Jaime I in 1238, it became a complex of church, monastery and hospital. During the 17th and 18th centuries, the complex underwent major changes including various demolishings during the Carlist Wars until the arrival of the Augustinian nuns, who took charge of the complex until it was finally abandoned in 1973.

The monument, declared an Asset of Cultural Interest in 1978, had to be shored up in the 1980s due to its ruinous condition until the consolidation and structural reinforcement carried out in recent years put a stop to the process of deterioration.

## Historical background

The origins of this antique monastery, located in the widening of the city, date from the 4th century when a *martiryum* was built on the tomb of San Vicente Mártir. In the 13th century, and under the impulse of Jaime I, it became a complex of church, monastery and hospital, occupied first by the Benedictines of San Victorián de Asán, then by Mercedarian friars and again by the Asán monks until the Cistercians took possession of this foundation as a priory dependent on Poblet.

The building of the church, monastery and hospital complex started in 1240. Two late Romanesque porches have been preserved from this first stage. The first one is between the cloister and the north wall of the church, coinciding with the interior chapel of San Vicente. It is a semi-circular arched façade, flared and with archivolts standing on fine columns whose capitals represent the various episodes of the martyrdom of San Vicente. The second porch is located in the western part of the church and communicates with one of the parish rooms. It is made of ashlar, although it was rendered in modern times.

In the middle of the 15th century the monastery had eleven monks who had a kitchen, bedrooms, Chapter House, sacristy and other minor rooms as well as the church.

Church and cloister of the ancient San Vicente de la Roqueta Monastery.





Romanesque porch.

Detail of the Romanesque capitals.

New roof protecting the cloister.



In the 17th century the church was renovated using ashlars from the old masonry. At this time the existing church was configured with a single nave divided into four sections, with chapels between buttresses and transept with dome without drum and high choir at the end and covered with a barrel vault with lunettes. The interior elevation was built with Corinthian pilasters with a denticulated entablature and sgraffito decoration on the shafts of the pilasters, the frieze, the intrados of the arches and the inner part of the dome.

Part of the monastic rooms located around the cloister were renovated in the mid-17th century, which was not finished until the beginning of the 18th century, providing Doric pilasters on pedestals, in which there are semi-circular arches and rectangular openings with forged balconies on the upper floor.

After the disentanglement and exclausturation of the monks in 1837, the demolition of part of the monastery was ordered for planning purposes and the church's chancel and tower disappeared. One year later, the church, monastery and gardens were acquired by a private owner, until in 1879, Augustinian nuns from the demolished San José and Santa Tecla convent purchased the monastery with the help of the Marquis of Tremolar and commissioned work that gave it its new configuration. The church was consolidated and the chancel was closed with a flat board. In the cloister, only the north and west galleries were preserved, so another two with similar properties were built, in addition to increasing its height by one floor. The refectory, the locutorium, the chapter house and the lower choir were located on the ground floor, with the regular cells on the first floor and the novices' cells and infirmary on the second floor.

Cloister and Romanesque porch in the wall of the church.



Refurbished carpentry and slabs.

The façade in the Calle San Vicente, built in the 19th century with a neo-Gothic dressing, is divided into three floors with openings with ogee arches and closed with lattices. The church's chancel was closed with a wall with pointed spans and a central oculus with a triangular finish. Finally, the brickwork bell tower is notable for its quadrangular plan and its semi-circular spans.

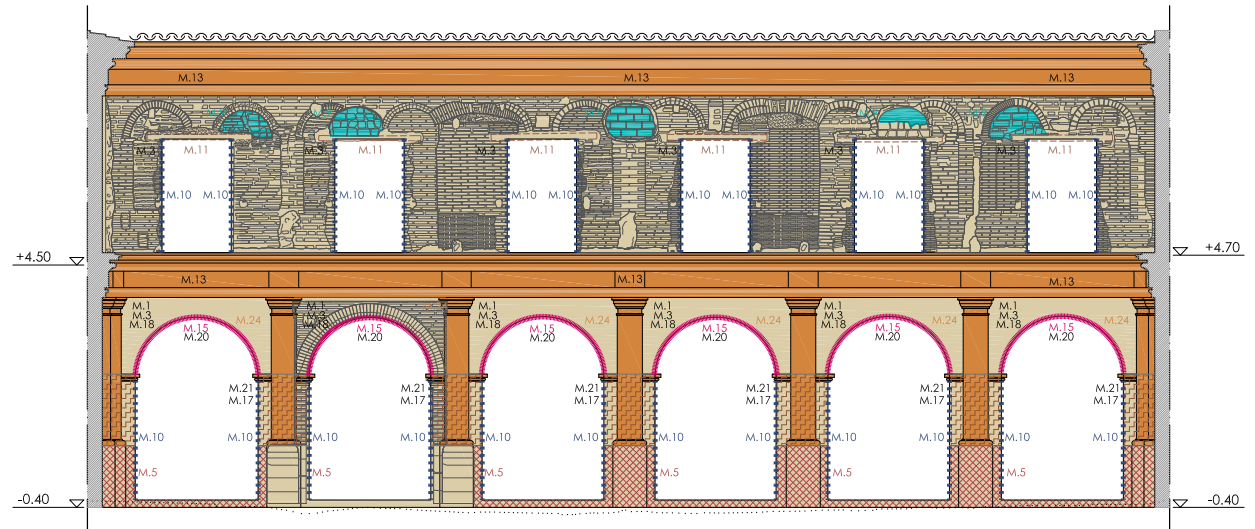
## Procedure

To stop the deterioration of the monastery, structural consolidation was carried out to guarantee the stability and tightness of the complex, especially around the cloister.

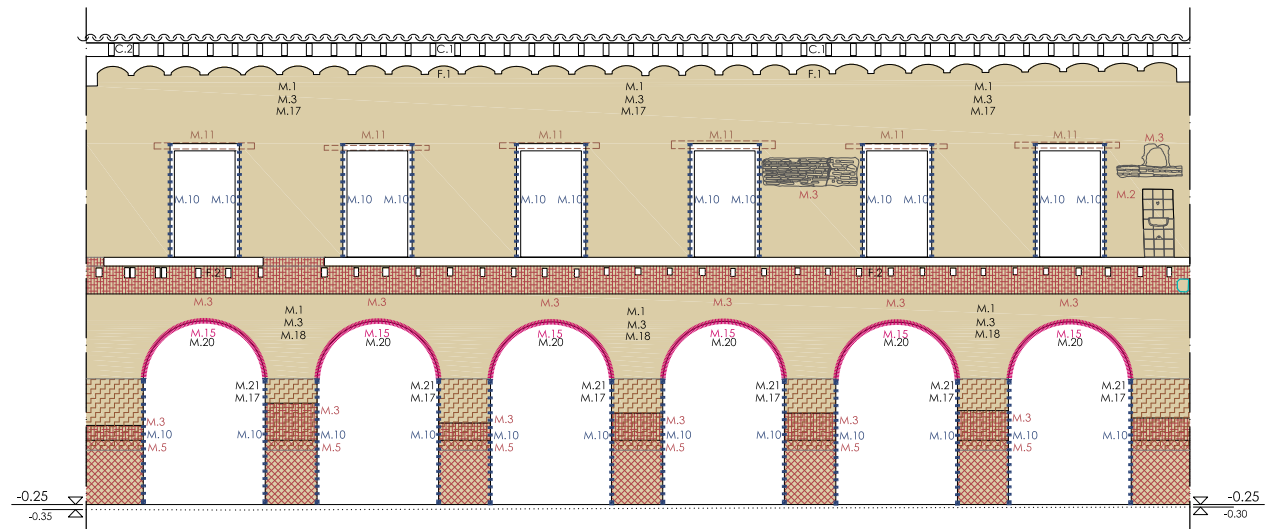
The prior archaeological work, based on the stratigraphic reading of the walls, allowed the identification and elimination of inappropriate constructional elements. In the first phase, work was also carried out to classify the ground and foundations, to classify the structure and to analyse the degree of biodegradation of the wooden beams, as well as to assess the load-bearing capacity of the walls and to measure the existing collapses in walls and the deflections in slabs with a 3-D scanner.

This was followed by the structural consolidation, firstly by improving the ground with polyurethane resin injections and then reinforcing the brickwork with low pressure injections of hydraulic lime slurries and stitching with glass fibre rods. The wooden beams in poor condition

Structural reinforcement on the upper face of the northern wall in the cloister.  
Architects Casar y Montesinos SLP.



Structural reinforcement on the inner face of the northern wall in the cloister.  
Architects Casar y Montesinos SLP.



were also replaced, spot prostheses were undertaken and the original wooden structural pieces treated with anti-thixotropic treatment. The wooden roof was removed to renovate boards, including insulation and replacing tiles.

Finally, the church's stonework wall was cleaned, consolidated and grouted with lime mortar. The Romanesque porch of the cloister was also restored with the reintegration of the archivolts and the consolidation of polychrome remains and the grouting of the masonry was renewed with lime mortar, prior to plastering and stuccoing with aerial lime.



# Santa María de La Vid Monastery

## *La Vid y Barrios (Burgos)*

### Promoter

Order of San Agustín

The Santa María de La Vid Monastery is a Premonstratensian foundation of the 12th century, declared an Asset of Cultural Interest. The building we know today is the result of the impulse given by the Abbot Íñigo López de Mendoza in the 16th century and of subsequent enlargements that lasted until the 18th century. Today it is an Augustinian monastery that offers hostel services.

### Historical background

Around 1140, Sancho Ansúrez and Domingo Gómez de Campdespina, two Castilian noblemen who had professed in the French abbey of Saint-Martin de Laon, returned to Castile where they founded the first two Spanish Premonstratensian abbeys. Sancho Ansúrez founded the Monastery of Santa María de Retuerta, in the province of Valladolid, and Domingo Gómez de Campdespina founded that of Santa María de Monte Sacro, on the right bank of the River Duero, in the province of Burgos. In 1152, following the donation by King Alfonso VII to the community of landowners known as La Vid, on the opposite bank of the river, the community moved and the monastery changed its name.

The work of building the original abbey lasted some six or seven years according to some of the Premonstratensian chronicles preserved in the monastery's archives, which suggests that the community had already settled in the new monastery around the year 1160.

The original building, built according to Romanesque canons, was favoured since its foundation by the protection of the Castilian monarch Alfonso VII and his immediate successors. In 1288, Sancho IV granted the Premonstratensian community the means to renovate and enlarge the monastery. When the 16th century arrived, a new cloister was erected, replacing the previous Romanesque cloister, and the present church was built. During the 17th and 18th centuries, the monastery was completed until it acquired the proportions it conserves today: new cloisters, three bodies of the church, the choir, the refectory and finally, in 1798, the library, were built.

With its large dome and its baroque façade topped by a large three-bodied belfry, the church dominates the complex. Inside it has three naves roofed with ribbed vaults and a notable 13th century image of Nuestra Señora de la Vid that presides over the Renaissance style main altar.

Steeple of the Santa María de La Vid Monastery.



Southern façade.

Cloister in the monastery hostel.



## Procedure

Before the action the monastic complex had numerous leaks in the roof, which caused important damage to the wooden structure. Likewise, the lack of protection in eaves and cornices, together with the lack of maintenance, caused a very widespread presence of plants, lichens and surface deposits on façades.

The actions were focused on the integral repair of the roof structures, cornice protections, sills and imposts, as well as the restoration and cleaning of the façades. For this reason, the works were carried out in three annual phases to make them compatible with the uses and activities offered regularly by the monastery: summer camp accommodation and hostelry throughout the year. Thus, in the first phase the main cloister was acted on, in the second the guest house and in the third phase, the church.

Firstly, all the roofs involved were dismantled to make an exhaustive inspection of the structures condition and to replace those pairs, battens, rows and notches in bad condition and to renovate all the boards.



Details of the cloister façade: eaves, bays and gutters.

Refurbished façades in the cloister.





Refurbished roof.



Likewise, the slate roof was completely replaced, opting for a solution based on battens with the slate pieces fixed with hooks. This solution allows ventilation under the tiles preventing the accumulation of humidity on the boards and the consequent damages to the boards and pairs. The finishes were of zinc pieces or with galvanized or lacquered sheet. The dome was covered with curved tiles on mortar, taking advantage of the original recovered tiles.

The buttresses of the church, the steeple and the staircase leading to the steeple were protected with 2 mm lead sheets. The rest of the exposed elements were protected with eaves, bibs and quart zinc gutters, which have a great durability and aesthetically match the procedure and the building.

In the façades and gutters the existing plants were eliminated with the application of biocide on all façade surfaces involved. Careful cleaning was then carried out with sprayed micro-abrasive to remove surface deposits of dirt. Those deteriorated pieces that had had significant volume losses were also reconstructed with stony mortar, using corrugated glass fibre rod anchors fixed with epoxy resin. The irretrievable pieces were replaced by Campaspero stone blocks seated with lime mortar and gravity injections with hydraulic lime slurry through the back of the wall. Finally, gargoyles and ornamental elements were reconstructed with silicone moulds and plaster counter moulds to recover the integrity of the complex.



King Don Pedro Citadel, Carmona (Seville).

# Old architecture and engineering

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# King Don Pedro Citadel

*Carmona (Seville)*

## Promoter

Spanish Cultural Heritage  
Institute, Ministry of  
Culture

The King Don Pedro Citadel, popularly known as the Upper Citadel, is located within the historical centre of Carmona, in a dominant position over the city and the surrounding territory. Sitting on an ancient acropolis from the Caliphate period, the preserved remains have their origins in later actions of the Castilian monarchs, notably by Pedro I and the Catholic Kings.

Declared a Historic-Artistic Monument in 1931 and now an Asset of Cultural Interest, it is one of the archaeological sites included in the Special Plan for the Protection of the Historical Heritage of Carmona, approved in May 2009 with the highest degree of protection.

## Historical background

The King Don Pedro Citadel I is located at the eastern end of the plateau on which the city of Carmona sits. Although its origin seems to be Islamic, the remains visible today date from the great reform carried out in the 14th century by Pedro I and later additions by the Catholic Kings.

Today, the Citadel is a conglomerate of constructive fragments of diverse importance, appearance and degree of conservation, complex to decipher. With an almost rectangular shape and north-south orientation, it consists of two enclosures, one inside the other, separated by walls and barbicans, except for the eastern side where both lean against the wall. The southern part of the complex was remodelled for use as a Parador: the Royal House building contains the halls and bedrooms of the hotel and the parade ground is used as a car park.

The outer wall of the complex delimits a rectangle with a crenelated wall, to which towers are attached at each end. The door, which originally had an elbowed access with a quadrangular enclosure in front and another behind, is framed with a pointed horseshoe arch and crowned with a gatehouse. The wall was protected by a moat around the entire perimeter of the enclosure, except on the south and east sides, where the natural escarpment of the land served as protection. The 16th century artillery tower is in the north-western corner of the moat, one of the first artillery bastions.

The Citadel was defended by an inner line of walls that delimited a rectangular area to which towers are attached at each of the corners and two smaller ones on the longer, western, side. The Torre del Homenaje is located on the south-western flank and stands out for its large dimensions

Access between the Torre de los Infantes and the intermediate tower in the western wall.



Western side of the outer wall.



Parador and Citadel.

Entrance to the interior of the enclosure.



compared to the rest. The north-eastern tower is also notable for housing the gate that opened towards the exterior in that corner. Access to the palatial area was through a layered door in the southeast corner.

The earthquakes of 1504 and 1755 left the complex in a dilapidated state and abandonment and plundering led to its current condition.

### **Procedure**

The main objective of the procedure was to consolidate the most damaged walls to make it possible to open the upper part of the Citadel to the public. At the same time, the need was raised to carry out an archaeological excavation in the area of the postern, recover the level of the northern barbican courtyard to facilitate spatial understanding of the whole and consolidate the structures at risk of disappearing, fundamentally the base of the Torre del Homenaje, the Torre Menor and the western wall.

At the beginning of the procedure, the northern courtyard had recent fillings from excavations in the enclosure that prevented a correct spatial understanding, as well as the covering of the postern, at risk of collapse. Likewise, the mud walls of the complex had important losses of material that compromised the stability of some elements as well as disintegrations, loss of cohesion, cracks, growth of minor plants and the excavation of a dovecote in the western wall.



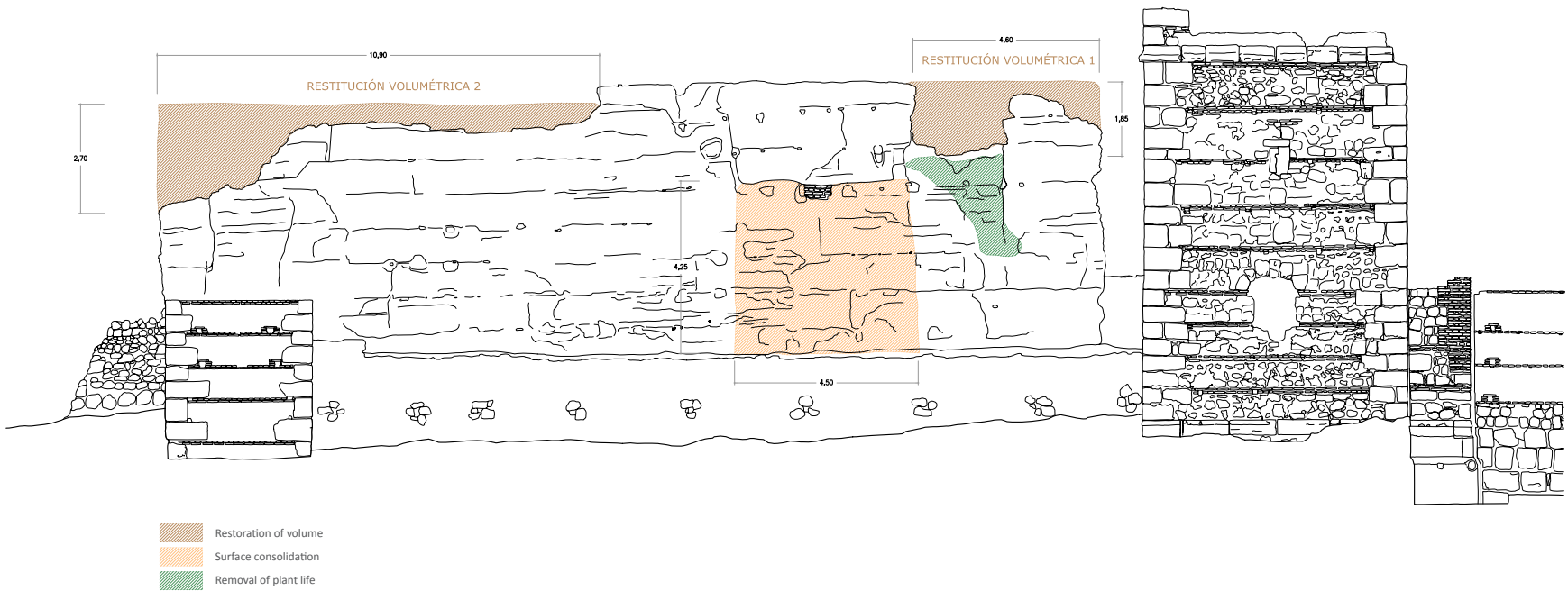
Torre del Homenaje from the viewpoint.





TORRE MODERNA

TORRE DE LOS INFANTES



Procedure on the exterior of the western wall. Architect Pablo Diáñez Rubio.

Because of all this it was necessary to carry out restoration work on walls and towers. With these works the necessary measures were adopted for the consolidation of the elements that offered the highest risk of disappearance and the basic conditioning of the complex for its future opening to the public, which required a specific study covering safety conditions, visiting arrangements and the necessary resources and dissemination content.

The work carried out in the restoration process consisted, on the one hand, of archaeological excavations at the northeast entrance and in the surroundings of the Torre del Homenaje and, on the other, of the removal of the terraces in the northern courtyard of the fortress down to archaeological levels. The consolidation of the walls involved the stabilising of the western part of the palace wall, the northern barbican and the remains of the stairs in the Torre Menor using formwork moulds with one and two sides. The blanked-off door on the northern flank of the outer wall was reopened and the urban wall was shored up with stone masonry.

For the consolidation of the walls, it was necessary to carry out a general cleaning of the wall surfaces, closing and sealing openings, injecting lime grout in cracks and fissures, building coping for protection against rain and using traditional moulds with one and two sides, all to guarantee the stability and good conservation of the complex.

Consolidated western wall seen from the interior between the Torre de los Infantes and the Torre Menor.



LA SUDA

# Castillo del Rey, La Suda

## *Lerida*

### Promoter

Lerida City Council

Located at the top of a hill, the Castillo del Rey was the most important civilian building in Lerida in the Late Middle Ages. Designed as a residence for the monarchs during their stays in the city, its walls were witness to events of great importance for the history of the Crown of Aragon. It is also known popularly as La Suda. This Arabic word, which means a closed urban area, refers to the Andalusian fort built during the 9th century in the place now occupied by the Castillo del Rey, but it is also the name that the documentary sources call the noble district that spread over the hill.

La Suda, declared a Historic-Artistic Monument in 1931 and now an Asset of Cultural Interest, forms part of the monumental complex of the Seu Vella, which includes the old cathedral, the military fortification surrounding the area and archaeological remains inside it, all witnesses to the city's history.

### **Historical background**

Just as, at the ecclesiastical level, the building of the cathedral marked the new reality that arose in 1149 after the Christian conquest of the Andalusian city of Larida, the construction of the Castillo del Rey was the element that staged the change at the political level. The construction of both buildings, carried out in parallel, was part of the process of replacing the pre-existing Andalusian constructions carried out between the end of the 12th century and the beginning of the 13th.

The south-east and south-west halls of the Castillo del Rey were built at that time. The first was used as a residence, meeting room and for assemblies while the second, crowned by a dome on the outside, served as a chapel and space for worship. During the second half of the 14th century, the structure of the castle was completed with a third nave to the northwest to contain the royal rooms and a new chapel, and a fourth and last nave to the northeast, with defensive and storage functions. The result of this constructive process, driven fundamentally by the Kings Pedro II el Católico, Jaime I el Conquistador and Pedro III el Ceremonioso, was that of a rectangular building formed by four naves around a central courtyard with a cistern.

The Castillo del Rey lived its era of greatest splendour between the 13th and 14th centuries, coinciding with a situation of full commercial and constructive expansion in the city. This reality changed during the 15th and 16th centuries when the kings stopped using the castle as a residence



View of the cathedral from the Castillo del Rey.

in their stays in the city. From then on, a process of abandonment and degradation began, culminating in its transformation into a military barracks in the 17th century, although the most important damage occurred during the 19th and 20th centuries, when the castle was used as a magazine, to the point that an explosion severely reduced the building's original dimensions.

Although the Castillo del Rey was declared a Historic-Artistic Monument in 1931, its military use continued up to 1948 when the hill was demilitarised and, unlike the cathedral, the castle fell into oblivion. It was during the 1980s when the first archaeological excavations and the recovery of the monument from a heritage point of view began.

Currently only the south-east nave of the castle, the oldest in the complex, is preserved. The façade facing the cathedral shows the building's original defensive function while the one facing the courtyard, with windows and doors, also gives a glimpse of the residential functions of



Southern façade of the castle, facing the cathedral.



yesteryear. This nave was originally covered by a wooden roof, which before 1244, as Jaime I el Conquistador states in his book *Llibre dels Feys*, was replaced by ribbed vaults. Only the corbels and the beginning of the ribs of these are preserved, since the vaults were dismantled in 1926 due to the danger of the nave collapsing into the courtyard. The only remaining element of the palace's Gothic work was then lost.

### Procedure

The procedure in the Castillo del Rey was conceived with a double objective – on the one hand, to favour the public use of the nave as an exhibition hall and multi-use space with the creation of an open-plan interior space and, on the other, to recover the original interior volume, which had been modified by the construction of an intermediate slab.

Northern façade of the Castillo del Rey nave.





New stairs on the consolidated southern façade.

Renovated roof adapted as a viewpoint with protective overhang.

View from the viewpoint.





For this, a series of refurbishment actions were carried out aimed at the structural consolidation of the building, consisting of stitching cracks with stainless steel bars and sealing with resins, as well as the structural reinforcement of the roof adding steel profiles and new waterproofing and upper finish with concrete slabs. In addition, an overhang was incorporated into the northern façade to protect the top of walls, buttresses and arches from the rain, thus favouring their conservation, and the interior slab added in previous actions was demolished.

Once renovated and waterproofed, the roof was adapted as a viewpoint. For this, a newly-built volume was incorporated next to the western tower, with a steel stair inside to facilitate access. Services and a vertical communication core to house a lift were included in this new volume to guarantee accessibility to the viewpoint for everyone. This volume also serves as a distributor for access to the so-called Sala Palau on the ground floor of the castle. The procedure was used to equip this space with all types of installations and HVAC equipment.

Mixed lime and cement mortars were used in the restoration of the outer and inner walls while the most damaged stones that compromised the building's stability were replaced. The procedure was completed with the crowning of the walls at the same level with coloured concrete finishes wherever necessary.

Thanks to this procedure, the complex of the city of Lerida and its surrounding countryside can be viewed today from the accessible viewpoint in the Castillo del Rey, confirming the dominant position of this monument in relation to a territory of which it was and is its capital.

Viewpoint access volume.

Communication core on the ground floor giving access to the viewpoint terrace.







# San Felipe Castle

*Ferrol (La Coruña)*

## Promoter

Spanish Cultural Heritage  
Institute, Ministry of  
Culture

The San Felipe Castle is located on the coast of the Ferrol estuary. From its strategic position it controls the narrow entrance channel to the natural anchorage inside the estuary, integrated into the landscape thanks to its location on one of the projections of this winding stretch of coastline.

Its origins date back to the 16th century, a time of confrontation between the European powers over maritime hegemony, although the current building is fundamentally the result of reforms promoted at the beginning of the 18th century by the Spanish Crown to recover its naval power. It currently enjoys the highest degree of heritage protection since it has been declared an Asset of Cultural Interest.

## Historical background

Located on the north and narrowest part of the mouth of the Ferrol estuary, the San Felipe Castle was built to control the passage to the natural anchorage located inside the estuary, next to the La Palma and San Martín castles, this latter now in ruins, on the other side of the estuary and with which it could cross its artillery fire.

The current building was fundamentally designed and built in the 18th century. The first projects, undertaken by Francisco Montaigú between 1726 and 1729, conserved the old fort, the work of Pedro Rodríguez Muñiz in 1589, adding side parts. In 1731, Juan Vergel completed the basic fort with batteries and caponiers, finishing it between 1744 and 1775 with the contributions of Miguel Hermosilla and other engineers. The building was subjected to a new reform during the 19th century, the work of Enrique Montenegro y López.

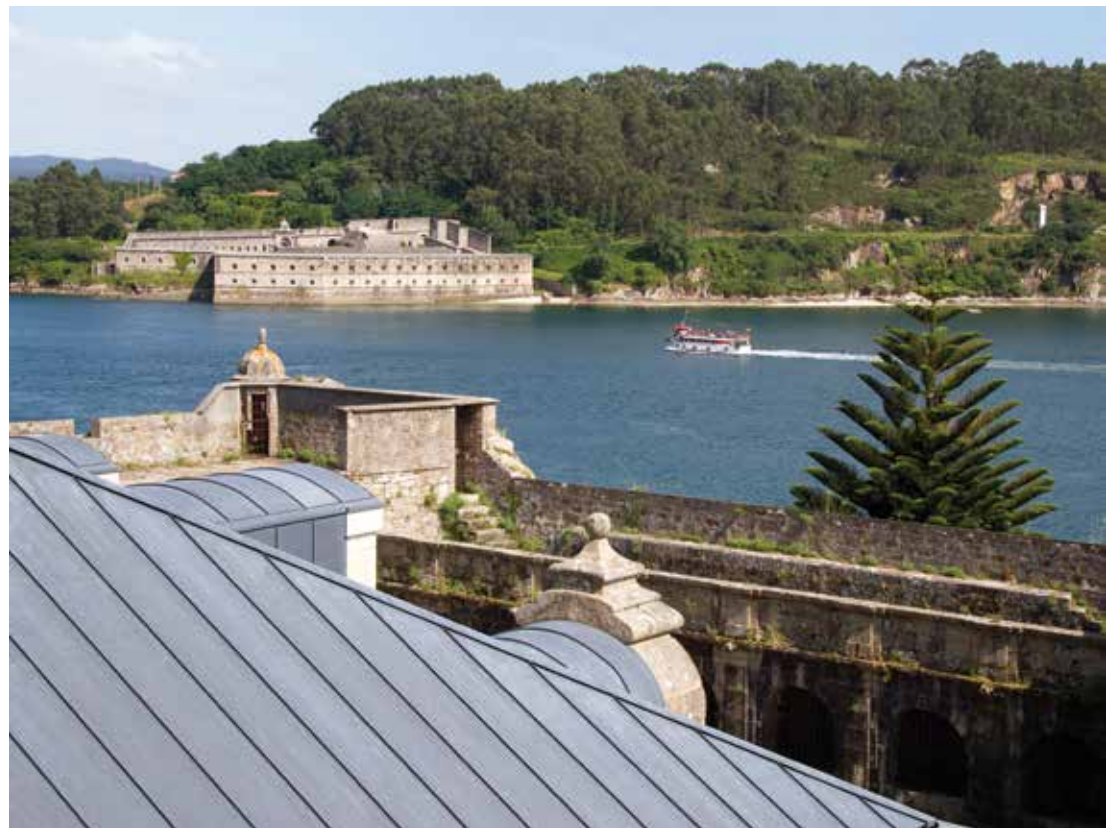
From the type point of view, the San Felipe Castle is a large coastal artillery battery, therefore directed towards the sea and bastioned towards land. Its enormous volume is distributed in three distinct parts. First, to the coast it presents a low line of artillery in which all the typical elements of this type of construction are preserved - loopholes, merlons, sentry boxes, parapet walkways and esplanades. The second element is the old 16th century castle and the reforms carried out in the 19th century loopholes, merlons, sentry boxes, parapet walkways and esplanades, that occupy the central place of the enclosure. Finally, the inner zone and the northern side have a bastioned system based on a horn work (fortification consisting of two half bastions), the external faces of which extend towards the interior of the battery, forming in its narrowest part (throat) a large

Officers' quarters and parade ground.



San Felipe Castle, on the northern side of the estuary (left).

View of the La Palma Castle on the southern side of the estuary (right).



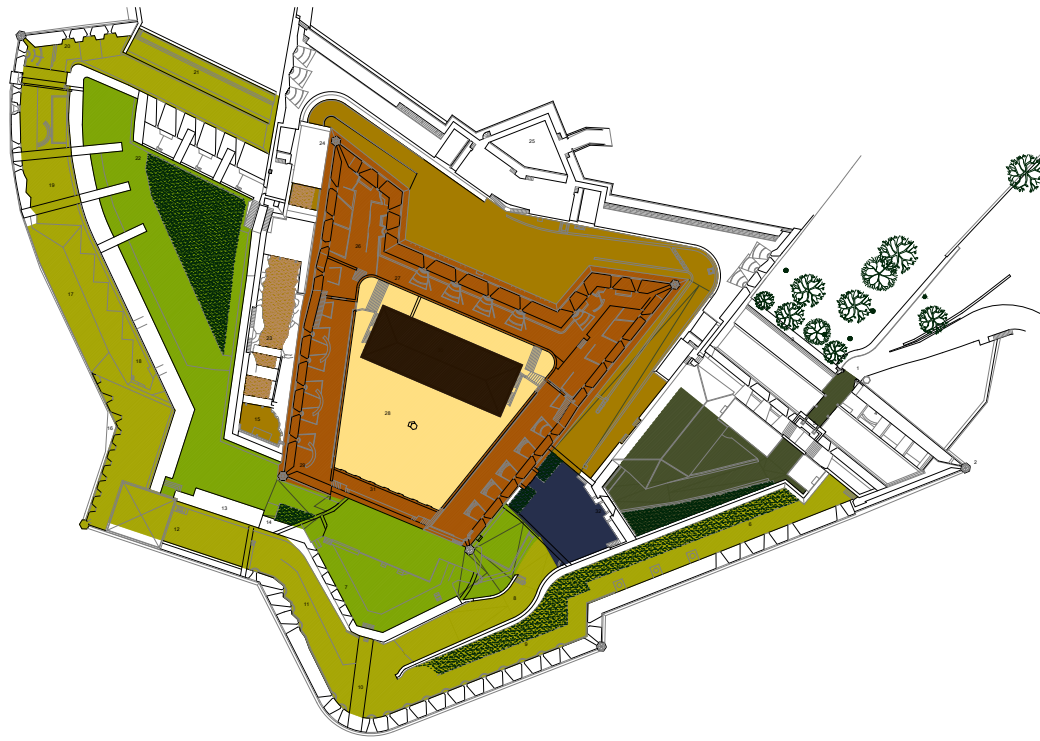
parade ground where the logistics services are located. Part of the 16th century construction is conserved in this area of the throat, also in the form of a high battery with arrow slits. This large horn work is surrounded by a dry moat and other elements such as a ravelin, a covered walk with espallions and a smoothly sloping area known as glacis.

Given the difference in level between the front of the horn work and the ends of the batteries, cages were built that close the eastern and western areas of this space, with a moat, covered walk and glacis flanked with a line of arrow slits. The main gate to the complex was located in the eastern cage for access both by land and with a ramp used as a jetty. Also notable is the waterworks to lead rain water and the cistern in the central part.

The design of a bastioned battery synthesises the doctrine practised by the Barcelona Army Mathematics Battalion in the 18th century, which took the experiences of this type of coastal castles in the American anchorages as a reference and combined them with the new doctrinal contributions of the Illustration, adapting them to a unique coastal space such as the mouth of the Ferrol estuary. Regarding decoration, the Baroque style predominates on doors, sentry boxes and other elements in the enclosure.

Low battery in the castle.

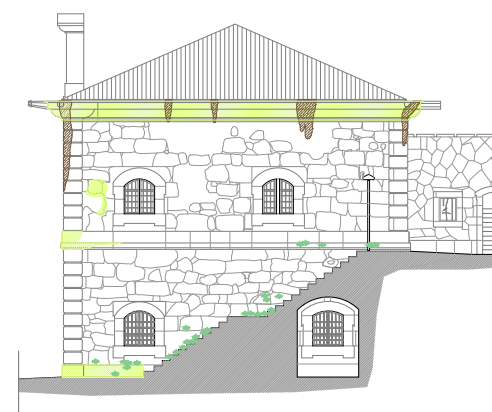
Access ramp to the low battery.



General planimetry of the castle.  
Architect Iago Seara Morales.

Notable among the materials used is the important ashlar stonework, mostly of granite, and some carefully-erected masonry walls. Here, the stereometry solutions applied in arches, lintels, sentry boxes, spiral stairs, vaults and other elements, including the discharge arches, are outstanding.

The central building in the complex, the so-called Officers' Quarters, has a very simple alignment and with no type of decoration on its façade. Initially single storey with entrances from the parade ground and from the old castle's battery, it was built with load-bearing masonry walls on one of the walls of the horn work throat. Oak beams for slabs and roofs were used in its construction with masonry in openings, parapet, jambs and lintels.



Perimeter horn work and refurbished Officers' Quarters.



### Procedure

The heritage element in the San Felipe Castle on which the procedure was focused was the Officers' Quarters since it had a series of pathologies, especially in the stonework. These included erosion caused by the action of environmental agents, problems arising from the use of cement mortar in previous actions, colonising by lichens, oxidation of metalwork elements and general humidity in the walls. The woodwork and metalwork, especially sensitive to the salty atmosphere of the environment, also had important damage from the action of the environmental agents.

Map of surface damage on the façades of the Officers' Quarters. Architect Iago Seara Morales.





Refurbished zinc roof.



Refurbished Offers' Quarters.



The procedure consisted of the restoration and conservation of the stone façades and original finishes according to the criteria resulting from the prior study of the walls. The building's image was therefore recovered by applying lime mortars after cleaning and repairing the support and occasional reintegration with restoration mortar and glass fibre armatures.

The water system for removing rainwater from the building was recovered following the models of the original gargoyles and the perimeter drainage was improved by sleeving the perimeter channel throughout its length, keeping the falling rainwater away from the plane of the façade and finishing the cornices with zinc.

In the roof, the joists were replaced with beams of laminated wood and the central load-bearing structure with arches of the same material, following the alignments of the historic documents. The damaged faces of the attics were restored and insulating boards finished with zinc sheet and new woodwork were incorporated. Finally, the exterior metalwork and woodwork were partially repaired, especially in areas with rusty metalwork.

Details of rain water removal.

Refurbished attic fronts.





# Buitrago de Lozoya Castle

## *Buitrago de Lozoya (Madrid)*

### Promoter

Spanish Cultural Heritage  
Institute, Ministry of  
Culture

The Buitrago de Lozoya Castle, declared an Asset of Cultural Interest, is the best example of fortified architecture in the Region of Madrid. Located in the town of the same name, where the historical complex also enjoys the maximum level of protection, it is seated on one of the windings of the River Lozoya, taking advantage of the topographical conditions to comply with its defensive functions.

The property of Diego Hurtado de Mendoza, together with the Old Castle in Manzanares el Real, it served to protect the family's vast lands. His descendants, Íñigo López de Mendoza, Marquis of Santillana and later the second Duke del Infantado, with the same name, caused the construction of palatial Renaissance rooms in the castle. With a square plan approximately 40 metres on each side, the castle currently has seven towers and a parade ground containing a circular bullring.

### Historical background

The Buitrago de Lozoya Castle, also called the Beltraneja Castle because it housed Juana la Beltraneja during her dispute for the throne of Castile with whom was to become Isabel la Católica, is an outstanding example of military architecture of mediaeval origin and of clear Islamic constructional influence.

Stratigraphy and the issues of the construction have shown various constructional phases. Throughout the last quarter of the 11th century and during the 12th century, a mud wall formed the town's first defence with a gate and primitive towers on the southern side; there may also have been a first citadel, today disappeared. The wall was thickened between the 13th and 14th centuries with a curved and boxed masonry layer and in the first half of the 14th century the wall was given a second reinforcement with another concerted masonry layer and the pentagonal tower reinforcing the main entrance was erected.

The current castle was built between 1387 and 1500. It must have been Diego Hurtado de Mendoza, son of the first Lord of Buitrago, who built the interior walls with their powerful defensive towers and erected the towers on two sides of the urban wall at the end of the 14th century. His descendant, Íñigo López de Mendoza, first Marquis of Santillana, built the first palace bays on its parade ground, where Juana la Beltraneja lived. The third Marquis and second Duke del Infantado, of the same name, built the definitive palace inside it, of which some shanks

Restored panels and walls.



Castle interior. Restored panels and walls.

and capitals of columns are conserved. This palace was dismantled in the 20th century to build the grandstand for the municipal bullring. Nowadays it is difficult to identify its practically square plan, the wide parade ground and the seven towers conserved on the axes of the wall panels.

The castle towers appear slim since their heights range from 1.5 to two times that of the contiguous faces. Towers 1 and 2 have different intermediate floors finished with vaults and slabs while towers 3, 4 and 5 contain a single vaulted room, accessible from the parapet walkway. The towers were built with granite and quartz masonry and stonework laced with brick courses with edges also of brickwork.

Eastern side of the Buitrago de Lozoya Castle.



Crenulations are conserved on the crowns of the walls on the southern face, the continuation of the town wall, and on the eastern face, built in the 20th century. The remains of up to three levels of floors can be seen on the interiors of the northern, southern and western sides.

The main entrance to the castle is in the tower on the northern axis and consists of an elbowed access through the western side of the tower under a brickwork vault. The configuration of the castle area provides access at the same level between the corner tower in the castle's south-west angle and the parapet walkway on the rest of the walled enclosure and between each tower, which must have been the castle's original walkway.

The interior space, with a practically square plan, first the parade ground and then the Renaissance palace, is today a circular bullring in the barrier wall of which some architectural elements have been reused, mainly cylindrical shanks, certainly from the original interior configuration of the Renaissance palace. The recently-built grandstands are of concrete block masonry.



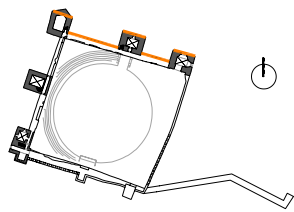
Detail of the recovered wall.

## Procedure

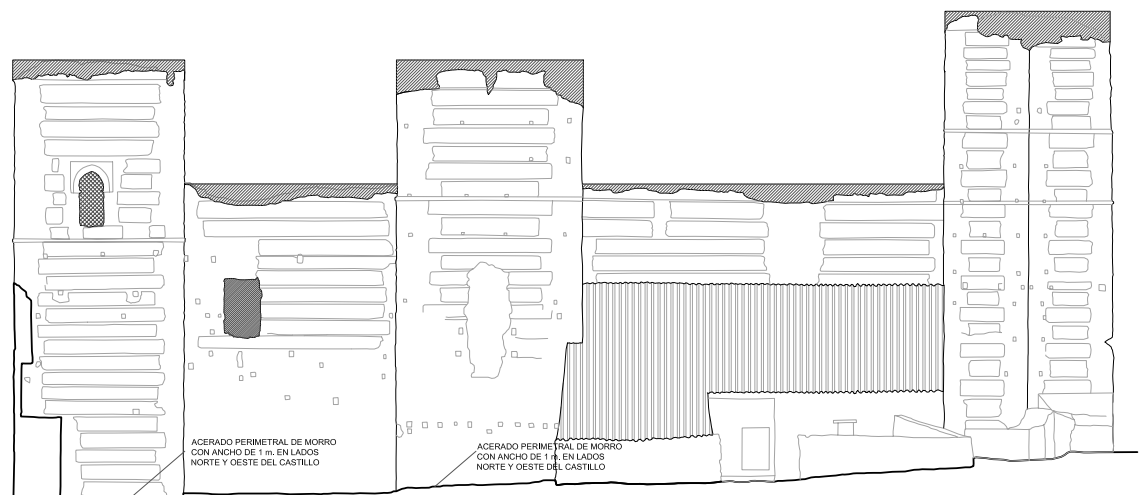
The main pathologies in the castle before the procedure were the erosion and desegregation of its mortar and masonry, the lack of protection of the crowns, the damage due to bio-deterioration caused by the presence of plants, damp and infiltrations, the loss of grouting, the presence of elements that altered the reading and comprehension of the complex and various mechanical problems in the towers, including the collapse of one of them.

The restoration work started with a series of archaeological tasks to improve the knowledge of the building, fundamentally the stratigraphic analysis of the masonry and the undertaking of soundings in the parade ground to confirm the existence of archaeological strata. Later, and with better knowledge of the building, new foundations were built in the collapsed tower, based on micro-piles, and the lost volume was replaced up to its original height.





Plan of the actions on the northern face. Architect Pedro Ponce de León.



At the same time, the general cleaning of the faces of the wall and parapet walkway was carried out with the dismantling of the elements at risk of collapse and the areas affected by plant life were dry cleaned and treated with herbicide. Masonry was consolidated with materials similar to the existing ones and weep holes were closed with the application of lean lime mortar and pre-selected aggregate.

The towers were consolidated structurally with the injection of hydraulic grout, sealing of cracks and fissures with masses of fatty lime and aggregate and re-adhesion of fragments by stitching with hydraulic lime and glass fibre rods.

Finally, the large lost volumes were recovered with uncalcareous brick masonry using local materials after laboratory analysis and their testing on site and respecting the original levels of the walls, the configuration of their volumes and the conserved finishes that define the predominant appearance of the walls' structure.



Work on one of the towers.



# Gate of the Pomegranates in the Alhambra and Generalife gardens

*Granada*

**Promoter**  
Ministry of Culture

The Alhambra has its origin in the Palatine city built by the Nasrid sultans between the 13th and 15th centuries. Its construction started at the end that we know today as the Alcazaba and over time it extended to reach its current dimensions. The Generalife Almunia was built outside the walls at the start of the 14th century, a recreational farm with orchards, gardens and a hunting ground at the disposal of the Muslim kings.

The importance of the Alhambra and of the Generalife in Granada has been recognised throughout history with the initial declaration of the Alhambra citadel as a National Monument in 1870, the declaration of the Alhambra and Generalife gardens as Historic Gardens in 1943 and the recognition of the entire complex as a World Heritage site by UNESCO in 1984.

## **Historical background**

The Alhambra was a walled city that occupied most of the La Sabika hill. It had its own defensive system and could function autonomously with respect to Granada since it had all its own and necessary services for the population who lived there, from a royal palace to a mosque, schools, workshops, etc.

After the conquest of the city by the Catholic Kings, the Alhambra acquired the nature of a military fort with the General Captaincy of Granada established in it. A series of reforms was started then to strengthen the defensive system and adapt it as a royal residence, acting with great respect for the Islamic elements.

However, this conservationist policy took on new directions with Carlos V, who ordered the construction of a new palace contiguous to that of the Nasrids with the twin objectives of, on the one hand, correcting the insufficiencies of the Alhambra as a royal residence and, on the other, to express the Emperor's power. The Carlos V palace is today one of the best examples conserved in Spain of the representation of imperial power through architecture.

Entrance to the Alhambra through the  
Gate of the Pomegranates.



## Gate of the Pomegranates

After he came to power, Carlos V commissioned Pedro Machuca to redefine the space in the Alhambra, a project in which one of the substantial elements was the new entrance to the Palatine enclosure through the so-called Granadas Gate.

The gate, which was not called Pomegranates until the 18th century, was possibly built between 1545 and 1548. Located on the Gómez slope, it opens between two hills that crown the Alhambra itself and the Bermejas Towers, in what was previously a ravine. The *Bib al-Buxar* or Gate of the New Joys, also called the *Bib al-Jandaq* or Moat Gate, was located in this area, a defensive tower that constituted one of the entrances to the city, open to the Alhambra's current poplar groves and connected to its walled enclosure. It was in the same place in which the tower was located, although higher up, where Carlos V ordered the building of the Gate of the Pomegranates as a Roman triumphal arch to commemorate his arrival in Granada on the occasion of his recent wedding with Isabel of Portugal.

Originally, this gate was not the main access to the Palace since this function was that of the Puerta de las Armas in the Albaicín. But during the Emperor's reign, the Gómez slope began to gain prominence, which motivated the commissioning of its construction. Its name came from the enormous pomegranates (*granadas*) that decorate the lintel.

The construction of the Gate of the Pomegranates, together with the Pilar de Carlos V located to the side of the Puerta de la Justicia, served to confirm the Alhambra as a macro city that demonstrated, almost as a manifesto, the principles of the new Renaissance architecture and which was intended to become an example of future urban refurbishment programmes.





Detail of the cleaning work on the gate after restoration.

Cleaning work.

The Gate of the Pomegranates seen from the interior.



## Procedure

The Gate of the Pomegranates had a series of pathologies typical of this type of stone architecture – deposits of dirt, loss of stone material, peeling and pitting, as well as descohesion of material, cracks and fissures, runoff spots and bio-deterioration.

To deal with these pathological processes, the stone was cleaned manually before its consolidation with the surface spraying of calcium hydroxide and the sealing of cracks by injecting lime grout. A micro-abrasion meter was used according to the needs for removing scales or surface deposits.

The old cement mortars used in the grouting of the stone and in the volumetric reintegrations were removed manually with a micro chisel and replaced by a new white hydraulic lime mortar, desalinated and compatible with the original stone. The concrete mortar was also removed mechanically from the side arches, replacing it with colour-matched lime mortar.

Finally, a water-repellent treatment was applied in the masonry except on the shield of the drum, to reduce water absorption but without affecting its appearance.



View of the Alhambra and the Generalife.

Restored wall crown.



## The Generalife

The Nazari Generalife farm is located outside the Alhambra walls in its north-east area, maintaining a close territorial relationship with the Alhambra. The Generalife is defined as a garden, a farm that is at the same time residential and agricultural, with a Palatine building in a vast extent of cropland and pasture. Divided by terraces and embankments into four large gardens, an ascending path between the walls of the gardens, called the Medieval Path, connects both Palatine residences.

The gardens spread in several embankments below the south-west face of the palace building. Among other values, it is notable for its ecological importance, having been maintained in cultivation practically without interruption since its construction and because it preserves the gardens' original dividing walls. Despite the natural deterioration of the centuries and their avatars, these walls, which were built to formalise or regularise large terraced areas, have maintained the essentials of their masonry.

The names of the gardens have changed over time and today are known as Colorada, Grande, de la Mercería and de Fuente Peña. One of the large wall structures that contains the earth in the intermediate embankment known as the Huerta Grande, below the Generalife Palace, reveals the ancient layout of the Nazari gardens and forms one of the most singular vestiges of this monumental complex. After the archaeological excavations, remains appeared next to it of other structures related to this early stage of the design of the gardens in the 13th century (access ramp and waterworks structures for channelling and drainage) that provided valuable information on their use and functioning.

The Generalife and its gardens.



The wall is a large stonework structure more than 7 metres high, 78 metres long and 2.30 metres thick, with an angled shape and with a slight inclination, following the gradient of the land which in turn favours the draining of irrigation water from adjacent gardens.

## **Procedure**

At the start of the procedure, the Huerta Grande wall had surface dirt deposits, loss of large volumes of masonry on the crown and corners, erosion, an important loss of stonework, cracks, fissures, run-offs, erosion of weep holes and damage from bio-deterioration.

Huerta Grande wall after restoration.

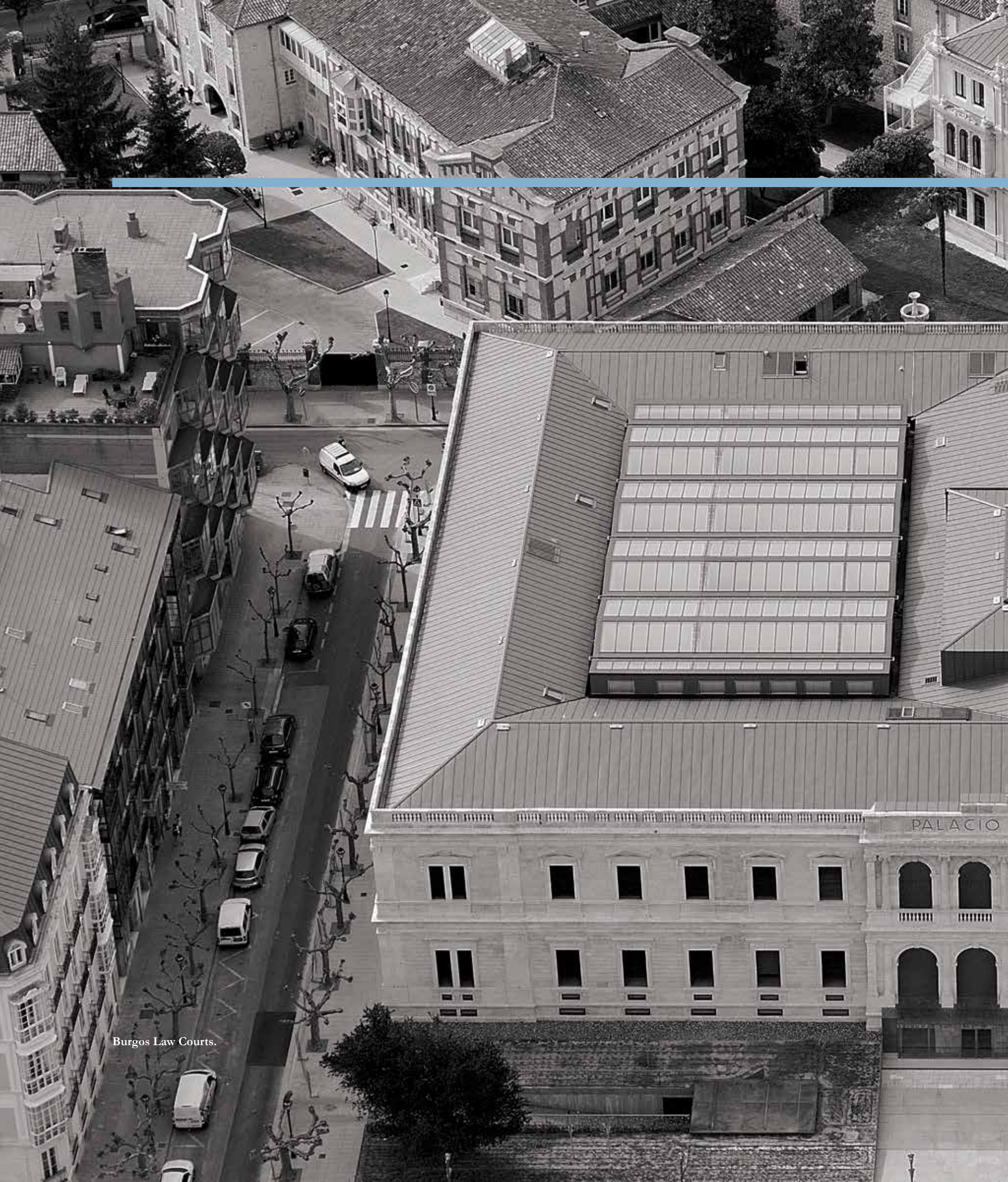
Detail of the restored wall with recovery of volumes.



Restoration work to stop these pathological processes in the wall started with the archaeological excavation and unearthing of 13th century structures followed by manual cleaning. The stonework fragments were carefully cleaned with mechanical means and with lime water. Integral biocide treatments were also applied and general consolidation undertaken by spraying with a solution of calcium hydroxide in water.

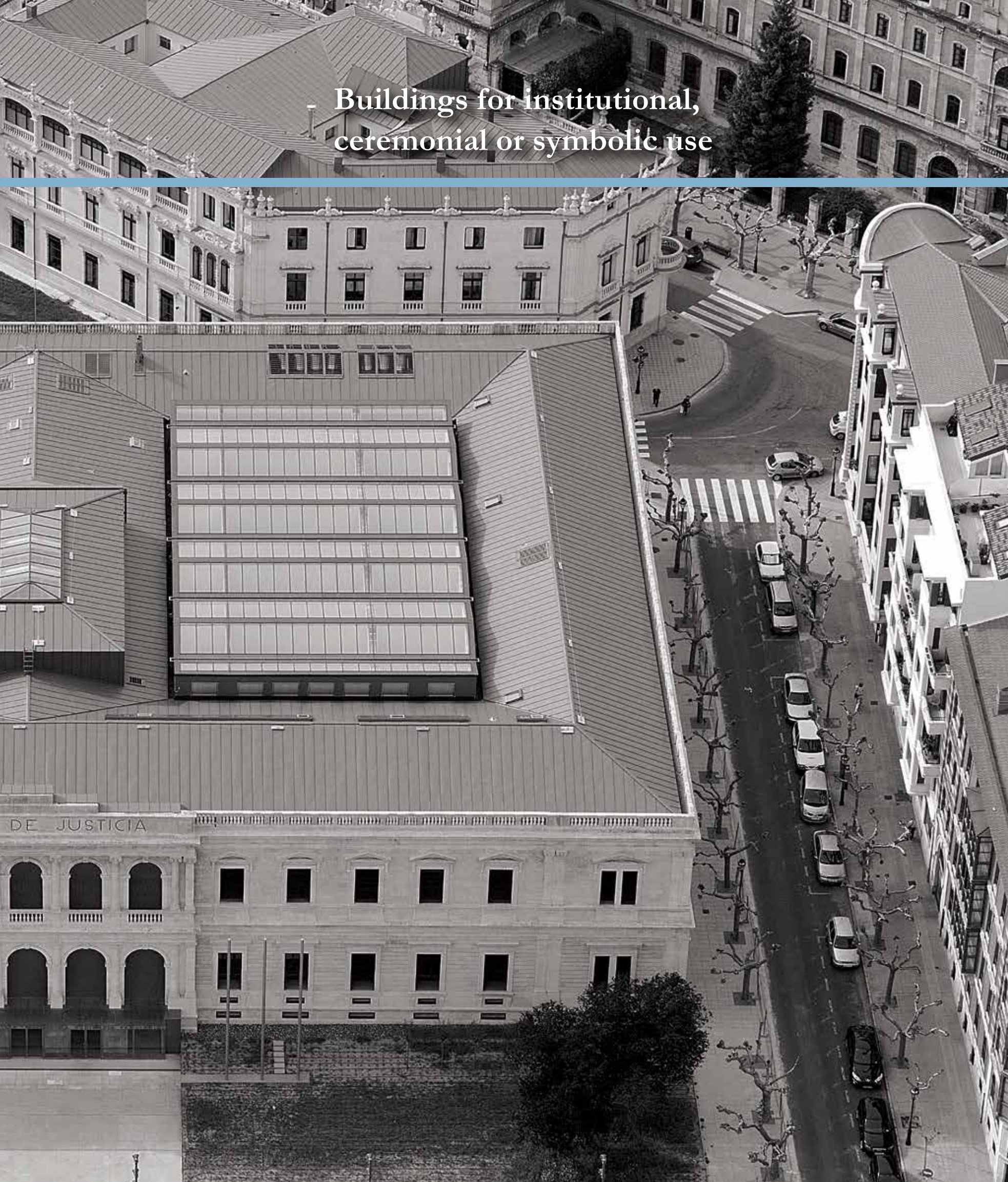
The structural consolidation involved the injection of hydraulic grouts, sealing of cracks and fissures with mass of fatty lime and aggregates and stitching with corrugated glass fibre rods. The weep holes were also sealed with lime mortar and pre-selected aggregate, reproducing the lines of the stonework and the original position and shape of the holes.

Finally, the large volumes of lost masonry were recovered with traditional masonry using local materials after laboratory analysis and testing on site.



Burgos Law Courts.

Buildings for institutional,  
ceremonial or symbolic use







# Former Model Prison

## | 9 de Octubre Administrative City

*Valencia*

### Promoter

Government of Valencia

Construction of the Model Prison in Valencia started in 1889 and it was inaugurated in 1903. The American Cherry Hill prison, built in Philadelphia in 1825 and featuring a panoptically radial structure, was taken as the reference for its construction.

The prison closed its doors in 1992, leaving the building unused. Its refurbishment has allowed the housing of a large administrative centre for the Government of Valencia, containing various departments and some of its central and territorial services.

### Historical background

The construction of Valencia Model Prison was framed within the great effort made at the end of the 19th century in Spain to improve the infrastructure of public buildings. The Model Prison in Madrid was inaugurated in 1884 to serve as the prototype of a new concept of prison philosophy. A model to be followed – hence its name – that was imitated by other prisons such as Barcelona and Valencia. The new prison was designed by Joaquín María Belda Ibáñez following the radial model imposed for this type of building.

Built of brick and masonry, the building of this old prison is located on a large site of 30,000 m<sup>2</sup>. Access to the prison is through a U-shaped module around a courtyard, originally destined for offices and auxiliary services, flanked by landscaped gardens.

The access module led to the building's central space, the control point and the only access to the four galleries containing the cells. The four cells modules extend in the form of a star facing south with four three-storey galleries lit by a large semi-circular opening and by a series of windows above the cells themselves.



Old Model Prison.

New administrative complex.



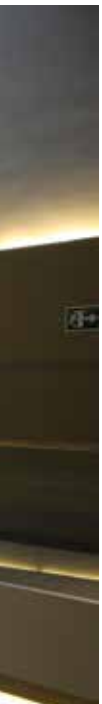
## Procedure

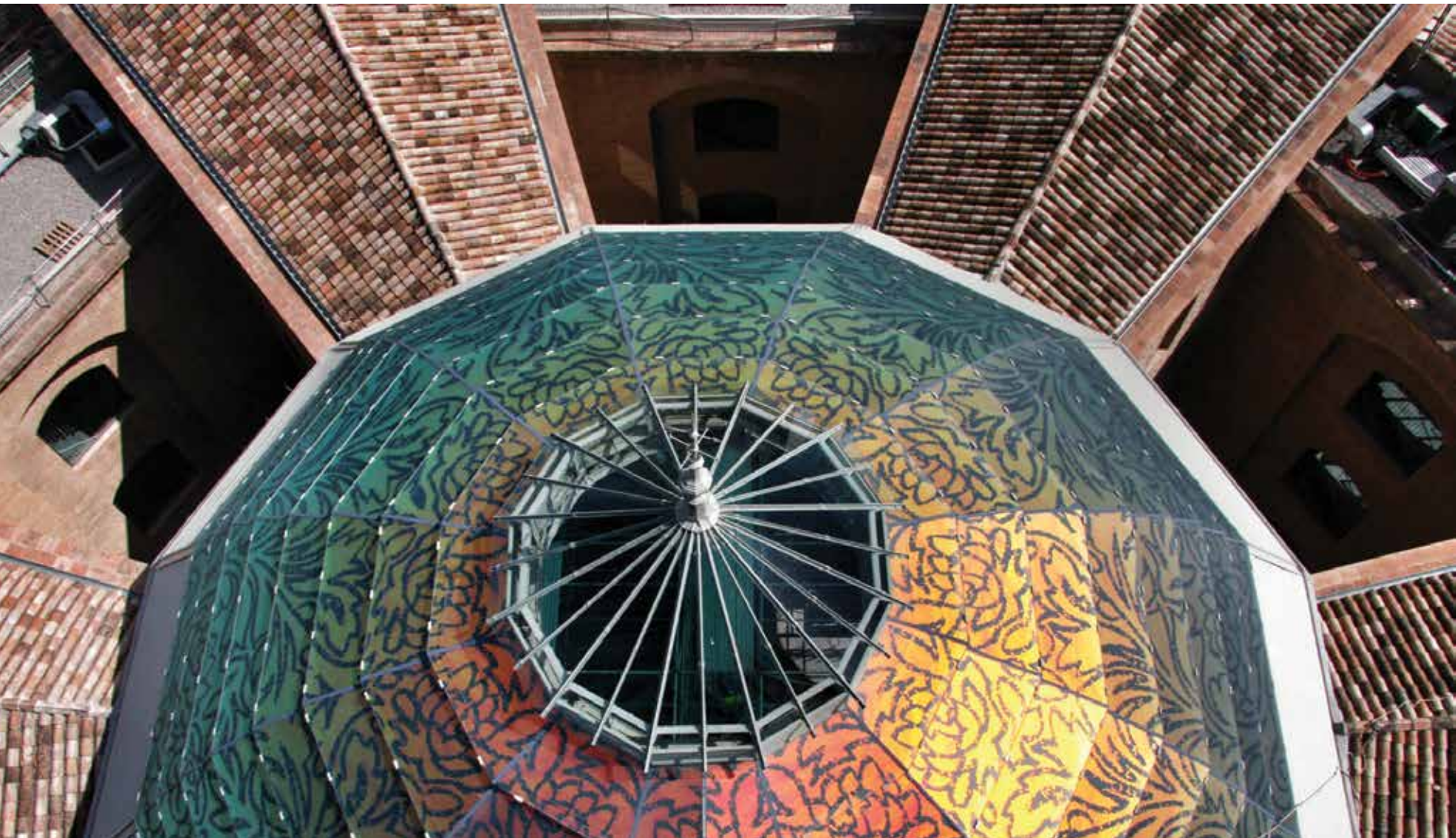
The procedure focused on the refurbishment of the old prison's main building and its access module, demolishing the perimeter wall and the auxiliary buildings, of little heritage value. Four new buildings, square in plan, were erected in the free spaces in the courtyard, three of them with nine storeys and the fourth with sixteen, to accommodate the extensive administrative programme required by the new complex. In addition, two new parking floors were built below ground level with a capacity for some 880 vehicles.

The original façades of the original buildings were preserved, replacing the prison module slabs inside with others with a higher load-bearing capacity, reproducing their original geometry, although with a different constructional system and removing the partitions between cells. Thus the interior space was left open-plan but allowing possible future partitions thanks to the installation of noise barriers. At the same time, the transformation of the roof and the use of noble materials have generated a new scale, more appropriate to the new activity.

Old prison module.

Refurbished galleries.





Original brick façade recovered.

Old access module.

Refurbished roofs.



The central part of the radial structure, the surveillance point in the old prison, was transformed into a meeting and rest place and a communication core for the complex, functions for which galleries and courtyards were also recovered. Likewise, the panoptic space was equipped with screened natural lighting.

A particularly careful treatment of the old galleries was carried out, in which its basilical section was revealed, replacing the old trusses, which did not meet strength conditions, with others made of laminated wood with a tie rod. In addition, the building's natural lighting was improved by replacing tiles with glass at various points.

The refurbishment of the old prison was guided by maximum sustainability criteria, focusing on the recovery of original materials for later use. The tiles were removed manually, cleaned one by one of mortar and moss, and reused in the new roofs. More than 95,800 original bricks were also recovered from the walls of the auxiliary buildings. These bricks were reused in the refurbishment of the deteriorated areas and in the enlargement of the 675 openings of the old cells, this being the only façade modification in the project allowed by the heritage protection authorities.

Special care was taken in the conservation of existing plant species, transplanting sixteen palm trees and protecting them from being affected by the works.

Refurbished dome in the centre of the radial structure.



# Burgos Law Courts

## *Burgos*

### Promoter

Ministry of Justice

The Burgos Law Courts form part of the set of civil buildings built in the city at the end of the 19th century. Of neoclassical inspiration, they have maintained their use to this day as the seat of the High Court of Justice of Castile and Leon, the High Prosecutor's Office and the Provincial Court. Designed by the David Ruiz Jareño, they have always been a reference in the city and are therefore included in the Catalogue of Protected Buildings of the Burgos General Urban Development Plan, with an environmental protection level.

In 2006, the Ministry of Justice promoted the recovery of this unique architectural piece with the aim of including innovative criteria for the judicial office and improving its accessibility conditions.

### Historical background

The construction of the definitive seat of the Territorial High Court, equivalent at the time to the present High Courts of Justice, was agreed on 30 July 1871, in a new rectangular building of 73 by 53 metres located in the current Avenida de la Isla.

Nine projects were submitted to the tender for the new construction, from which the then Academia de Bellas Artes de San Fernando chose the three that were most suitable. In December 1875, the municipal corporation chose the Madrid architect David Ruiz Jareño to carry out the project, although the works did not start until well into 1878.

Inaugurated in 1883, this is a representative, solid and balanced architecture, with two floors and topped by a baluster around its perimeter that hides the pitched roof. The lintelled holes on the ground floor rest on a cushioned plinth, topped with cornices, while the openings on the upper floor are finished with a pediment. The corners are emphasised by paired pilasters on pedestals, the lower ones of Doric order and the upper ones of Ionic order.

The main façade has a slightly advanced central body, with a portico presided over by a staircase. This body is formed by semi-circular arches framed by superimposed Doric and Ionic columns with pedestals, which are duplicated at the ends.



Access volume from the exterior.

Main façade.





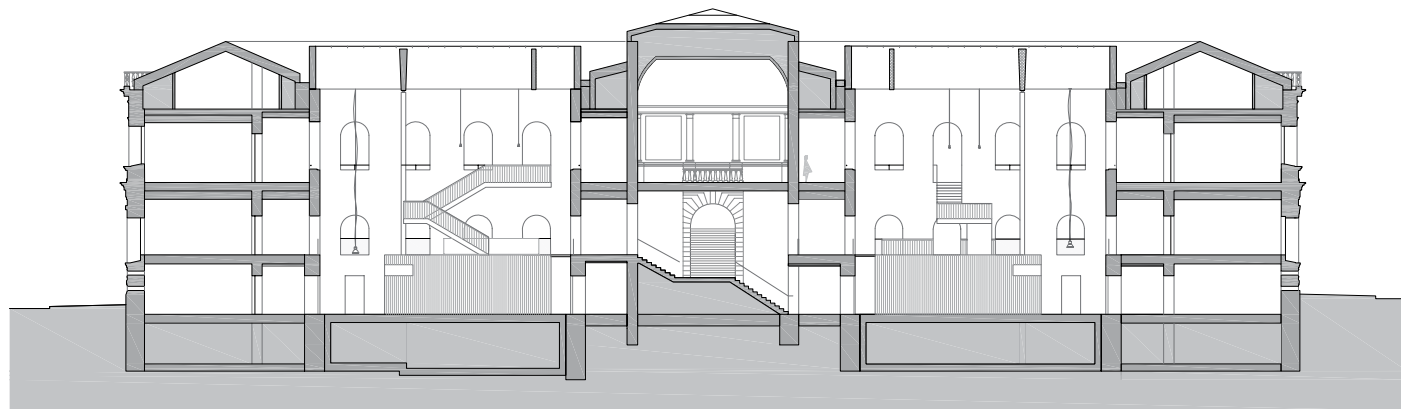
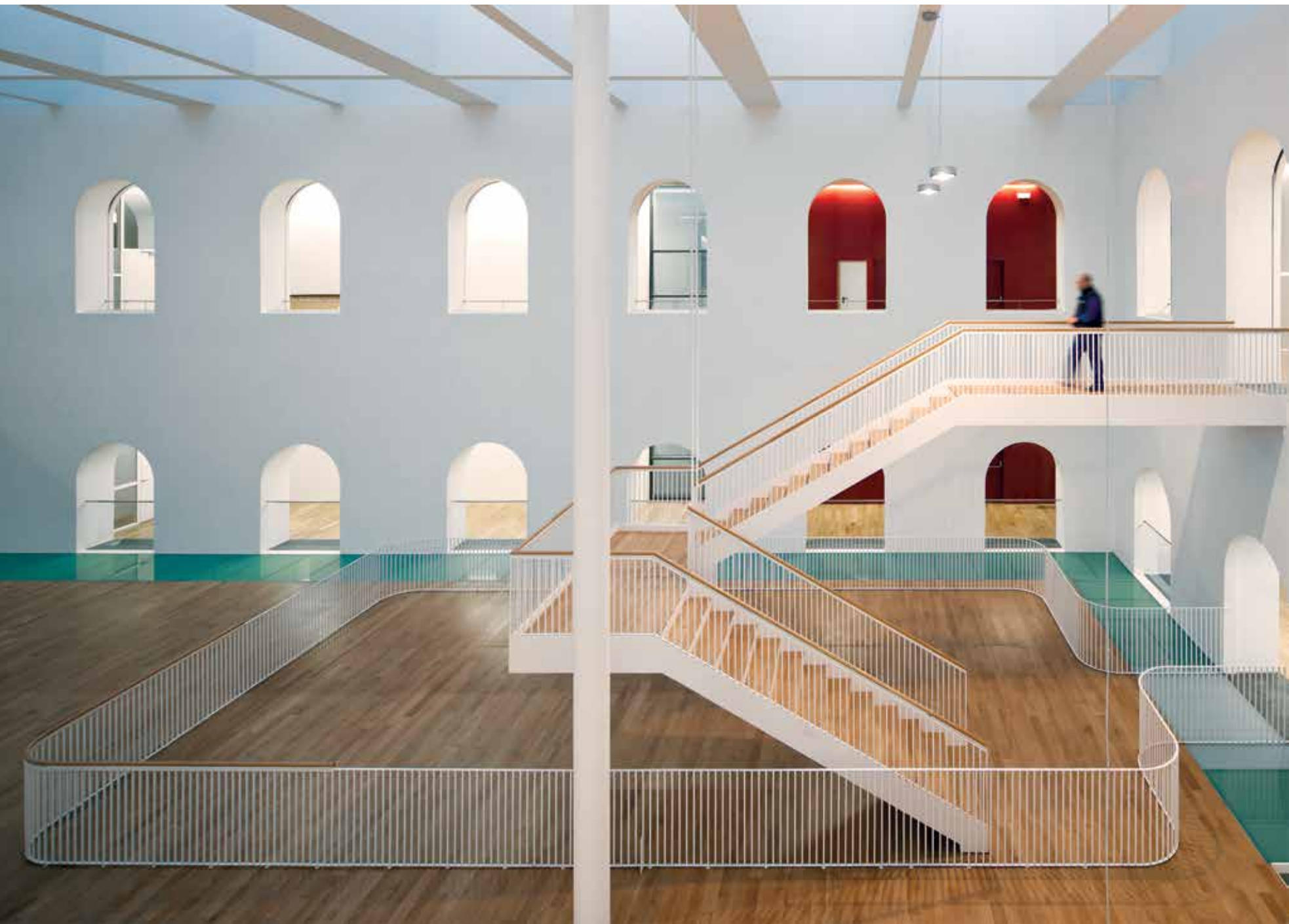
Access foyer on the ground floor.



The floor plan is a perfect rectangle with two large inner courtyards around which movements are organised. It consists of a semi-basement, two noble floors and a ground floor. In the central part there is a large imperial staircase with balustrade and stone steps from the nearby quarry of Hontoria, lit from above by a large skylight.

The load-bearing walls are built of stone ashlar with flush joints, backed with masonry 50 cm thick, with a perfect lock. The slabs are of wooden beams with blocks and hollows filled with lime mortar. The pitched roof has a structure of wooden belts and trusses.

Since its inauguration in 1883, this state-owned building has the main headquarters for the administration of justice in Burgos.



Courtyards refurbished and roofed with skylights, in which new communications are located.

Refurbished imperial staircase.



## Procedure

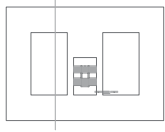
The congestion of the building due to the growth of judicial bodies and services, together with the presence of certain pathologies that were not solved with specific conservation actions carried out previously, justified the need to undertake the integral refurbishment of the building. In addition, improving the living conditions and redistributing spaces according to new functional requirements were indispensable requirements.

For this, the procedure reorganised the spaces taking the existing levels as a starting point. The old semi-basement became the new access floor, the one with the greatest use and to which guaranteeing accessibility was a priority. The main floors were kept at their original level and the attic floor was used for the archive and facilities. Thus the façade openings were preserved unaltered.

Longitudinal section. Architect  
Primitivo González.



New courtrooms in the covered courtyards.



Cross section. Architect Primitivo González.



The old courtyards were covered with large skylights which allowed, on the one hand, the lighting of the new ground floor and, on the other, advantage to be taken of these well-lit spaces with natural light to locate the courtrooms in separate wooden boxes. The location of the courtrooms near the main entrance prevents unnecessary movements and frees the rest of the floors of public movements.

Access through the main façade was maintained, where accessibility was improved by replacing the original staircase with a horizontal glazed piece that leads to the entrance hall. This new, large, double-height foyer was achieved by eliminating part of the upper floor slab, allowing the use of the space as a distributor and the easy visual identification of the communication core. With this, the use of the monumental staircase has been enhanced, while at the same time it has been complemented with a new section of stairs from the ground floor to the first floor. In addition, two new staircases connecting the first and second floors and a central communication core were incorporated into the covered courtyards, all for the exclusive use of employees, thus also complying with emergency evacuation regulations.

As for the exteriors, the façades of the building were cleaned and lintels, cornices, mouldings, imposts, capitals and other ornamental elements were repaired, replacing those that were damaged or lost. The entire perimeter of the building's upper balustrade, made of Hontoria stone, was also stitched with stainless steel rods, and the carpentry was renovated. The procedure was carried out preserving the existing trees and improving the gardens in front of the palace.

Once the refurbishment work on the lawcourts was completed, the High Court of Justice of Castile and Leon, the High Prosecutor's Office of Castile and Leon and the Provincial Court of Burgos inaugurated their renovated headquarters on 16 July 2012.



# Palacio de Comunicaciones

## | Madrid City Council headquarters

*Madrid*

### Promoter

Madrid City Council

The Palacio de Comunicaciones, originally the central headquarters of Correos y Telégrafos de España and currently that of Madrid City Council, was the work of the architects Antonio Palacios and Julián Otamendi and was one of the most significant buildings in Madrid's architectural panorama at the start of the 20th century.

Known for the monumentality of its façades, which combine decoration inspired by Spanish plateresque with other elements of neo-Baroque style and Viennese influence, it has been protected since 1993 as an Asset of Cultural Interest.

### Historical background

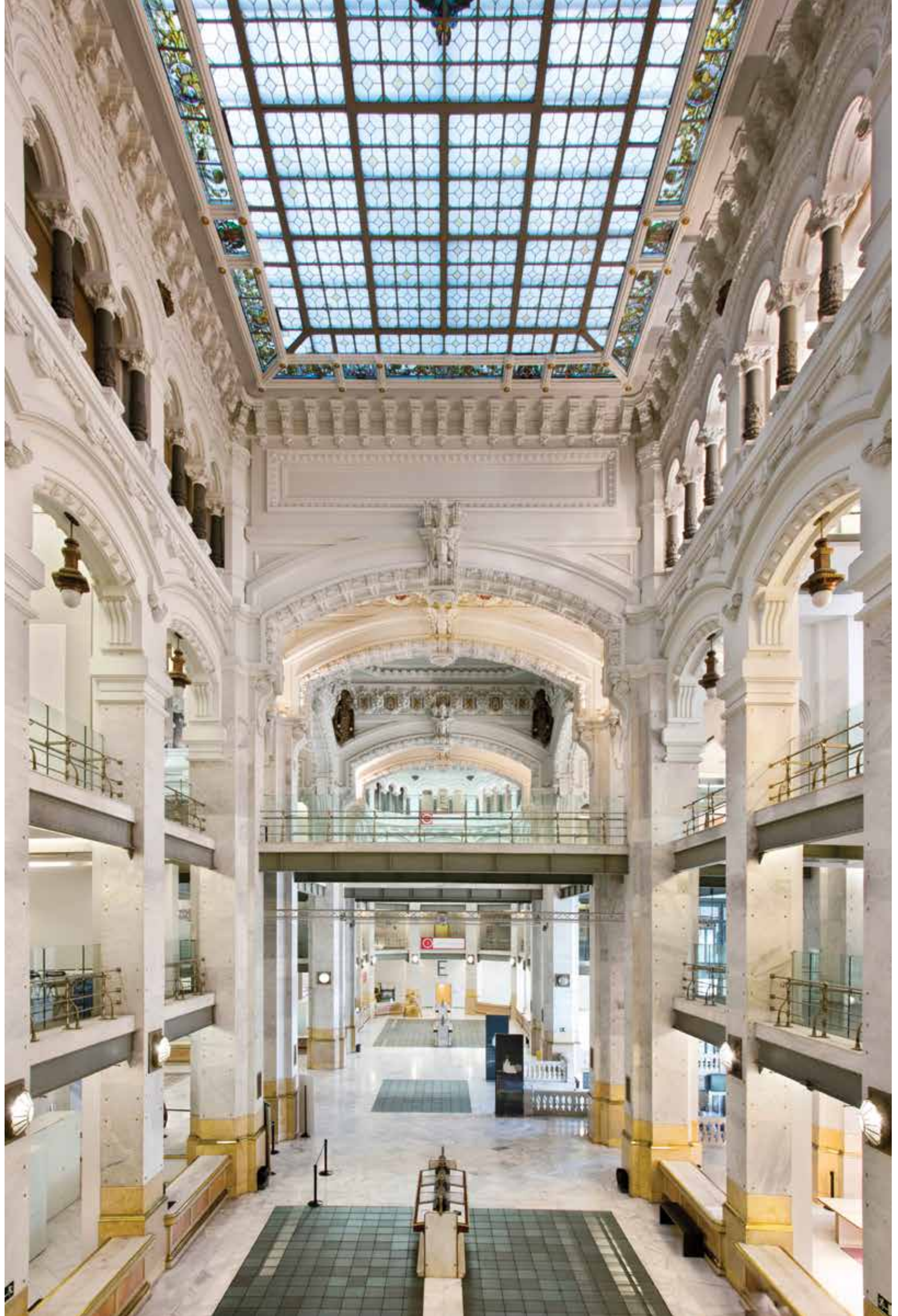
The Palacio de Comunicaciones was the result of a national competition held in 1904. After its inauguration in 1919, it became a landmark in the urban transformation of the Calle Alcalá and of Madrid at the start of the 20th century, together with two other monuments located in the same artery such as the Banco Español by Río de la Plata, the current headquarters of the Instituto Cervantes, and the singular building of the Círculo de Bellas Artes, both also by Antonio Palacios.

The proposal of the architects Palacios and Otamendi for the Correos building sought to adapt itself to the irregularity and large extent of the site, located between Calles de Alcalá and Calle Montalbán, the Paseo del Prado and the Plaza de Cibeles. The result is notable for the monumentality and originality of its eclectic and functional language, as well as for the plasticity of the play of volumes of the profusely-decorated external bodies.

In the process of the work, an in-depth study of the materials was carried out, giving special protagonism to avant-garde elements such as glass and iron, while paying close attention to the suitable layout and distribution of the spaces.

The design of the monumental building is articulated around three large courtyards, the operations courtyard, the post office courtyard and the unloading courtyard, and overall had all the necessary spaces for its new functions as a postal, telegraph and telephone centre. In the main body, open to the Plaza de Cibeles, there is a large cruciform hall, the height of which encompasses the entire building, crowned by an exceptional stained-glass window. Generally, the building's six floors are distinguished by their rationality and functionality, as well as by their innovative installations and by the structure of rolled profiles, a true demonstration of constructive sincerity.

Palacio de Comunicaciones in the Plaza de Cibeles.





Original customer service counters in the operations courtyard.



Outside, the tower stands out, crowned by a powerful octagonal dome seventy metres high, in which innovative radiotelegraphic installations were incorporated at the time.

### **Procedure**

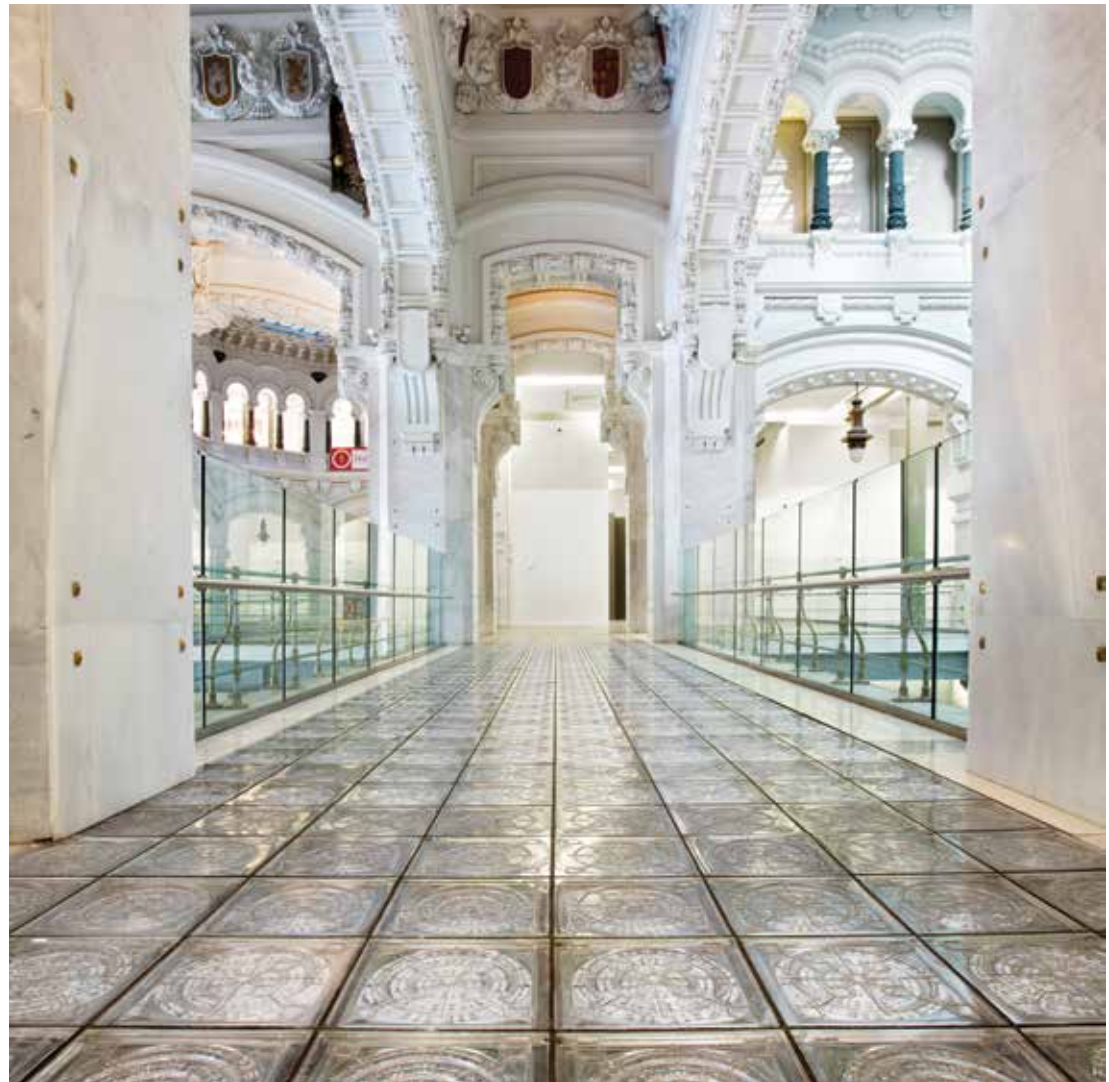
At the start of the 21st century it was decided to install the headquarters of Madrid City Council in the Palacio de Comunicaciones, for which it was necessary to refurbish and adapt it to the new uses. Between 2005 and 2007 the administrative units were accommodated to locate about five hundred civil servants in the east wing of the building while some of the most representative institutional spaces of the building were recovered, among them the main staircase, the assembly hall, the stained-glass room and the institutional lounge, trying to recover the typical elements of the original project.

The procedure was structured around three main lines: the repair of the damage to the building, the recovery or maintenance of its original values and the harmonious integration of new uses and their adaptation to regulations.

Old operations courtyard.



Refurbished glass pavement in the main body.



In turn, the work was organised into two large blocks, one for the refurbishment of the existing building and the other for the creation of new spaces (new work). The first block comprised three areas of action - the main body of the building and its southern angle, the tower and the Sala de Batalla.

The main body of the building and its southern corner were to be used for museum and office functions, respectively. The original spatial and luminous values were recovered in the spaces intended for exhibition use, restoring the light and the openness with which they had been designed while the necessary means were incorporated to adapt it to its new uses. For this, the upper glazing was restored, freeing the main lantern, and a new glazed roof was installed for the central body's ambulatory.

Refurbished stained glass windows in the main body.

Handrails adapted to regulations.





Entrance to the great tower.

Vertical communications.

Restored staircases in the towers.

Likewise, in the area of the main body the veneers, the plaster moulding and the stained-glass windows were restored and where it was not possible to repair the original elements, due to loss, they were completed with reproductions according to the original design. Examples of this are, among others, the pieces of glass of the pavements, the tiles of the staircases in the towers and the leaded windows of the false vaults. Handrails, counters and lights were also repaired and reinstalled in accordance with current regulations.

The second singular element of the building acted on was the great tower that crowns it, which was also opened to the public. The mezzanines and added staircases were eliminated to recover their interior spatiality and two staircases and an elevator were installed. The construction systems and supports are an essential part of this new route, which reveal a large-scale steel structure. In the tower, plasterwork was also restored and the various facilities renovated.

The third and last area of action in the original building was the so-called Sala de Batalla, located in the southwest of the building. This old postal room, in which some four hundred postmen worked, was converted into the Council's Council Chamber. With the refurbishment, the steel framework that divided the height of the room into two was removed and replaced with a new glass surface that allows the regulated entry of light. This made it possible to recover its original scale, lighting values and monumentality.

As for the new construction elements, the new Crystal Gallery stands out, which rises from the covering of what had been the rear courtyard, in the shape of an L, and which has now been converted into a place for meetings, celebration of events and other uses. As a result of the procedure, this large multifunctional space of 2,800 m<sup>2</sup> is covered by a sophisticated steel structure of organic forms, like a large glazed vault, made up of some two thousand triangular panes, all different from each other.

The new auditorium was conceived as a large music box, with capacity for more than two hundred people. Its construction, twelve metres below street level, was accompanied by other complementary services such as warehouses, workshops, archives and vestries and one of the two large areas of general installations which, together with the one under the roof, form a vertical distribution scheme, freeing ceilings and walls and leaving the building's structural elements visible.

Finally, notable among the newly-built construction elements is the two-storey underground car park under the Calle Montalbán, which is connected to the basement of the building's inner courtyard with a tunnel under the crossing of that street.



The Council Chamber, formerly the postal room.



New Crystal Gallery in the old rear courtyard, now a multi-use space.



CONGRESO DE LOS DIPUTADOS



# Parliament Building

## | Headquarters of the Chamber of Deputies

*Madrid*

### Promoter

Chamber of Deputies and  
Ministry of Finance and  
Public Administration

The Chamber of Deputies building was one of the most important works of those built during the reign of Isabel II. In itself it embodies the political transformation of Spanish society in the 19th century and also represents the creation of a new type of building with a previously unheard of functional programme.

### Historical background

Since Parliament met in 1810 in the Teatro Cómico on the Isla de Leon in Cadiz, the Chamber of Deputies met in various venues, always temporarily. Finally, after the absolutist period of Fernando VII, in 1834 it was decided to settle definitively in the disentailed convent and church of the Espíritu Santo in the Carrera de San Jerónimo in Madrid.

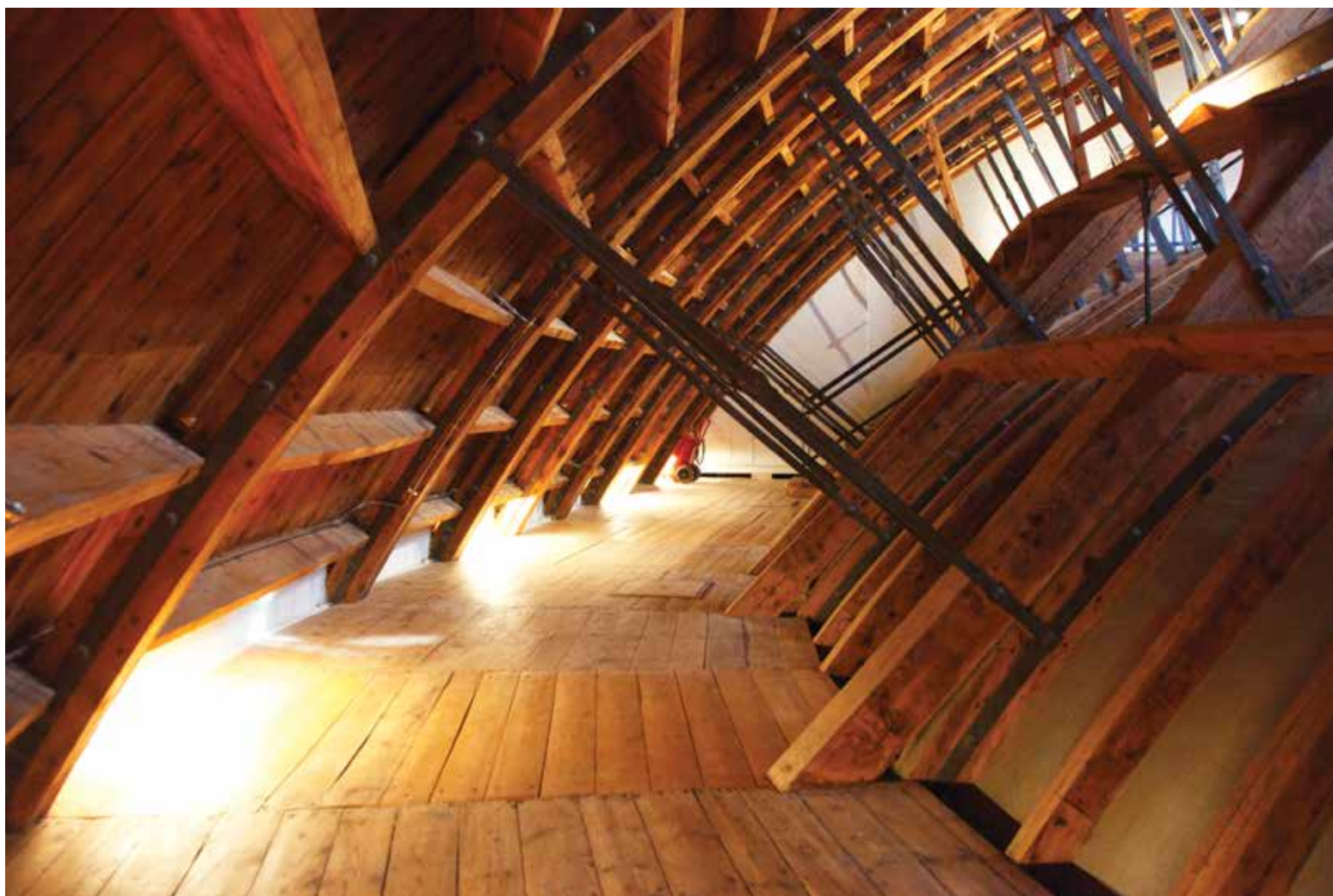
This convent, very deteriorated due to a fire in 1825, was reformed for that purpose and Parliament continued to hold its sessions there until, almost twenty years later, much of the building was declared ruinous. At that time, a competition was held to built “a Parliament Building worthy of national representation, albeit of a simple and sober nature, the cost of which is compatible with public needs.”

The competition was decided in November 1842 and was won by Narciso Pascual y Colomer, who became the most outstanding architect of Elizabethan and romantic Madrid. The work was definitively finished in 1855.

The architect presented an expressive and functional project with a large Chamber in the shape of a semicircle within a rectangular plan with a very marked axis of symmetry on which were situated the *acceso de respeto* preceded by a staircase, the vestibule, the Salón de los Pasos Perdidos and the Chamber, behind which were the archive and the accesses to the public gallery. Vertical communications and other administrative offices were located on both sides of the axis. All the pieces on this floor had natural light, through four rectangular courtyards, two triangular courtyards and several skylights.

Its main façade on the Carrera de San Jerónimo recreates the image of an urban palace from the Italian Renaissance *quattrocento*. It has a central body, slightly advanced and enhanced by the staircase flanked by two lions, the work of the sculptor Ponzano, with a Corinthian hexastyle

Main façade.



Refurbished wooden structure under the roof.

solution. There are two façade bodies with cushioning and Ionic pilasters on both sides of this monumental entrance. The two side façades are resolved in a similar way, although a basement body was added in the Calle de Fernanflor, where the level is lower.

While the Members entered from the Calle Floridablanca, the public entered from the fourth façade in the Calle del Sordo (now Zorrilla), its two entrances, with Tuscan columns, communicating directly with the public gallery in the Chamber by stairs. While in the main façade all the masonry is of stone, in the rest there are brick walls combined with stone.

Throughout the 20th century the Parliament Building underwent changes with respect to the initial project conceived by Narciso Pascual y Colomer, with greater or lesser reforms. It was also extended on several occasions, through the construction of two new adjacent buildings to which it is connected by an elevated corridor and with other annexes nearby, provided for specific needs.

## Procedure

The deterioration of the roof, with signs of abundant dampness and seepage, caused damage to the wooden structure and paintings on the vaulted roof of the semicircle. Added to this were problems of obsolescence in the installations, drainage that compromised the good seating of the foundations, abundant constructional damage in the basement and an accumulation and superimposition of apparatus, ducts and installations in roofs and interior courtyards, resulting from the needs of the technological refurbishment of the building. In addition, a spatial and functional redistribution of the old attic floor (now the second floor) and the inclusion of a new Committees Room was necessary.

The action started with the building's roof. The general condition of the existing gypsum under the outer layer of lead covering required its demolition. There was an advanced state of deterioration in the wooden beams and the straps that support the roof trusses due to rotting caused by water filtrations, so that the parts were replaced or repaired using glass fibre and polyester resin prostheses, depending on the extent of the damage. It was also decided to apply a preventive antixillophage treatment to their surfaces. No serious pathologies were found in the steel structure, so that the actions were limited to reinforcements to adapt it to current legislation.

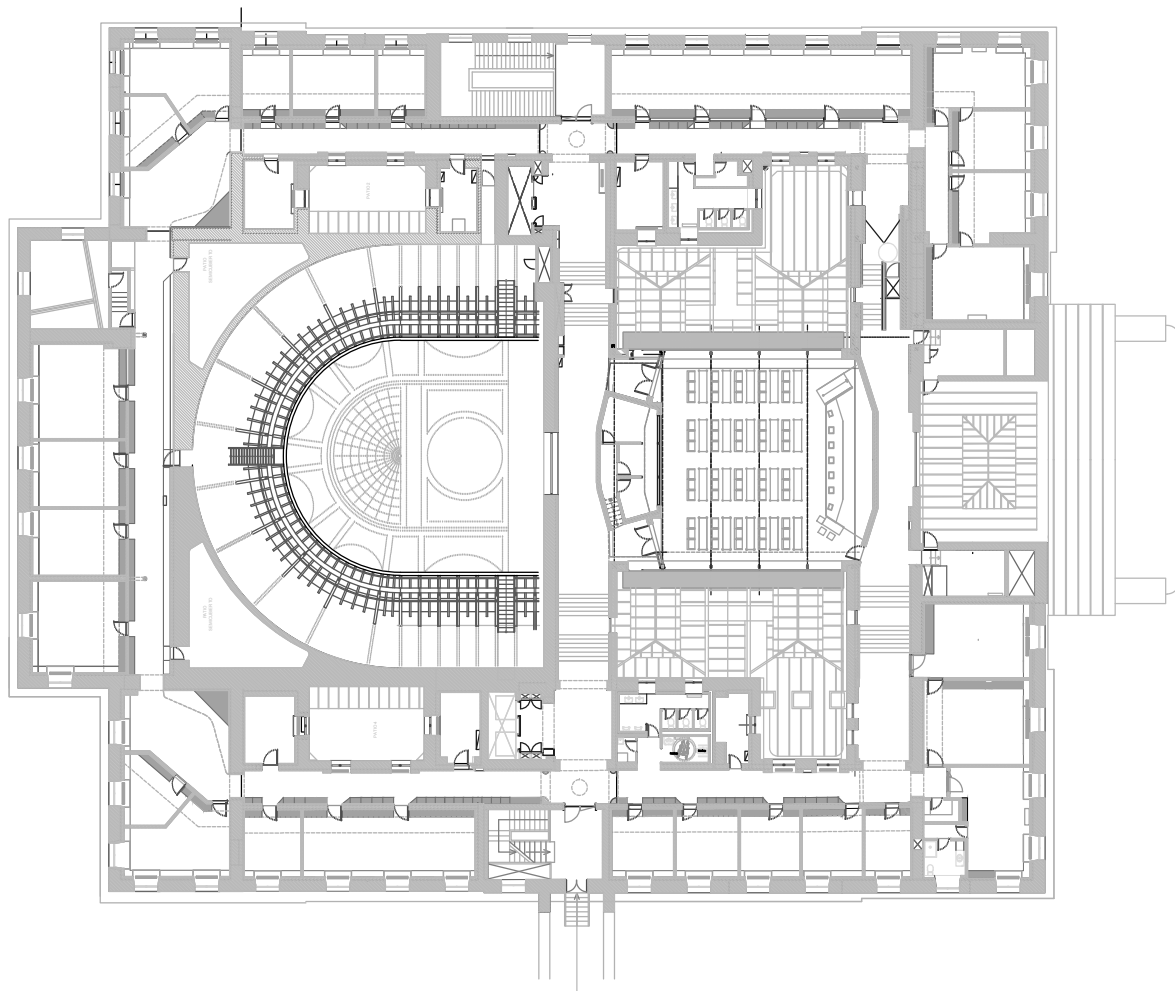
Given the disparity of constructional criteria and materials in the roof, added to the need to resolve the pathologies detected that threatened to ruin the roof definitively, procedure criteria were adopted which also complied with energy-saving requirements.

At the same time, pipes and ducts were laid for the new location of the HVAC machines on roofs and courtyards, as well as the removal of obsolete equipment and installations, providing the new HVAC units in hidden areas of the building and moving the chillers to adjacent buildings. The lift huts were also removed.

Once the interior courtyards had been cleared, their walls and plasters were restored with lime mortars, following the traditional methods, as well as the existing roofs and skylights in them.

The unique space under the dome of the semicircle was refurbished by removing the existing partitions, removing the exposed facilities and treating its wooden structure with water-based varnishes and preventive anti-xylophagous treatments. Once the layers of paint and rust had been removed by blasting with aluminium chips, the metal tie rods in this space received a surface finish treatment with an anti-rust primer. The result was a space suitable for restricted visits.

The HVAC in the semicircle, the Salón de los Pasos Perdidos and the Salas de Escribanías was also completely renovated, with more efficient diffusion systems and also incorporating air conditioning in the public galleries.



Second floor.

Refurbished rooms on the second floor.

Refurbished courtyard.

New Sala Prim.



In addition, the stained glass windows of the skylights of these rooms were restored, as well as that of the so-called Vestíbulo de la Reina, by cleaning and repairing leaded cords, and restoring or replacing damaged glass parts.

Special mention should be made of the treatment of the new Sala Prim. This space, created after a reform in 1966, is located above the Salón de los Pasos Perdidos. The procedure transformed the two rooms, called Calatrava and Olózaga, that existed at the start of the work, into a single Committees Room called the Sala Prim. It was adapted for a capacity of sixty Members with an area for the Press, control and translation room and a podium for the Chair. With the new volume of the Sala Prim, the symmetry of the roof was recovered, improving circulation and arranging the spaces destined for installations. In addition, the entire volume was covered with a mesh to filter sunlight and preserve views from the outside as well as defining everything built as a new element.

The refurbishment was completed with integral repair work on the building's sanitation facilities, repairs and structural reinforcement in the basement with the placement of connectors, new compression layer and underpinning of foundations with micro-piles and, finally, the remodelling of the second floor with the new interior distribution and refurbishment of installations as well as the refurbishment of the footbridge connecting the old and new buildings.



# Bank of Spain headquarters

*Madrid*

## Promoter

Bank of Spain

The Bank of Spain headquarters is one of the most representative buildings of Madrid and of the Spanish architecture of the end of the 19th century and the beginning of the 20th. Its construction dates back to 1883, when the project by the architects Eduardo de Adaro, a connoisseur of large European banking establishments, and Severiano Sainz de la Lastra was approved.

The monumental building was inaugurated in 1891 and since then has been subjected to successive reforms and extensions but always maintaining its use as the headquarters of the Bank of Spain. The building's artistic and historical importance was recognised in 1999 with its declaration as an Asset of Cultural Interest.

## Historical background

The origin of the Bank of Spain dates back to 1782, when King Carlos III created the Banco de San Carlos. Subsequently, in 1847, as the Banco Español de San Fernando, it merged with the Banco de Isabel II, giving rise to a new institution called the Bank of Spain in 1856.

Almost twenty years later, thanks to the then Finance Minister José Echegaray, the Bank of Spain was granted a monopoly on the issue of banknotes. The first new buildings were planned for the provincial branches at the end of the 19th century. Following the guidelines of eclecticism then in vogue, motifs of regional architecture were often introduced in their design.

In the second decade of the 20th century, José Yáñez Larrosa designed numerous branches and introduced concepts that were repeated in all of them and that give them a specific character: classicist façades, open-plan and functional internal spaces, solid vaults and operations courtyards clad in marble and covered with stained-glass windows as was built for the extension of the headquarters in Madrid.

The Bank of Spain headquarters, designed in 1883 and inaugurated in 1891, managed to define a new type of building following a programme of incipient needs. The headquarters was built on sites that included that occupied by the palace of the Duke of Sexto and Marquis de Alcañices, in the Calle de Alcalá backing onto the Paseo del Prado.

Bank of Spain headquarters in the Plaza de Cibeles.



The original wing of the building, which runs parallel to the Paseo del Prado and includes the chamfer at Cibeles, has the monumental staircase of honour by the Bilbao sculptor Adolfo de Aréizaga in Carrara marble in its central axis. This singular space is covered by a stained glass window with allegorical figures by the London branch of the German company Mayer and presided over by the triumph of Fortune.

The first extension began in 1927, extending westward towards the Calle de Alcalá. This growth used the same historicist vocabulary of the original project, inspired by the Venetian renaissance. This action served to define the new façade as an extension of the original one with minimal variations.

Refurbished Llavero spaces.

Refurbished annex spaces.





The extension was carried out by the architect José Yárnoz Larrosa who, while maintaining the external image of the original building, used a language renewed according to the Art Deco fashion of the time inside. He was responsible for the new operations courtyard which became the centre of the new distribution of the building, covered with a geometrically designed and simplified stained-glass window created by the Maumejean company. The second extension, dating from 1969 (1969-1975), extended the building along the Calle de los Madraza and the Calle Marquis de Cubas with a simplified interpretation of the original façade. In 2006 a new enlargement project, in this case by Rafael Moneo, closed the block at the angle of the Calle Alcalá and the Calle Marquis de Cubas with a criterion similar in concept to the one used in the first enlargement, although with a greater schematisation of the ornamental elements.

## **Procedure**

The refurbishment actions carried out in the Bank of Spain headquarters were centred on two spaces in the building - on the one hand, the Correspondence Unit and the Llaverero and its annexes and on the other, three skylights and the library reading room (originally the Patio de Efectivo) and the surrounding spaces.

Regarding the first, the work was carried out on the ground floor in the crossing parallel to the Paseo del Prado to respond to the functional needs of the Bank of Spain departments located there as well as to enhance its architecture, creating a more unitary spatial environment. For this, in addition to the refurbishment of finishes and installations, original spaces and heights that had been lost were recovered. The most notable action was the restoration of the old entrance courtyard and its skylight.

The structural actions involved checks on the condition of the slabs and their supporting elements as well as specific fire protection actions.

New interior woodwork and metalwork were installed in the enclosures with a finish similar to that of the rest of the building and new wood, steel or cast iron exterior windows were installed following the same aesthetics as the existing ones, but improving their insulating capacity.

The refurbishment of the HVAC, plumbing, electricity and LED lighting installations completed the refurbishment together with the implementation of a general fire protection programme.

The area of the second procedure was divided into two - on the one hand, the restoration of three skylights and stained glass windows in the library, in the Echegaray rotunda and in the Staircase of Honour and on the other, the restoration of the library reading room, which was the Bank's first operations courtyard, and its surrounding spaces.



Spaces surrounding the original Patio de Efectivo after refurbishment.



The restoration of the groups of skylights and stained-glass windows began with the dismantling of the latter to allow access to the skylights built using the “eclipse system,” a method widely used at the end of 19th century and the beginning of the 20th, in which the glazing is dismantled in a downward direction, starting with the roof of the lantern. Previously, lead bibs, valleys, gutters and joints had been dismantled to continue with the dismantling of the glazing. The T-shaped profiles were numbered and taken to the workshop together with other metal elements, such as carpentry, handrails and stairs, for restoration.

The entire structure of the skylights and stained glass windows was also revised, repairing, replacing or reinforcing all those elements that were in poor condition and ending with the application of antioxidant paint and enamel on clean surfaces.

The refurbishment of the library reading room involved the refurbishment of its facilities, the replacement of flooring and the treatment of the access lobbies as well as the remodelling of its surrounding spaces on the main floor. The restoration of the lattices and carpentry on the courtyard façades, the mezzanine and main floors, with the dismantling of the glazing, their shot-blasting and stripping and painting before the reinstallation of the glazing, was particularly notable.

The original Patio de Efectivo refurbished as the library reading room.



Detail of the refurbished original carpentry.



New administrative spaces.

Refurbished latticework and carpentry in the library reading room.



The procedure for the reading room incorporated new HVAC, plumbing, fire protection and electrical installations for better protection and the modernisation of a significant part of the historic building.



BANCO DE ESPAÑA

Plaza de San Juan, 1  
28014 Madrid  
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# Bank of Spain branch

## *Pamplona*

### Promoter

Ministry of Finance and  
Public Administration

The old Bank of Spain branch building in Pamplona is located in the Ensanche II in Pamplona on a site previously occupied by the old corn exchange. The classification assigned to the building in the Special Plan for Interior Reform is that of Conservation, catalogued with Grade II protection, according to the General Town Planning Regulations in the Municipal Plan. Thus the procedure for adaptation the building to current needs required the exhaustive study and conservation of its protected elements.

### Historical background

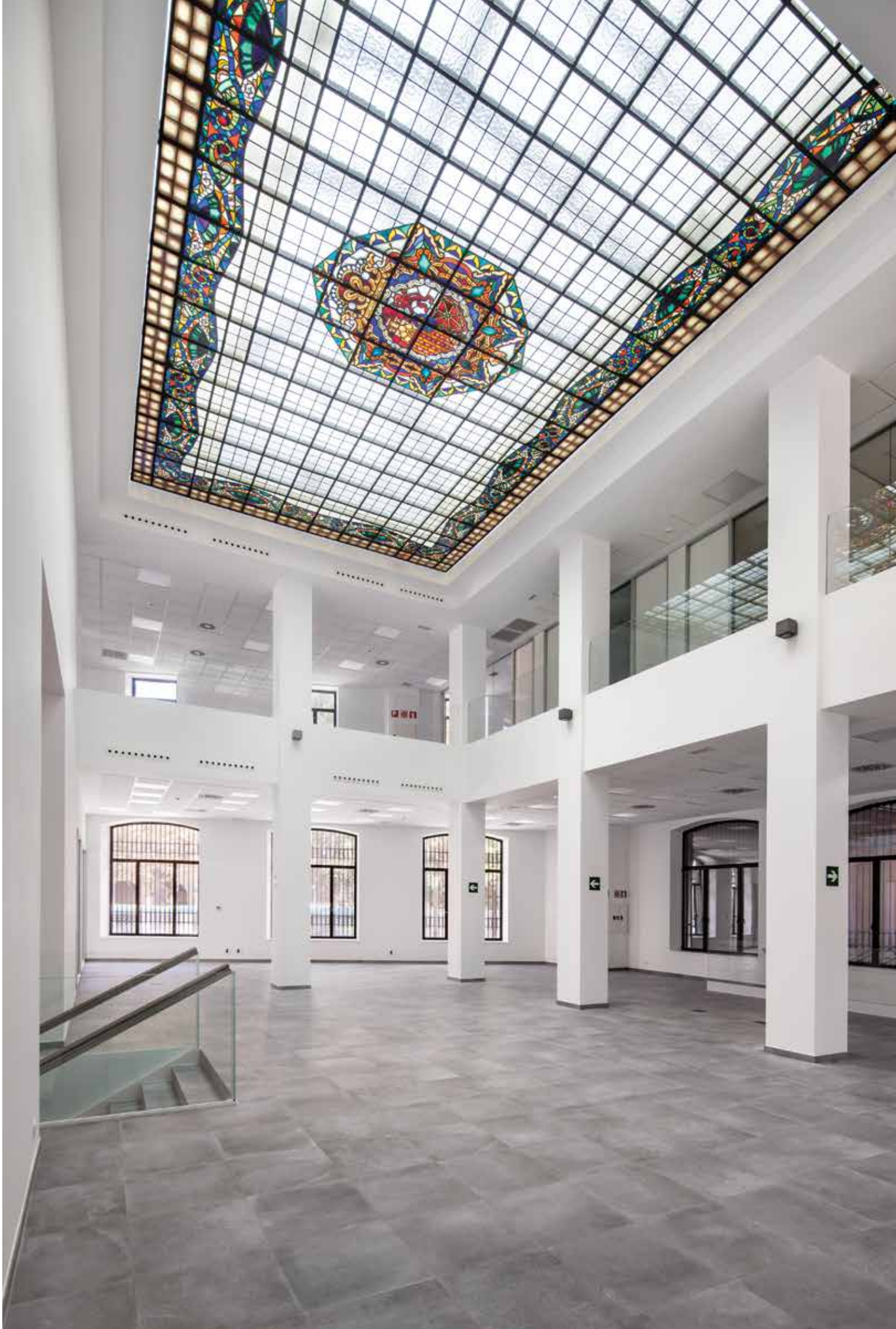
The Bank of Spain branch in Pamplona, designed by architects José Yárnoz Larrosa and Ángel Astiz and built between 1925 and 1927, is located at the junction of the Paseo Sarasate and the Avenida de San Ignacio.

Its façades of stone, of ashlar masonry with thick spaces in the plinth and masonry panels with stone cladding without grouting, include the typical elements of an architecture of classicist style. Its interiors show the principles of solidity, representation and functionality of this type of architecture. Solidity fundamentally in the façade walls and in the base of the building where the vault is located. Representation in the central space of ground and first floors, of double height, with a regular structure of marble pillars topped with classic decoration and lit through a sober stained glass barely decorated with the Spanish coat of arms. And functionality in the structures of regular offices, ground floor for attending to the public and housing apartments in the upper floors.

The building is of markedly classic style but with a mixed and relatively modern constructional system for the time in which it was built: load-bearing walls of sandstone and solid brick founded on solid concrete combined with a structure of pillars and steel beams with block vaults. The building underwent various actions during its use: blocking of openings on the ground floor, creation of security locks, creation of openings in slabs for new staircases and independent accesses and even the re-enclosing of the vault to create a corridor around it

The building, designed and built for the Bank of Spain branch in Pamplona, became obsolete in 2011 when the Central Bank closed its regional branches.

Main façade in the Paseo de Sarasate.





Finish on the refurbished façade.



## Procedure

There were two objectives to the integral refurbishment of the old Bank of Spain branch in Pamplona - on the one hand, the maintenance and consolidation of its original structure and façades and, on the other, the adapting of the interiors to new administrative uses as well as to national, regional and local regulations applicable to a building of non-residential use.

In line with the first objective, the procedure at all times respected the heritage value of the building, valuing the neoclassical composition of its façades with the cleaning and regeneration of its stone panels and the restoration of its deteriorated ornamental elements and metalwork.

On the other hand, the procedure in the interior managed to respond to a non-residential use intended for central government units, adapting the spaces to the relevant usage to adequately house the various administrative services, not only on the ground and first floors but also on the second, third and fourth floors, originally occupied by homes. Thus, the distribution of spaces was guided by a criterion of flexibility, enabling different situations and considering a regular distribution of work posts with offices and open-plan areas on all floors of the building.

The refurbishment work consisted of the cleaning of original façades and stitching elements with mechanical fixings for the loose pieces as well as the incorporation of zinc bibs for gutters and to prevent humidity stains.

The interior façades of the courtyard of the upper floors where the homes were located were replaced with a new ventilated limestone façade with divisions that conceals the differences in height between the three floors. In addition, the openings were enlarged and regularised, guaranteeing greater insulation and a more energy-efficient façade.

Old operations courtyard refurbished.



Interior courtyard with new ventilated façade.

After confirming the poor condition of the original French-type slate and zinc roof, it was replaced by a new steel structure, sandwich panels and zinc finish, preserving its volumetry.

Structurally, to comply with the technical requirements of building regulations, reinforcements of the slabs were introduced, replacing all those of the fourth floor. The original staircase was adapted and adjusted to the regulations, respecting its original layout. New spaces were also provided for the facilities and others were modified to comply with the regulations on use, accessibility and fire with new internal partitions.

The structure of the vault with its automatic opening door was preserved in its entirety as a testimony of the history of the building and what it was originally, as well as the central volume of the operations courtyard and the artistic stained glass window.



Open-plan offices for administrative use.

Access foyer at street level.



To refurbish the old Bank of Spain branch as a public building it was necessary to use criteria that facilitated the non-discriminatory, independent and safe access and use of the building by persons with disabilities, so that everyone could use the building under the same conditions. Thus, in the main entrance foyer, the level of the slab was lowered to street level to make it easier and clearer for the public to access the various services. A lift was also installed to communicate all levels of the building (semi-basement, street level and ground, first, second, third and fourth floors). Thus the main access was left wide with an accessible information point and from which to access is provided all levels thanks to this accessible lift.

All floors include accessible routes, accessible lavatories and safe evacuation routes and shelter areas, ensuring safety for persons with disabilities too.



# Old Customs House

## *Bilbao*

### Promoter

Ministry of Economy and  
Finance

The Old Customs House building in Bilbao summarises and recreates the port character that the Uribitarte area had until the middle of the 20th century. After the abandonment of the port activity that occupied the banks of the estuary, a process of transformation of the area began that continues to this day. The historical, architectural and cultural values of the Old Customs House have validated its cataloguing at the municipal level as a building of Level B Special Protection.

### Historical background

According to the original plans for the project, kept in the archive of the Vizcaya Provincial Council, the project dates from 1890 and was the work of the architect Eladio Iturria, municipal architect of Getxo. Built on a site occupied by former wine warehouses, this is a neoclassical construction, typical of the late 19th century, where pure lines, the proportion of its spaces and horizontality predominate.

Its type is that of a distribution around two large central courtyards where the movements are concentrated, highlighting a large imperial staircase of classical design in the central crossing which communicates the ground floor with the main floor and which is the heart of the building.

The façades repeat the classic pattern of basement, central body and cornice, predominantly horizontal, and using elements such as Corinthian columns, pediments, semi-circular arches and decoration based on grapes, wreaths, floral motifs, coats of arms and trophies. The façades are of red facing brick consisting of a large ashlar plinth on the ground floor with openings with semi-circular arches forming arcades, on the upper floors with windows and balconies highlighted by lintels and stone jambs and crowned by a cornice, also of stone.

The building's two main façades, in the Calle Barroeta Aldamar and the Plaza Pío Baroja, comprise balconies on the upper floors with stone balustrades, the two entrances to the building being highlighted with stone bodies topped by pediments decorated with coats of arms. Particularly noteworthy is the representative section of the façade in the Calle Barroeta Aldamar, the building's main entrance, for its composition using images and ornamental elements taken from classical architecture. The secondary façades, on the two interior streets, comprise balconies on the first floor and windows on the second floor.

Main façade in the Calle Barroeta  
Aldamar.





Old Customs House in the Bilbao estuary.

Main entrance.



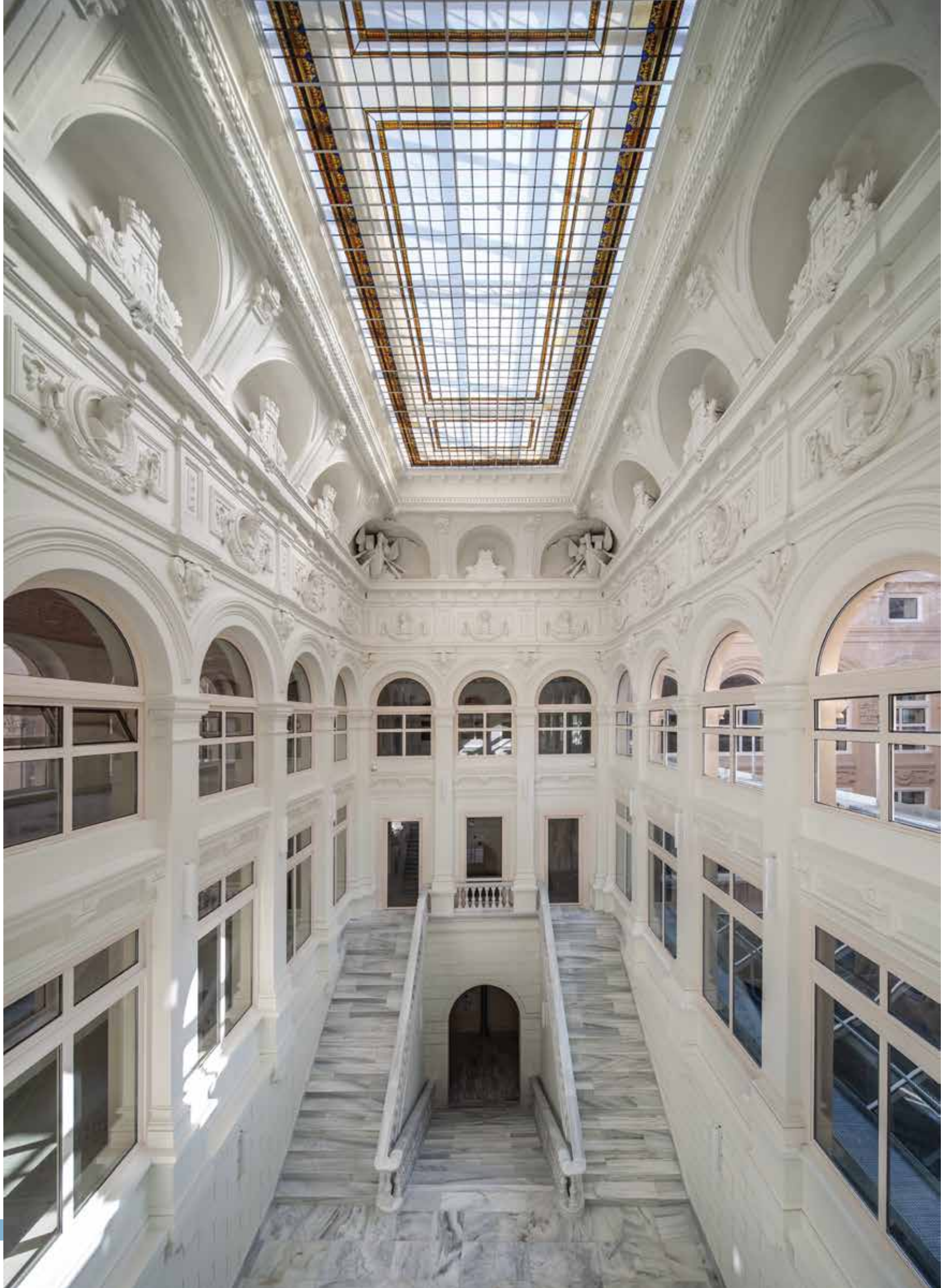
The building's floor plan has a trapezoidal shape and occupies an approximate area of 2,190 m<sup>2</sup> with an adjoining later construction of garages of approximately 423 m<sup>2</sup>. The two courtyards and the void of the imperial staircase pierce the floors of the building.

The building consists of four floors above ground distributed in ground, first and second floors and the floor below the roof. Originally, the Customs offices occupied the ground and first floors, the two upper floors being used as homes for internal staff.

Thus, the ground floor was used for warehouses, the entry of goods and the passage of packages, and therefore has an open morphology with little compartmentalisation and free heights of approximately 7 metres. The first or main floor, where the Customs offices were located, is the most representative of the building with a free height of 4.65 metres. The offices were distributed perimetrally along the façades, with a wide circulation corridor of 4 metres around the courtyard. The second floor, of less importance, with a free height of 3.70 metres, was intended for staff housing. The attic floor was divided into four homes located around the courtyard.

The courtyards of the building are trapezoidal with non-parallel sides, and are roofed at the first floor level by a glass skylight with a lead structure of the time, allowing the lighting of the ground floor. Its façades are profusely decorated with stone mouldings and ornamental elements extracted from classical architecture, with large pilasters and capitals with plant motifs. They also have large rectangular windows with semi-circular arches that illuminate the interior of the building.

Façade in the Plaza Pío Baroja.





Refurbished imperial staircase and skylight.



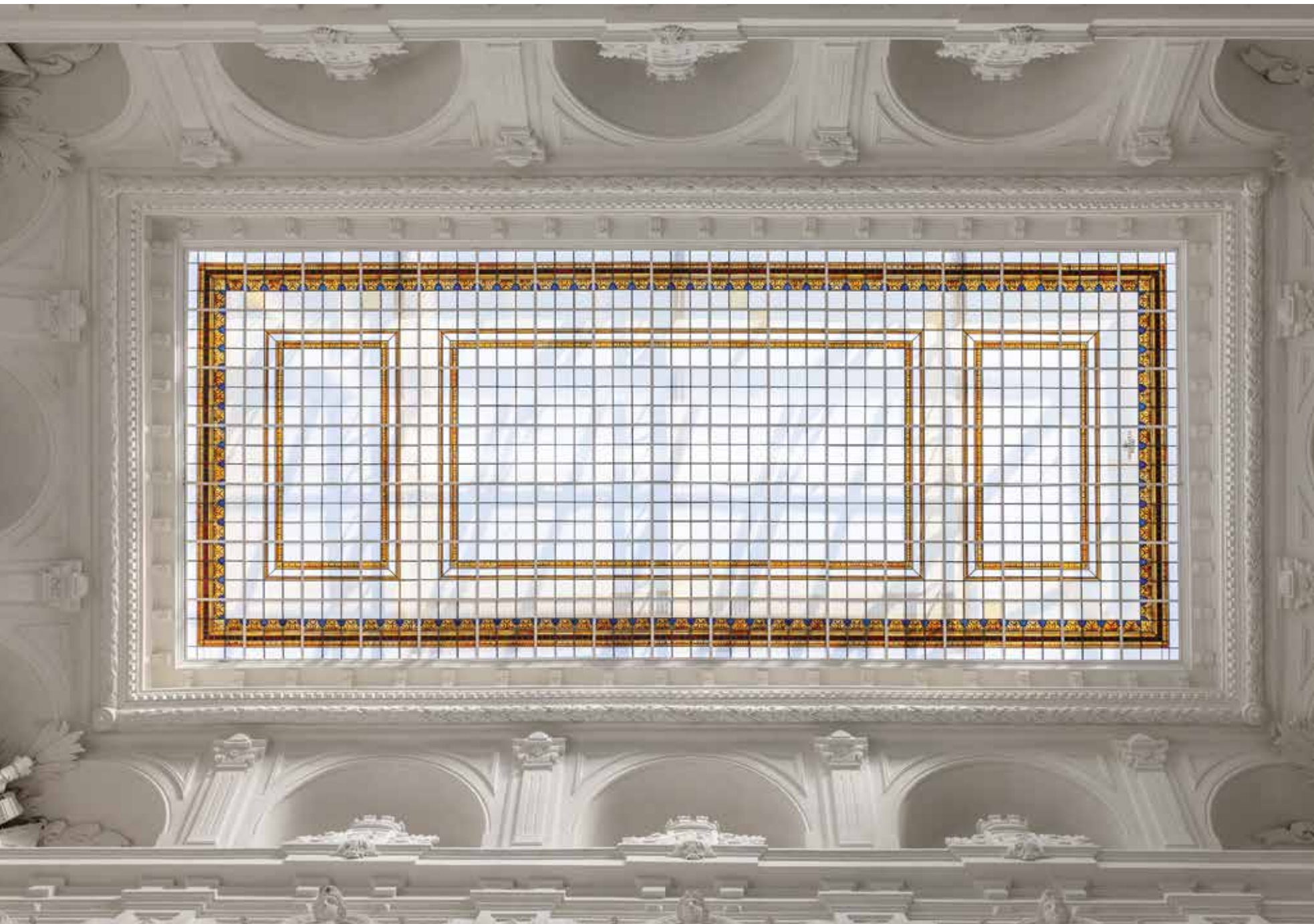
Refurbished interior courtyard.

Refurbished skylight.

The spectacular imperial staircase connects the ground floor with the first and is located in the central crossing of the building, in a large void extending to the full height of the building, with highly decorated walls. This great void is covered by a stained glass window protected by a skylight, which provides natural lighting.

The building's vertical structure consists of load-bearing walls on the exterior façades and courtyards, hollow and very slender cast iron pillars on the ground floor and masonry posts or pillars embedded in walls on the upper floors. Its horizontal structure consists of steel beam slabs with block beams and metal beam porticos between pillars and bracing beams that perpendicularly tie the central crossings with the façade perimeter crossing. Visible trusses on the floor below the roof support a wooden sub-structure consisting of beams and board under a tile roof.





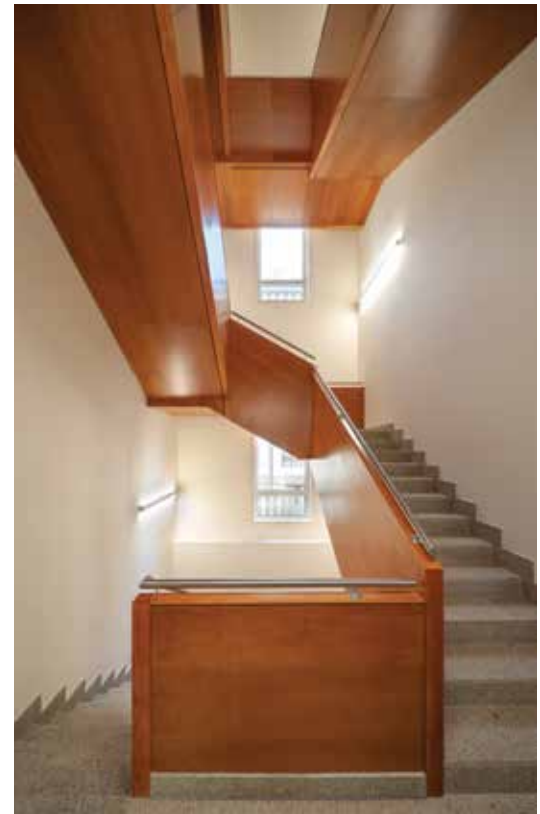
Restored stained glass window on the imperial staircase.

## Procedure

The procedure consisted of the integral refurbishment of the building, maintaining the typological, formal and structural elements that define it, giving it its special relevance within the urban fabric of Bilbao and adapting it for its new use as central government offices.

Access foyer.

New communication core.



Although the façades, the strong elements of the steel slabs and the steel structure supporting the roof were maintained, it was necessary to structurally reinforce the building's entire enclosure, replace nearly 70% of the façade balustrades and consolidate all the exterior stonework as well as the brick or lime mortar walls of the inner courtyards. The steel floors as well as the pillars on the first, second, third and attic floors were also reinforced. Only the cast iron pillars on the ground floor were preserved without the need for reinforcement.

The glass roof of the courtyards was completely replaced due to its poor state of conservation and the impossibility of reinforcing the original steel pieces. On the other hand, a new skylight with a steel structure was installed on the restored stained glass windows of the imperial staircase due to the bad condition of the original one.

To comply with accessibility and evacuation regulations, three new communication cores with staircases and lifts were included, connecting the building's four storeys.

The building's facilities were completely renovated, modernising the systems and reaching high levels of energy efficiency, relocating a new space for the installations on the level below the roof.



# Town Hall in Baeza

*Baeza (Jaén)*

## Promoter

Government of Andalusia

The introduction into Spain of humanist ideas during the 16th century brought about profound changes in the urban centre of the city of Baeza. This important Renaissance urban and architectural legacy led to the historic centre of this city, together with that of Úbeda, being declared a World Heritage site by UNESCO in 2003.

The old Town Hall building, declared an Asset of Cultural Interest, is a good example of this Renaissance architecture and is one of the most remarkable buildings in the city.

## Historical background

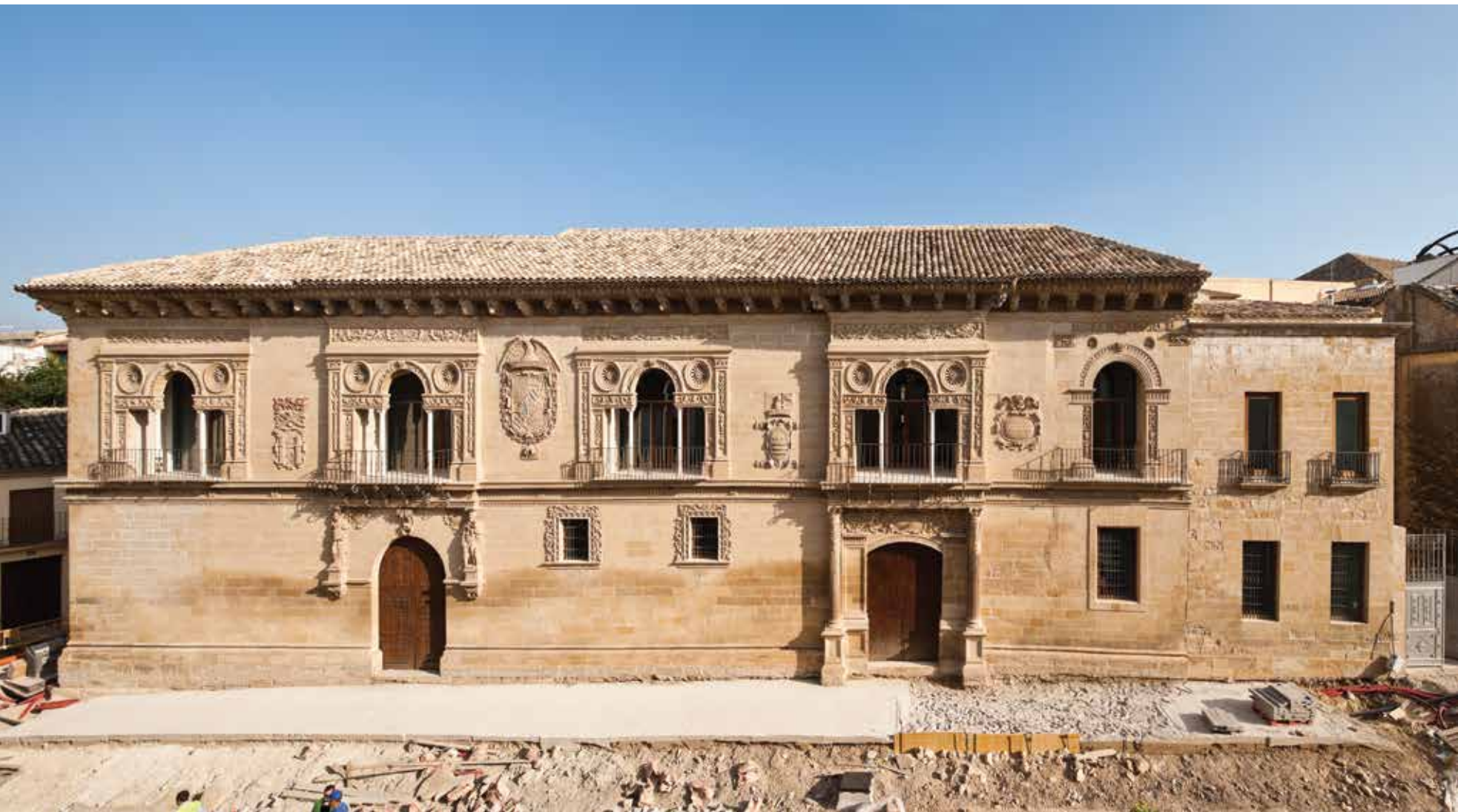
Built in the 16th century, the building has had various uses throughout its long history. It functioned as a prison and courthouse, among others, until 1867 when it was fitted out to house the council offices, and became the city's Town Hall.

Today it is one of the best examples of Plateresque decoration in Baeza. In the upper body of its main façade there are four balconies formed by Serlian spans, defined by a semi-circular arch flanked by two lintels separated by classical columns. These types of decorative and structural elements show the solid classicist training of the architect who undertook the project. There are two doors on the lower floor, formed by a semi-circular arch alternating smooth voussoirs with the decoration of the keystone. Between the two floors, separated by rows of acanthus leaves, there is a heraldic decoration consisting of a monumental shield of Felipe II with the eagle of St John, flanked by the emblems of the Corregidor and the Town of Baeza.

A large cornice crowns the building, with two lateral ovals and a large decorative display based on small figures of children, sphinxes, eagles, acanthus leaves, corbels and scrollwork or festoons, among others. The interior features polychrome coffered ceilings covering the Council Chamber.

The original building, occupying the first crossing, was declared a Historic-Artistic Monument at the beginning of the last century, as was the imperial staircase that was later erected inside to give the building a palatial appearance. Later, the building was progressively enlarged, until it occupied the whole site with minor constructions.

Serlian style opening in Baeza Town Hall.



## Procedure

The objective of the procedure in the Town Hall was, on the one hand, the refurbishment of the 16th century protected building to house the Mayor's office and the Council Chamber, among others, and, on the other, the construction of a new annex for administrative offices, both volumes being communicated by a new walkway crossing a public space.

In the protected Renaissance building, the façade was cleaned, the damp removed and the mouldings recovered, among other work. Inside, the arches of the lobbies, the wooden wainscot of the Council Chamber and the steps, vault and balustrades of the imperial staircase were restored, with spot replacements of very damaged or irrecoverable pieces.



Restored Renaissance façade.

Restored ceramics in the Council Chamber.



In addition, the slab of the first floor was replaced, rebuilding the beams and joists in areas where they still existed, as well as the wooden roof structure, reusing the existing and recovered tiles.

The protected building was consolidated with masonry that enhances the original construction and responds to the needs of the Mayor's office. The openings in the façade were fully respected, incorporating new carpentry inside the building, recesses, and conserving the chiaroscuro of the Serlian windows.







Restored foyer and imperial staircase.

Recovered arches and stained glass.



Courtyard and connection between the Renaissance piece and the new volume.



Courtyard between the two volumes.



The new building housing the administrative offices was fully integrated into the environment thanks to the use of the materials and textures of nearby constructions, such as stone, wood or lime-based stucco. Its structure was built with steel and reticulated slabs and a new basement was built. The volume is protected from the sun by wooden lattices on its south side and open to catch indirect light from the northern side with a curtain wall. The ground floor was opened to the courtyard between the old building and the new one, which functions as a distribution space.

Restored imperial staircase.

Vault on the imperial staircase.



# Tarín House/Palace

## *Zaragoza*

### Promoter

Ministry of Development

The Tarín House/Palace, also known as the Casa del Canal Imperial, is a building of Renaissance origin catalogued as Asset of Cultural Interest. Its refurbishment has enhanced the building and improved its function as the headquarters of the State Roads Department in Aragon, part of the Ministry of Development.

### Historical background

Located in the Plaza de Santa Cruz, originally an area of residential and noble nature where palaces and ancestral homes were the norm, it received its name from the illustrious characters who initially inhabited it, Juan and Esteban Gil Tarín, who came to hold the office of Judges of Aragon.

The Renaissance palace, which gave rise to the current construction erected in the 16th century, was conceived following the traditional structure of the palaces of the time - the entrance gave access to a large hallway that opened onto a central square courtyard, around which the palace rooms were arranged. At its end was a staircase roofed by a dome and lantern that gave access to the upper floors.

Only the eaves, the old stables in the semi-basement and the carpentry and roof of the noble floor remain from the Renaissance period, since the original three-storey building underwent major transformations over the years, especially from the 18th century onwards, to adapt it to new uses. Between 1706 and 1759 became the seat of the Court of the Holy Inquisition, which involved an important compartmenting of its original spaces. These changes were reflected in the façade with the addition of Baroque balconies on the first floor and a second neoclassical door on the façade.

In 1818 it became the headquarters of the Directorate of the Imperial Canal of Aragon, an institution it would house for more than 150 years during which it would undergo new reforms until it became the headquarters of the Aragonese El Cachirulo company. Finally, the State Roads Department occupied the palace until its eviction after the building was declared to be in a ruinous condition in 1998, due to serious structural and roof waterproofing problems.

In 2002 the Government of Aragon declared it an Asset of Cultural Interest and the work of refurbishment began in 2009.

Main façade of the Tarín House/Palace.



Staircase covered with dome and lantern.

Refurbished interior.



## Procedure

At the beginning of the works the building was empty and in a precarious state of conservation. The refurbishment works recovered the most significant spaces of the building, both those of Renaissance origin and the successive historical contributions. Thus, both the inner courtyard and the two-storey porticoed element were preserved, and the original 16th century entrance, the hallway and the courtyard were enhanced, forming a succession of interconnected spaces.

The exterior façade was in a better state of conservation than the interior façades, which were already very deteriorated. On the outside, the original facing brickwork and the viewpoint and the arched openings on the second floor were recovered and the entrance doors and balconies were restored. In the interior façades, the original openings were re-opened, eliminating the added and superimposed elements.

Old stables in the basement.





Refurbished central courtyard.

Rear courtyard.





Renaissance eaves.

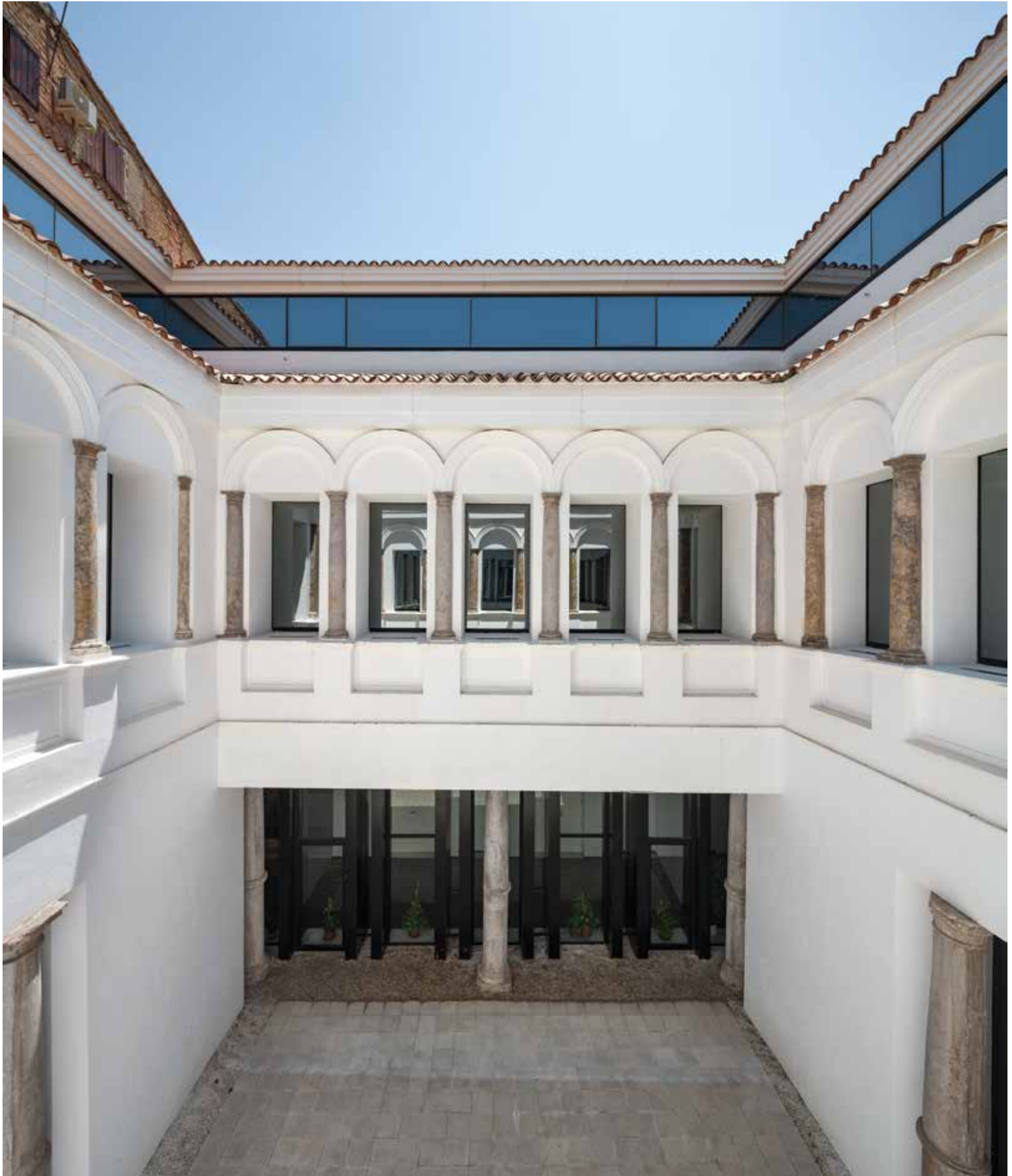


Unlike the load-bearing walls, which were in good condition, the horizontal wooden floor structures had to be replaced entirely due to their poor state of conservation and deteriorated load-bearing capacity. With this refurbishment the two levels were recovered in the façade crossing and in the central courtyard, while in the rest of the building the positions of the slabs were modified by raising their level to obtain two floors. In addition, the entire foundation was reinforced with micro-piles.

On the roof only those pieces of wood that were not recoverable were replaced and the wooden board was replaced in its entirety, incorporating the original tiles.

The main staircase was restored and a lift was installed to give access to the upper floors and ensure their accessibility. Another vertical communication core was located next to the secondary entrance, with a staircase protected for escape in case of fire and giving access to all floors, including the basement.

Finally, the spaces and outbuildings were functionally redistributed and the building was provided with new efficient facilities as per current regulations.



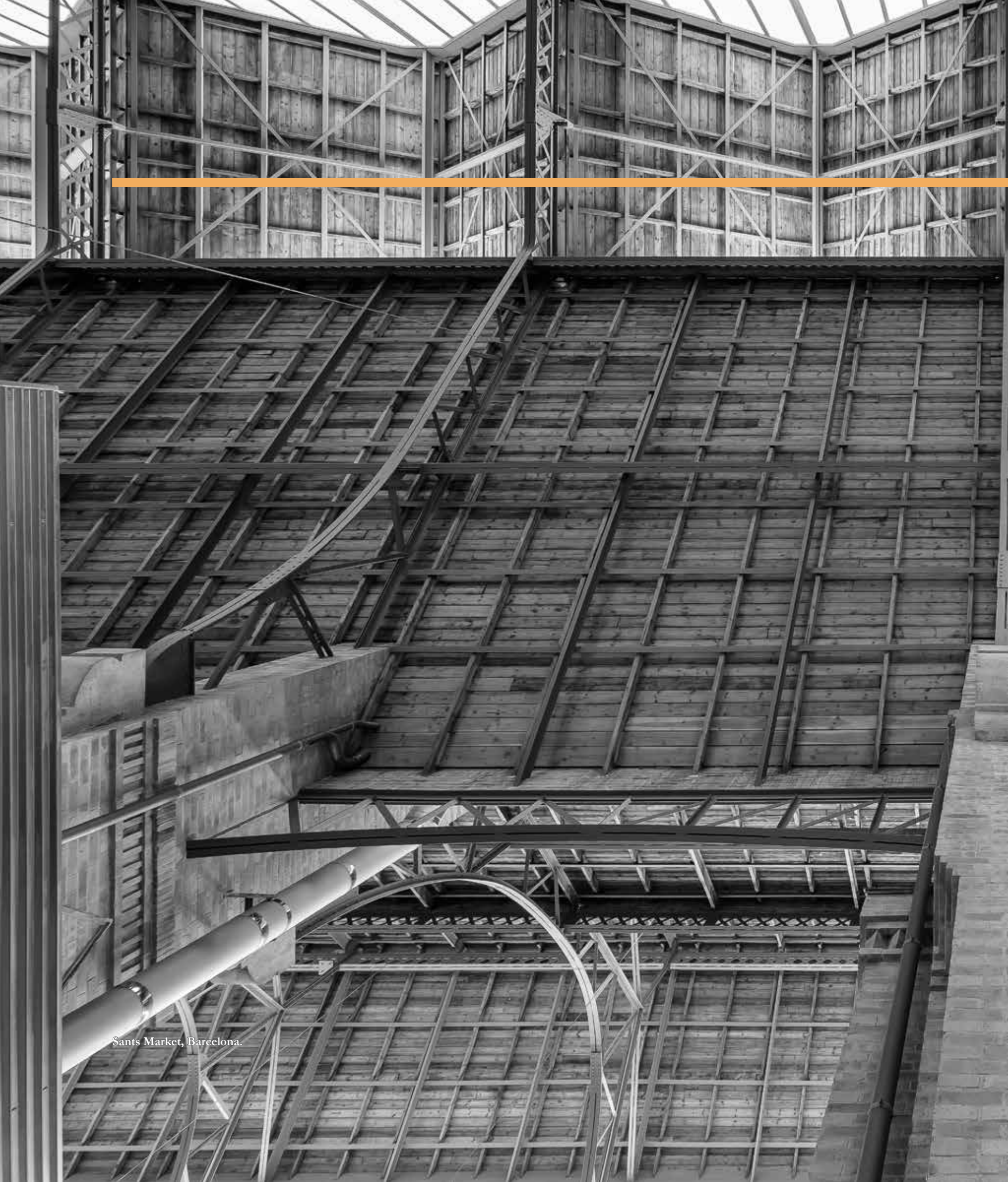


Detail of refurbished elements in the courtyard.



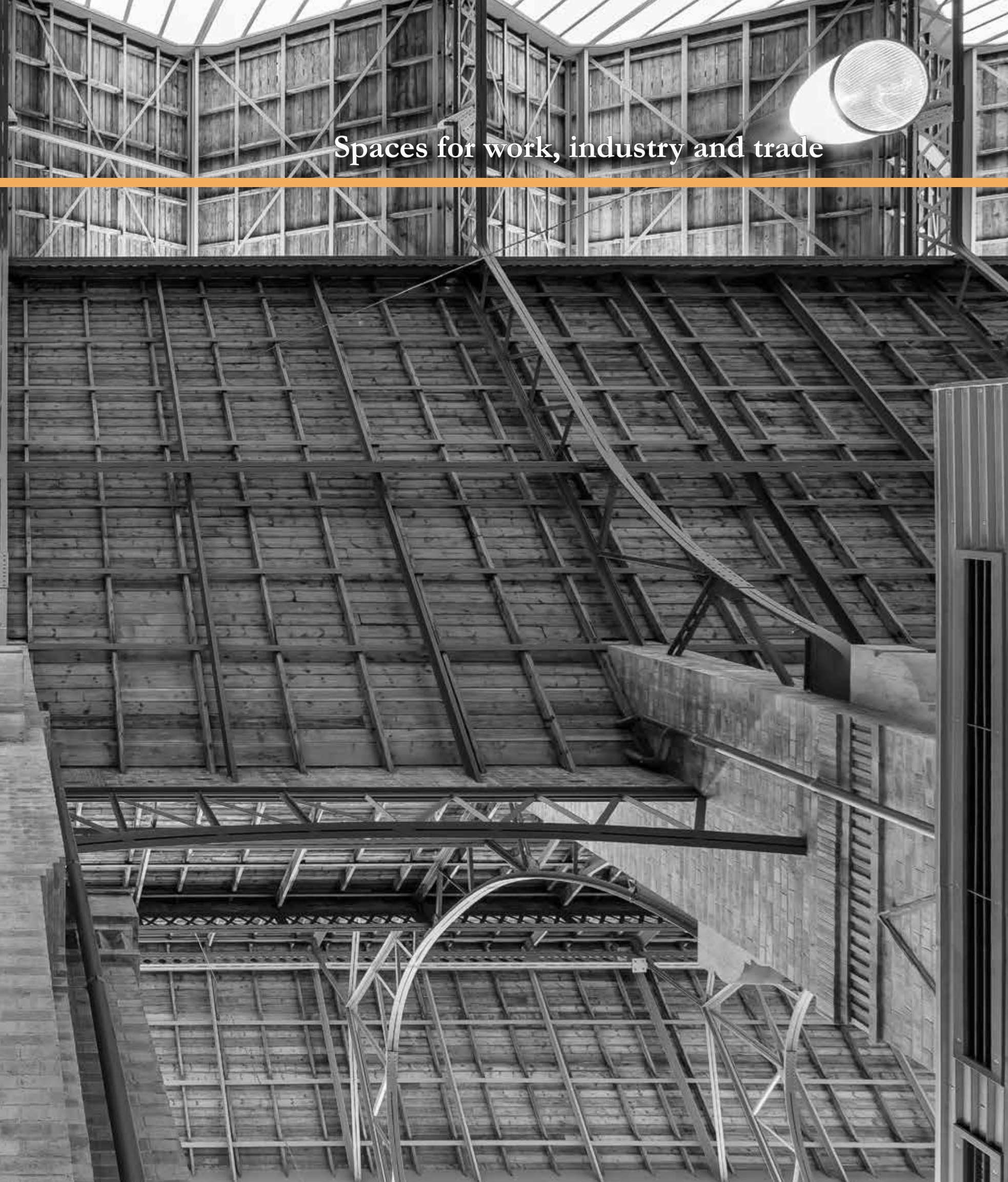
Refurbished roof with recovered tiles.

Courtyard façades after refurbishment.



Sants Market, Barcelona.

Spaces for work, industry and trade





Carne  
DELICIOS 41

Masib

58

Masib

45

et

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NIAR CASOLA

# Sants Market

## *Barcelona*

### Promoter

Barcelona City Council,  
Barcelona Municipal  
Markets Institute

The Sants Market, popularly known as the *mercat nou*, was designed by the municipal architect Pere Falqués i Urpí. Inaugurated in 1913, this new covered market served an increasingly populated Sants district and became the centre of commercial and social life in the area.

The building, of three bodies built of facing brick, is an almost perfect example of the architectural type of municipal markets at the beginning of the century in Barcelona, the reason why it has been included as a Cultural Asset of Local Interest in the Barcelona City Heritage Catalogue.

### Historical background

Although its construction began in the late 19th century, the Sants Market was not inaugurated until 1913. The building was designed to accommodate the temporary stalls which were jumbled without any set order on the old Sant Crist road. For this, three floors were built on which to distribute all the services of this type of public building - a basement floor for warehouses, chambers and warehouses, a ground floor where the market stalls in its central area are distributed radially and symmetrically, surrounded in turn by a line of stalls that face both the interior of the market and the street; and a loft for the administration of the enclosure. All levels communicated with stairs and goods lifts.

In accordance with the trends of the time, a rectangular building with a steel structure was designed, arranged in three parallel naves of similar widths, the central one being notably narrower and higher. Each nave has a pitched roof of parabolic trusses with iron lattices. The interior of the central nave is lit through a longitudinal skylight, while the slightly lower side naves have a line of skylights perpendicular to the nave, forming an external sawtooth profile.

The structure of the roof rests on brick pillars that are higher than the roof itself, thus becoming ornamental pinnacles visible from the outside.

The façade enclosure consists of a Montjuic stone impost on which a facing brick wall rises. The lateral façades are crowned with a steel finish under the eaves of the roof while the façades overlooking the Calle Sant Jordi and Calle Sant Medir combine facing brick with an abundant decoration based on glazed ceramic.



Eastern and northern façades of the market.





Ornamental detail of the headwalls.

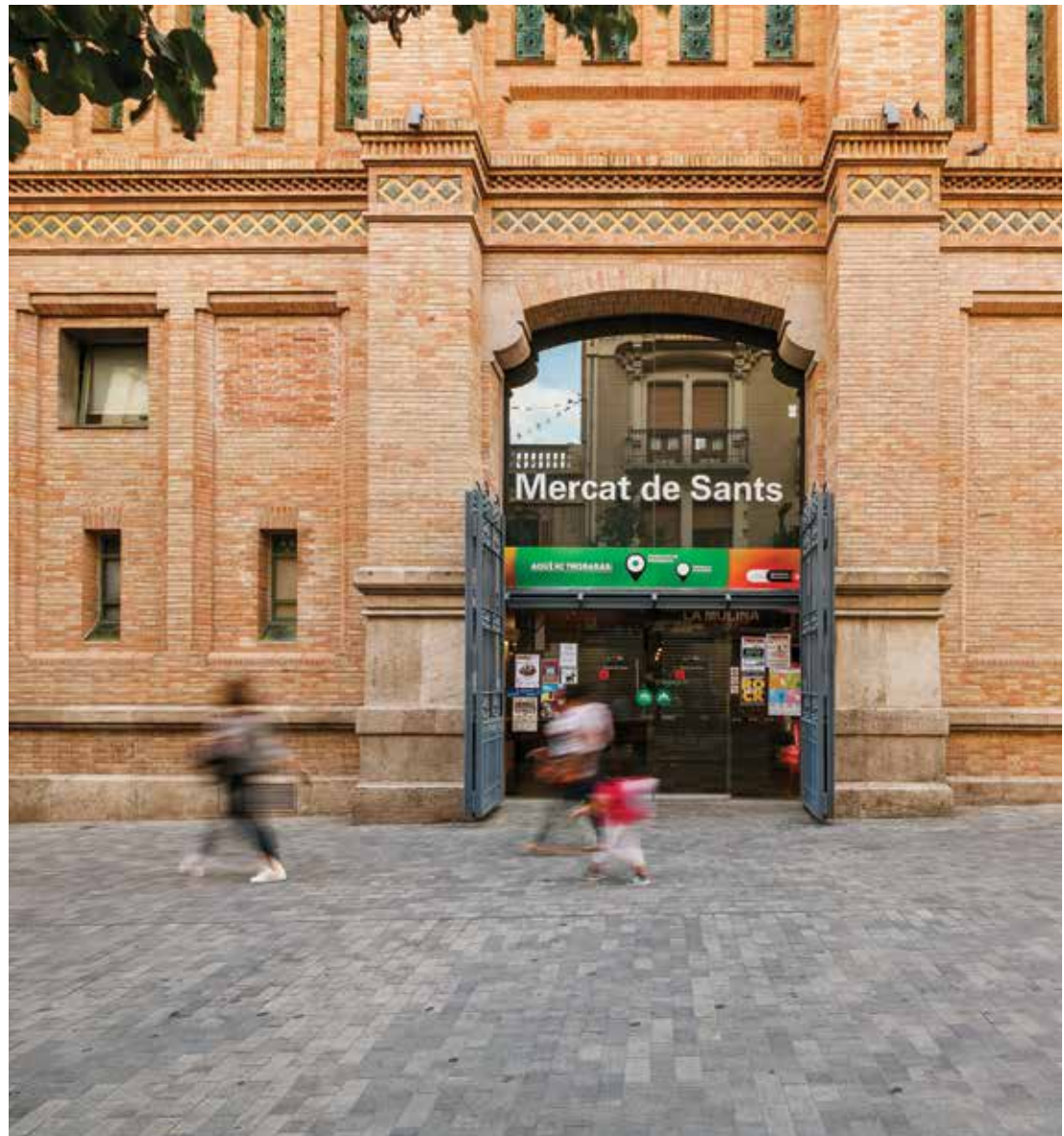
## Procedure

The fundamental objective of the refurbishment of the Sants Market was to adapt the building to the needs of users and sellers, preserving its monumental character as well as its heritage value. The need was also raised to improve the immediate environment so that it would be accessible to all and to incorporate a two-level underground car park that would contribute to decongesting the public space and improve waste management and loading and unloading circuits.



Exterior detail of the northern façade skylights.





Roof structure.

Main entrance.



Underground car park.

The undertaking of all these improvements began with the works below ground. For this, firstly, the ground containment elements for the two levels of underground car park were built and the interior pillars of the building were shored temporarily. Next, the vertical and horizontal structure for the basement floors and the structure of the mezzanines planned on the ground floor was erected. Once all the essential sanitation elements had been installed under the basement floor, this first phase of the work was completed. Later procedure phases completed the refurbishment of the market, making it possible to re-open it to the public in 2014.



# Former Boetticher lift factory

## | La Nave

*Madrid*

### Promoter

Madrid City Council

The current La Nave centre in the Villaverde district of Madrid integrates in the same complex a mid-20th century industrial structure, the old Boetticher lift factory, and a series of new buildings. Its refurbishment has recovered a symbol of the industrial past of southern Madrid, recognised with level 2 protection with structural grade in the Catalogue of Protected Buildings in Madrid, to convert it into an avant-garde facility for the city as a centre of innovation and new technologies.

### Historical background

The district of Villaverde became a powerful industrial nucleus in the middle of 20th century. In it were concentrated factories dedicated to very diverse sectors such as metallurgy, telecommunications, electronics and the automotive industry. Also auxiliary industries, a sector in which the family business founded in 1904 by Gustavo Boetticher and José Luis Gómez Navarro stood out, which had to expand its facilities with the construction of a new building.

The Boetticher building was built between 1942 and 1950 and was initially nicknamed “The Cathedral,” due to its powerful image. It is a large rectangular factory, 138 metres long and more than 40 metres wide. The nave is divided into three bays, in a volume in which the central nave doubles in size to the sides, with a maximum height of more than 21 metres. Its reinforced concrete structure with brick fronts consists of four longitudinal porticos on which the cable-stayed vaults that make up the roof start, with wide skylights that allow the natural illumination of the interior. The large lowered barrel vault is the most notable element of the complex.

Industrial activity was maintained in Villaverde until the 1990s, when successive deindustrialization processes took place. In particular, Boetticher went bankrupt in 1992, which meant that the building was completely abandoned until this refurbishment.

Refurbished vaulted building and new  
façade-latticework.





Work under way in the complex: nave and two new buildings.

Refurbishment of the building's concrete structure.

## Procedure

The central element in the project to create this new infrastructure was the refurbishment of the old Boetticher factory building, the dimensions of which allowed a great versatility in its configuration. The procedure allowed its conservation as part of the industrial architectural heritage and its integration into the rest of the proposal.

To refurbish a structure of these properties it was necessary to carry out an exhaustive investigation to guarantee the safety and durability of the procedure, taking into account the foreseen changes of uses and the adaptation to the current building regulations.

The original materials of the building, typical of the Spanish post-war period, lacked the strengths of today's materials. The analyses carried out revealed that the strength of the building's concrete structure was well below the permitted minimum. The same was true of the reinforcing steel and tie rods, all of which were found to be plain and to have an elastic limit below the required standards. This required reinforcing the most important structural elements, among them the concrete pillars, for which external steel pillars and continuous sheets clamping the concrete pillars were installed. Likewise, to guarantee greater stability, the structure was underpinned with micro-piles.

The concrete vault was repaired and reinforced. First the existing braces were cleaned and those that were broken were replaced and coated with protective paint. Next, a study was made of the vaults in all possible configurations and, with the resulting final loads, the appropriate measures were applied for loads on accessible roofs, concluding with the reinforcement of the side vaults and the installation of an auxiliary structure for the skylights.

Together with the structural reinforcements of the hall, other works were undertaken for the cleaning and embellishment of the structure. These included sandblasting all concrete surfaces to remove the various patinas and layers of paint to achieve a uniform finish and repairing all areas with fissures or detachments of the concrete coating that left the metal reinforcements uncovered, by injecting epoxy mortars. Finally, a coat of anti-carbonating paint was applied to the cleaned surface to prevent future damage and with a view to implementing a preventive conservation programme.

At the same time, certain elements inside the nave that reflected its industrial use were preserved, including one of the original furnaces of the old foundry.

Once refurbished, the old Boetticher building has been integrated into a larger complex which also includes new buildings, notably for its importance the so-called Tower which houses classrooms and offices, and the single-storey Banda, located along the east side of the building, which includes a large auditorium, among other spaces.

Refurbished building.





New high volume: the Tower.

The Banda, on the side of the building.



To give unity to the complex, a new façade in the form of vertical lattice around the three volumes was installed, consisting of rectangular tubular profiles spaced apart and with different heights. The colours of the façade are related to the colours of the optical fibre, thus reinforcing the symbolic link of the building with new technologies.

Vertical latticework running around the entire perimeter of the complex.



Tapestries and Textiles Museum, Toledo.

Spaces for culture,  
leisure and social services





# Tórtoles Mosque

*Tarazona (Zaragoza)*

## Promoter

Zaragoza Provincial  
Council and Tarazona  
Town Council

Declared a Catalogued Aragonese Cultural Heritage Asset in 2002, the 15th century Tórtoles Mosque is one of the latest works of Islamic culture in the Iberian Peninsula. At the time of its construction, the town of Tórtoles, today a district of Tarazona, was inhabited exclusively by Muslims in a context of Christian political dominance.

## Historical background

The Tórtoles district has its origin in the military camp set up by Alfonso I el Batallador in 1119 to reconquer Tarazona. Under Christian rule, the settlement became a destination for the Muslim population that had been forced to leave the city of Tarazona. The Tórtoles Mosque was built between 1447 and 1455, according to the foundational inscription by the *alarife* Mahora Almorabid. It is therefore one of the few preserved examples of Muslim mosques built in the Christian era.

It was a modest mosque, as befitted a rural population, but it had all the typical elements of Islamic aesthetics, in which the constructional austerity of the exterior contrasted with the decorative richness of the interior.

The mosque was built under the protection of the walls of a defensive tower. Originally it was a building with an irregular trapezoidal floor plan and a single nave divided into three parts differentiated by two arches, one semi-circular and the other pointed. Both were built in brick, although the semi-circular one seems to have been built with corbel vaults, the second does not have this feature.

Inside, all the elements that define a mosque could be seen - the *haram* or main prayer room, the wall of the *qibla* towards which the prayer was directed, the *mihrab* from which the imam directs the prayer and the opening for the *mimbar* from which he gives his sermons. However, there are no traces to confirm the ancient existence of other elements such as the minaret from which to call to prayer, the *sahn* or outer courtyard and its fountain for ablutions or the inner space reserved for women.

Interior of the old mosque in the  
Tórtoles district.



Brickwork exterior façade.



Particularly noteworthy is the decoration preserved on the building's ceiling, one of the most exceptional and interesting Mudejar iconographic and epigraphic conjunctions in Aragon. Another special feature preserved inside is the set of cushioned ashlar found in the *qibla* wall, next to the *mibrab*, remains of the defensive tower to which the mosque was attached in the middle of the 15th century.

In 1526, after the forced conversion of all Muslims, the mosque was transformed into the church of the Anunciación de la Virgen. In the early years of 17th century, the lack of space to accommodate all the faithful of Tórtoles forced the construction of a new church in another location. From then on, the multiple changes in the use of the mosque, as well as the modifications to the building's internal structure, damaged the interior decoration.

In 1980, the Turiasonian Studies Centre made the monument known after finding several painted pieces of wood and the remains of what appeared to be a *mibrab*. From then on, and due to the historical importance of the discovery, an attempt was made to recover the mosque, something that was finally achieved in 2016, thanks to the efforts of various institutions.

Interior with *mibrab* and the opening for the *mimbar* recovered and the new exhibition showcase.







Wooden ceiling from the Islamic period.

## Procedure

The refurbishment works were started with the aim of guaranteeing the correct conservation of the building's elements of heritage value, among them the pictorial mural altarpiece, the *mibrab*, the opening for the *mimbar* and the beams and remains of the original roof, for its opening to the public.

Externally, a new roof was configured on top of the existing structure and the façades brickwork was cleaned. Advantage was taken to define the main door, close the openings with alabaster and adapt both the access stairs and the pavement.

Inside, the existing gypsum was restored, the masonry was stitched and the original moulding was consolidated. The walls were rendered with lime mortar and electricity, lighting and fire protection were installed. An exhibition showcase was installed for museum purposes.

The restoration of the altarpiece mural began with a surface cleaning and the consolidation of the existing remains, including the pictorial film. The surface was filled and levelled where there were gaps and then a chromatic reintegration was carried out, finishing by applying a final protective layer to the entire surface.

The polychrome ceiling was also carefully restored before assembly in its original location. For this, the pictorial layer was cleaned, the wood was consolidated by filling in cracks and the faults were reintegrated where necessary.

Finally, the *mibrab* and the space for the *mimbar* were restored. In the former, the vault was raised and the horseshoe arch was rebuilt. In the latter, the access span was consolidated and the relevant archaeological excavations were carried out before the consolidation of the original floor.

Detail of the restored mural.

Detail of restored polychrome.



# Old Teniente Ruiz Barracks

## | University Campus

*Ceuta*

### Promoter

Autonomous City of Ceuta

The old Teniente Ruiz Barracks, designed in the 18th century as a model for a new type of military architecture, has been an urban landmark in the city of Ceuta since its construction. Its enormous proportions constitute a singular example of Spanish military architecture. After it was abandoned at the end of 20th century the building was refurbished to house the city's University Campus.

### Historical background

This building, first designed by the military engineer Juan Bautista Jáuregui in 1793, formed part of a series of military constructions that began a new architectural type during the 18th century - the military barracks. This type arose from the need to provide stable accommodation for soldiers who were part of a garrison, which relieved the neighbourhood of the duty to provide lodging, as was previously the case.

The building has a rectangular floor plan, with a central courtyard under which there is a large cistern, and a small secondary courtyard at the back. It has three floors, originally the ground floor barracks offices and the upper two dormitories. Of classicist composition and sober finish, its main façade has a simple access surrounded by attached Tuscan pilasters and a small top finish with a curved pediment. Inside it has a low body with semi-circular arches and running galleries on the first and second floors with cast iron columns.

Although the construction of the barracks was to be started during the year of the design, it was stopped in 1806 and not resumed until the middle of the 19th century within the policy of constructing of public buildings that was typical that time. In 1852 the military engineers Andrés Brull and Antonio Rojí took charge of the project, making changes in the organisation and distribution of interior spaces. They assigned new functions, with rooms for an infirmary and literacy, among others. They also introduced hygienic measures to avoid overcrowding the troops and thus complying with the 1847 mandate that set a maximum of fifty beds per room, limiting the number of military personnel housed to a thousand. These measures were also incorporated in the finishes through the use of materials defined in the military building regulations and treaties of the time.

With its construction in finished 1871, it was inaugurated and occupied by the Fixed Regiment of Ceuta, and soon became a motive of pride for the city, being, for example, one of the first



Façade of classicist composition.

buildings with an electrical installation. The disappearance of the Ravelin Barracks, also in Ceuta, made it the last large barracks in this military square.

Reforms and improvements were undertaken in the first quarter of 20th century and the building became popular through the dissemination of its image in the Press of the time as a prototype of modern barracks, so much so that collections of postcards were published with views of its exterior and its internal rooms, which were distributed to the troops when they undertook their military service.

After the dissolution of the Fixed Regiment of Ceuta the building was occupied by the 54th Regiment of Regulars of Ceuta, from which it took the name of the 54th Headquarters, and later by the 7th Engineers Regiment, until its final abandonment in 1998 under the new defence structuring policies. It was ceded to the city in 2004, which assigned it to University Campus, thus ending the process of deterioration that followed its abandonment.

## **Procedure**

The main condition for the process of adapting the old barracks for use as a University Campus was the need to locate the teaching spaces and classrooms inside it, as well as the library, the secretary's office, the department offices, an exhibition hall and a students' residence, all accompanied by efficient vertical communication.

Refurbished galleries that preserve the cast iron columns.



The other planned uses, amphitheatre, study rooms, seminars and car park, were located in a new annex building, which used the same materials and colours as in the finishes used in the refurbishment of the old barracks, although the openings in the façade of the new volume were closed with lattices to give this building a different personality.

The new campus conserved the original load-bearing wall structure, with the slabs being replaced by new reinforced ones and the interior partitions being removed to facilitate their adaptation to the new uses. The original cast columns of the galleries leading to the old parade ground were preserved, now reinforced with a new steel structure.

The roof, whose original covering had been replaced by corrugated sheets on an obsolete wooden structure, was rebuilt with a steel structure and a dark grey covering of titanium zinc plates, the same solution as used in the new building.

The façades were finished with a lime-based cladding to avoid problems of incompatibility with the lime mortar masonry of the old building. In the large central courtyard, the old parade ground, the original paving was cleaned and restored, and a fragment of the original wooden roof, the kingpost in one of the corners, was installed there.

Finally, the refurbishment of the building was accompanied by the complete landscaping of the exterior space, including roads and fencing.



# Terrassa Main Theatre

*Terrassa (Barcelona)*

## Promoter

Terrassa City Council

This powerful building, with its Modernist decoration and monumental and eclectic character, bears witness to the social importance acquired by a thriving local bourgeoisie, in constant growth since the middle of 19th century thanks to the city's industrialisation.

In 1981 the Main Theatre was added to the catalogue of buildings of historical-artistic interest in Terrassa and, after its acquisition by the Council, was refurbished and recovered as a space for the performing arts.

## Historical background

The first theatre in the city, on a site close to the present one, disappeared in 1847, destroyed by a fire. Ten years later, in 1857, the new Main Theatre, with its classical composition and horseshoe amphitheatre, was inaugurated in the new Plaza Maragall. The theatre remained in use until a profound remodelling was undertaken in 1911 with which the building acquired its current image, altered by a subsequent restoration in 1916 that eliminated a large part of the original Modernist decoration.

The Main Theatre maintained its activity until the end of the 1960s when it was converted into a cinema, a use that would remain until the beginning of 21st century when it was forced to close, like most traditional cinemas. In 2005 it was acquired by the Council, which expressed its intention to keep the building in use.

Its façade has the shape of a great triumphal arch, horizontally divided at the height of the arch's impost by a large beam supported by four Corinthian columns, interpreted in the nouveau way and with roses on the capital. Thus the upper part of the arch forms a semi-circular window with four pilasters inside, which frames an allegorical scene representing tragedy and comedy supporting the city's coat of arms.

The triumphal arch rests on a base formed by a central carpanel arch flanked by semi-circular arches on each side, supported by picturesque flattened columns of medievalist fantasy. On the entablature of the mullion dividing the arch, "Teatro Principal" can be read in a typically Modernist calligraphy.

Main façade in the Plaza Maragall.



Refurbished foyer.



Refurbished vestibule.



Stained glass in the façade.

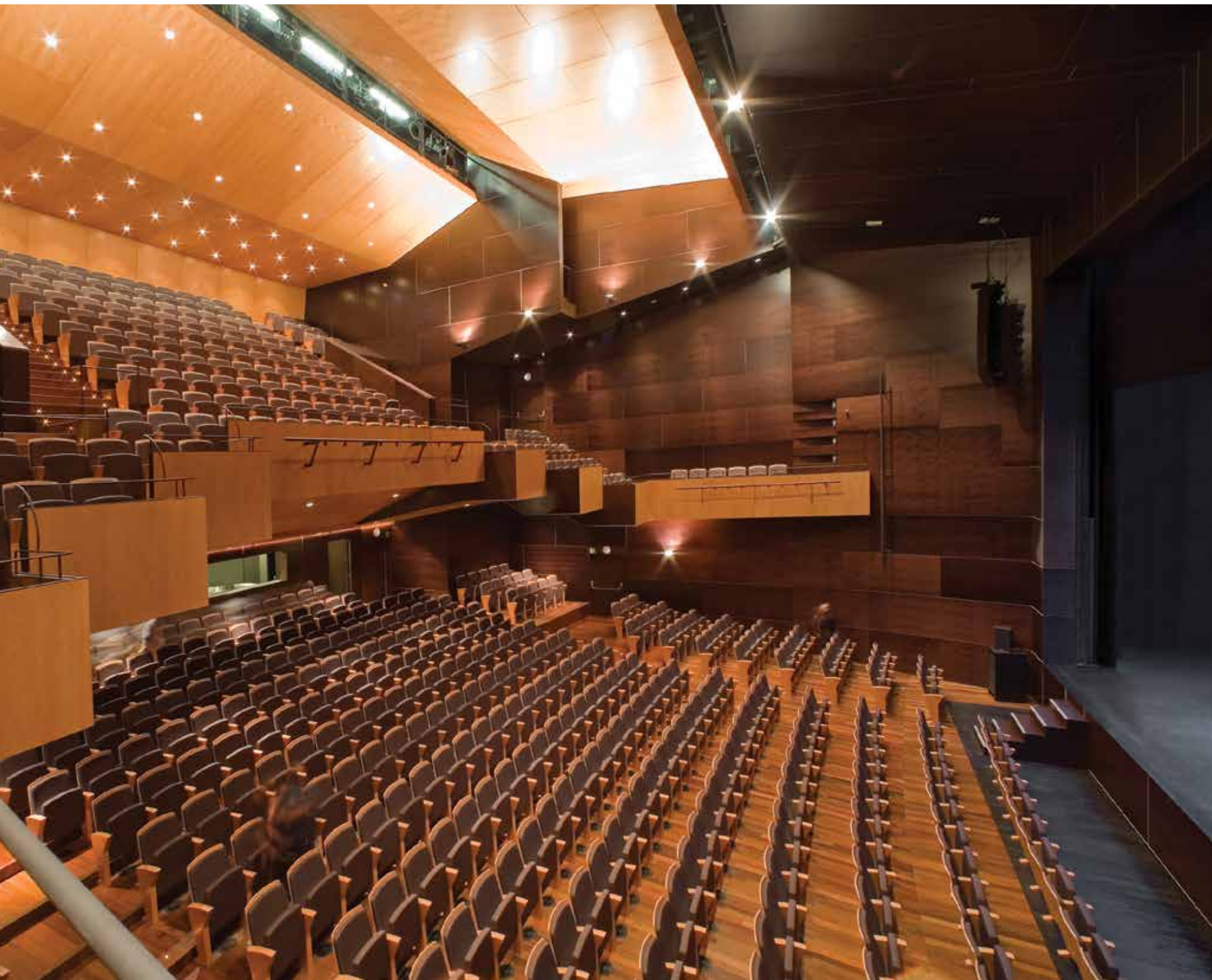


## Procedure

With its acquisition, the City Council proposed to restore the theatrical function that had characterised the building since its origins. The recovery of this function meant providing the building with a new open-plan, rational and welcoming room in front of a new and efficient stage, both linked through a fourteen-metre-wide opening. The limited depth of the room and the generous width of the proscenium gave a strong sense of closeness between actors and audience, creating an atmosphere suitable for the theatrical experience.

Likewise, the refurbishment of the theatre proposed to recover the original spaces that had survived the successive reforms of the 1911 building. The façade, the dome and the noble spaces of the first crossing were recovered, where, thanks to the procedure, the constructional systems and materials of the time were revealed.

In the rest of the building, as the layers superimposed at different times in history were removed, elements appeared that had been walled up and closed over the years, especially stuccos and mosaics. These were especially visible in the vestibule and foyer, spaces of access and relationship, connected with a staircase in three sections.



Auditorium and stage.

Restored original flooring.



The main auditorium comprises stalls and amphitheatre, according to the levels of the spaces that were recovered. Its dimensions, and therefore its capacity, arise from the compromise between the respective auditorium and stage sizes and from the search for a balance when reasonably distributing the free area of the theatre site, which lies between the first historical crossing and the back of the site.

The so-called dome room, a space illuminated by the large semi-circular window, was refurbished as a second room for freely configurable events, with a capacity of up to one hundred spectators. The use of this space is completely separate to that of the main auditorium thanks to its direct connection with the foyer and its proximity to the group of dressing rooms.

Together with the façade, the dome forms the public image of the institution. It is an element that originally appeared to be made entirely of stone but that in the refurbishment was covered with *trencadís* to improve its conservation. The composition of the façade and its slight curvature, reinforced by the four columns on which it rests, gives the theatre the leading role in the Plaza Maragall.



TEATRO MUNICIPAL

TEATRO MUNICIPAL

TEATRE MUNICIPAL  
DANS MUSIC ARTS  
TEATRE MUNICIPAL  
DANS MUSIC ARTS  
TEATRE MUNICIPAL  
DANS MUSIC ARTS  
teatre municipal

TEATRO MUNICIPAL

# Gerona Municipal Theatre

*Gerona*

## Promoter

Ministry of Development

Built in the mid-19th century, the Gerona Municipal Theatre was erected in the same place in which the city's theatrical activity had traditionally been performed. The building forms part of the historic complex of the old centre of Gerona, declared an Asset of Cultural Interest, and its importance has been recognised with its inclusion in the Inventory of Architectural Heritage in Catalonia (IPAC).

## Historical background

The Gerona Municipal Theatre was built in 1860 on the same site previously occupied by the *Teatre de Comedies*, which in turn in 1769 had replaced an old theatrical establishment that had occupied the old medieval corn exchange since the 16th century. The current building was built from the project drawn up by the then municipal architect Martí Sureda i Deulovol between 1857 and 1860, following the patterns of the Elizabethan period, with horseshoe-shaped plan accompanied by a large stage.

The theatre building occupies an irregular plot of land in the historic centre of the city, limited by a medieval urban fabric that is almost intact and contiguous to the Town Hall. Its location explains the twist in plan between the auditorium and the access axis.

The façade, of Renaissance inspiration, is structured around a low body of ashlar, in which there are semi-circular openings, on which the noble floor is arranged, consisting of balconies with recessed openings and balustrade and an attic topped by a simple triangular pediment.

The theatre comprises three main bodies. The first is the access, with the portico and the staircase, and, above them, the foyer, a singular piece square in plan and decorated in the Neo-Rococo style. The second section includes the stalls with a horseshoe floor plan, boxes up to the second floor and a grandstand in "the gods." The boxes, the curtain and the ceiling have motifs of Renaissance inspiration, among which the allegorical representation of the Muses around the figure of the god Apollo in the ceiling, stands out. The third and last body is the stage twenty-three metres deep.

The complex is built of masonry and the main elements such as the façade and the staircase are of local stone.

Entrance and main façade.







Previous page: main auditorium.

Auditorium ceiling.







Refurbished boxes.

Stalls.



Main staircase.

## Procedure

The refurbishment was structured around four actions of different natures: the restoration of the heritage elements, the reforming and refurbishing of the existing spaces, the new extension work and the landscaping of the surroundings.

The restoration work focused on the main auditorium, the foyer and the main façade, while the reforming and refurbishing work concentrated on the stage, the roofs and the backstage, where the stores and dressing rooms are located. The new work enlarged the theatre with the construction of the general foyer, the services body, the emergency stairs and the volume added to the stage. The creation of these new volumes served to improve the fluidity of the movement and distribution of the public.

The restoration of the main façade consisted of cleaning all its elements, repairing cracks and consolidating their colour with the application of pigmented solutions as well as the recovery of the sgraffito walls.

As for the restoration of the interior spaces, the transformation of the foyer into a room for presentations and conferences was accompanied by the restoration of the paintings on the ceiling of the main auditorium. The balcony railings in the stalls were also reinforced and restored.



Rear façade of the theatre and new courtyard.



Exit to the courtyard.



In all these spaces, the works of structural consolidation, replacement and modernising of facilities were adapted to the pre-existing elements. The access rooms in the main entrance were renovated. On the stage, the interior volumes were emptied, the pit was built and a floor was installed that could be removed from the stage. In the stage roof, the height of the block was increased to install an intermediate steel structure for the new stage structure.

On the auditorium roof, the main wooden structure, the beams and the floor were maintained, the defective tiles and channels were replaced and the Arabic tile was relocated. At the same time, the thermal and acoustic insulation was improved, an efficient HVAC system was installed and the auditorium lighting was modernised.

The new part of the work included the lateral spaces of accesses, circulation, rest and services, as well as the enlargement of the right side of the stage and its technical spaces. The auditorium maintained its seating capacity but with improved visibility. The public area now consists of stalls and four floors of boxes for 850 seats.

A new rear façade was also included, with an exit to the Calle Nueva from the theatre, a loading and unloading bay and direct access to the building's bar. In this rear part, the landscaping works created a square and a semi-open courtyard, thus recovering a space for the city that is linked to a theatrical activity of a historical nature.

Detail of the new stair.

New spaces for movement.

New proscenium curtain.





TEATRE PRINCIPAL

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# Palma Main Theatre

## *Palma de Mallorca*

### Promoter

Fundación Teatro Principal  
de Palma

The Palma Main Theatre, previously the Teatro de la Princesa in honour of Isabel II, was built in 1854 on the same site previously occupied by the Casa de las Comedias, the city's first stable theatre, built in 1667. Destroyed by a fire, it reopened its doors in 1860 and since then it has undergone various extensions in height and capacity until its last refurbishment to be able to receive large international companies.

### Historical background

The current building was built according to the plans and supervision of the Mallorcan architect Antonio Sureda y Villalonga. The French artist Félix Cagé, also author of the paintings of the Gran Teatre del Liceu in Barcelona, was in charge of the decorative part. It was inaugurated in the presence of Queen Isabel II in 1857 with the name of Teatro de la Princesa.

The project is of the theatrical type developed at that time in Spain, with a semi-circular horseshoe-shaped plan and two floors. The façade, on the other hand, was articulated in three bodies and, according to the prevailing academic classicism of the time, was finished off with a triangular pediment with mythological motifs by Ricard Anckermann. This façade has semi-circular arches on the ground floor, Ionic columns on the first floor and Corinthian columns on the second floor.

Inside, the design of the main auditorium included the necessary details for correct visibility and acoustics. The pictorial decoration of the ceiling, in which Felix Cagé represented the god Helios on a chariot drawn by four white horses, surrounded by allegorical representations of theatre, music and dance, is notable.

Fire completely destroyed the theatre a year after its inauguration, leaving only the façade standing; its reconstruction started immediately following the same design. It was then reopened to the public with the name of Teatro del Príncipe de Asturias on the occasion of the visit of Isabel II to the island in 1860. This is the building that has survived to the present day after undergoing various modifications to increase its capacity.

Main façade and exterior volume of the  
new stage.



Original façade and new volume.

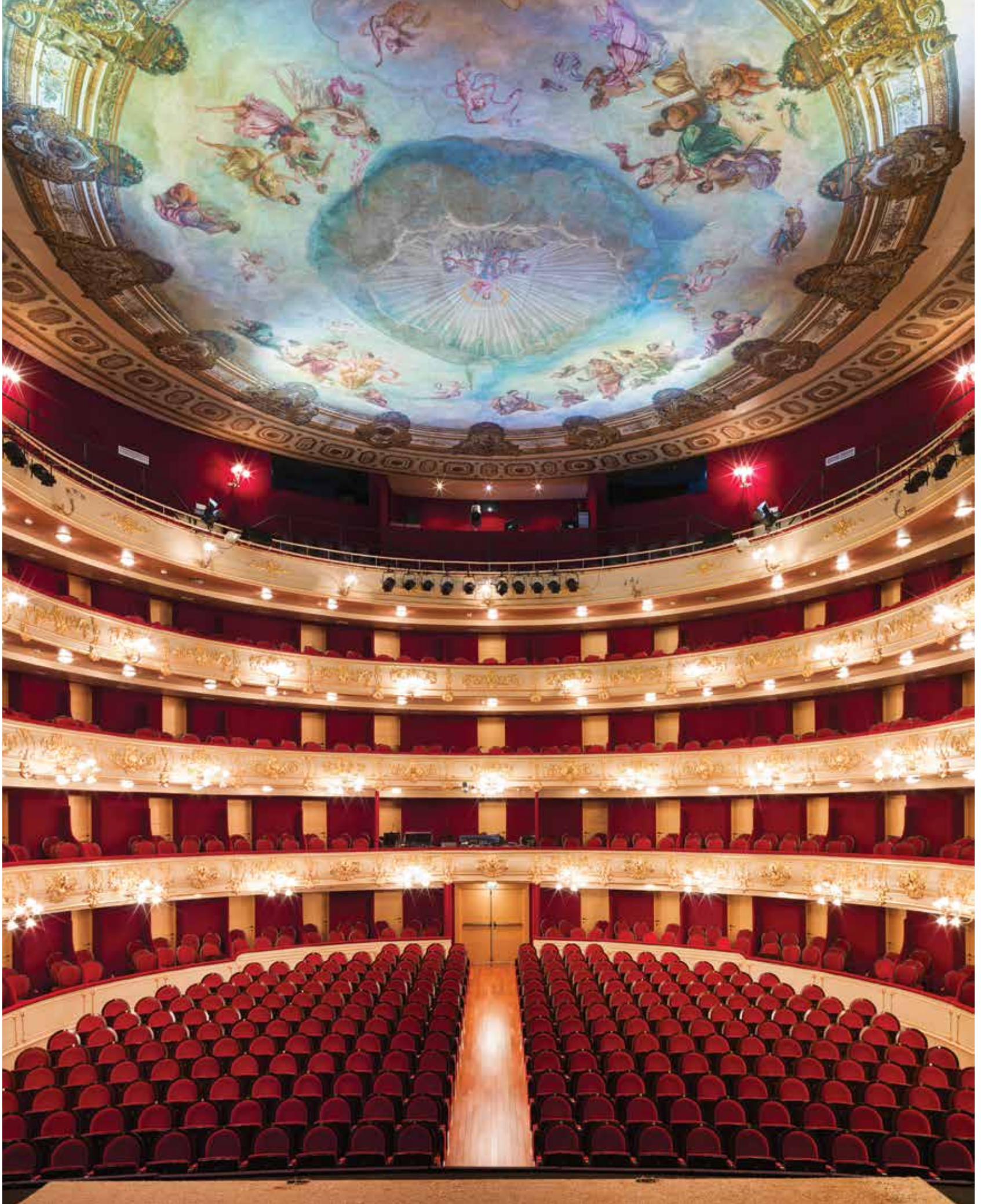
Main entrance.



## Procedure

Generally, the purpose of the refurbishment was the enlargement and refurbishment of the stage area to be able to host stagings by big theatrical companies, the dividing of rooms and the creation of multi-use spaces, the restoration of the decorative elements and the adapting of the building to current regulations.

To meet the first objective and make the theatre suitable for large international companies, it was necessary to adapt the dimensions of the stage and provide it with the latest technological advances, which constituted the core of the action, but this refurbishment sought not only to modernise the theatre but also to solve the constructional problems that affected the building.





Enlarged stage.



The entire length of the main façade consists of load-bearing walls of stone blocks (local limestone) that support the roof trusses and where the intermediate slabs are embedded. Due to the deficiency of its foundation, formed by load-bearing walls of stone on stepped overhangs of the same material, in the manner of footings and excessively scarce in some areas, it was necessary to reinforce the foundation with a series of micro-piles drilled, embedded or at a tangent to the load-bearing walls and their caps.

In the stage part, the roof was dismantled to erect a steel body covered with zinc and totally neutral to increase the height of the structure, thus increasing the height of the stage from fourteen to twenty-three metres, to house any set and to implement new technology. On the other hand, the ceiling in the main auditorium was dismantled to be able to install a room for small plays just below. In this part, all the coverings were changed and a cafeteria, a lavatories area and a lift shaft were added.

The important refurbishment work carried out on the roof to include new functions for the building meant the total replacement of its steel structural elements and constituting elements, respecting its original structural type but raising it by ten metres.

Refurbished main auditorium.



Restored main auditorium ceiling.

Boxes after refurbishment.



Finally, architectural elements were carefully restored in a workshop under strict monitoring by qualified personnel, such as the gilded boxes, gas lamps converted to wall lights, the great clock and the oil painting by Félix Cagé on a 320 m<sup>2</sup> cotton panel fourteen metres above the stalls and supported by a wooden frame anchored to the auditorium's roof structure.

With this procedure the theatre has been able to expand and renovate its installations, with new spaces such as the rehearsal room and the installations volume, a new structure for the main stage and the restoration of its most important heritage elements.

Clock in the main auditorium.

Restored decorative details.



# Ca N'Oliver

## | Art Centre

*Maó-Mahón (Menorca)*

### Promoter

Ministry of Development

This stately home is one of the best examples of the type of residence of Mahon's bourgeoisie in the 18th and 19th centuries. The building stands out in its interior for the magnificent imperial-type double staircase with openwork bannisters and a fresco painting of a Sicilian landscape. After its refurbishment, the building houses the Ca N'Oliver Art Centre, a depositary for the Hernández Sanz-Hernández Mora collection of watercolours, drawings, maps and furniture from the Menorca of the 18th, 19th and 20th centuries.

### Historical background

At the end of the 18th century, when Mahon City Council developed the land known as the English Cemetery, the local merchant Llorenç Oliver i Morillo decided to build his family home there. The ambitious concept of the residence was a reflection of the social level reached. Proof of this was the commissioning of the interior decoration of the house by the Italian artists Giuseppe Patania and Stefano Cotardi, who decorated the ceilings with classic themes inspired by Roman mythology.

Llorenç Oliver was a representative of the Mahonese bourgeoisie at the end of 18th century. A trader with a large business volume, he carried out his economic activity in Mahon, mainly in the business of importing wheat from North Africa and colonial products from Brazil. Ca N'Oliver was the family residence of his descendants, ennobled with the title of Counts of San Juan de Violada, until his great-grandson Josep Oliver died in 1928.

Its façades feature the neoclassical schemes common in 19th-century Menorcan architecture, this complex being one of the most beautiful and complete. The building's main façade is in the Calle Infanta and the secondary one in the Calle Anuncivay. The corner forms a vertical axis accentuated by the location of a tower two storeys higher than the building, which was used as a lookout to watch ships entering the port.

Notable inside the house is the double imperial type staircase which can be considered unique in the island for its dimensions, the beauty of its fretwork bannister and the landscape fresco. The rest of the important rooms of the building also had their ceilings decorated with paintings, whose themes serve as a guide to the use of the rooms.

Neoclassical façades of Ca N'Oliver.



Museum entrance.

Lookout tower for watching ships arriving.

Ceiling of the living room decorated with a scene of Romulus and Remus.

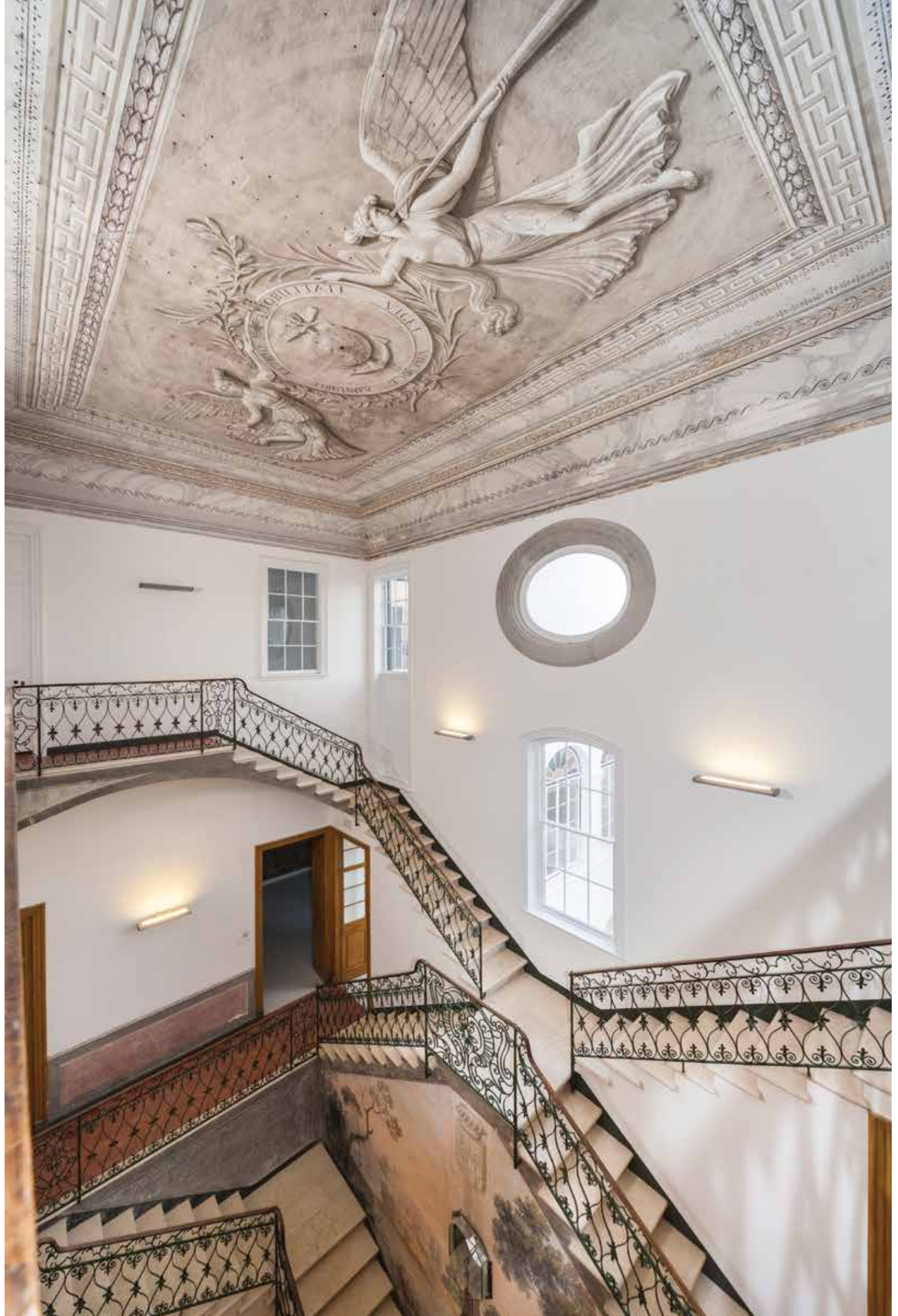


This decoration was carried out by the Italian artists Giuseppe Catania and Stefano Cotardi between 1804 and 1805 and is the most complete example of this type of residential decoration in the area of Mahon.

The basement was originally intended for stables and warehouses and had two staircases, one for direct access to the garden and another an exit to the Calle Infanta, the amplitude and beauty of the vault of the main room, of great dimensions, being especially noteworthy. In one of the rooms in the basement the cistern of the old house, which collected rainwater from the roofs, has been documented. This circular cistern was excavated in the mother rock and its base is approximately 4 meters below the level of the basement, communicating with the vertical plane of the parapet where the water was extracted.

The two side wings of the courtyard/garden are formed by a porticoed-glazed gallery on the first floor that constitutes the rear part of an annex building in the Calle Anunciavay as well as an elongated wing at the back of the site, formerly used for services and kitchen. The very high wall enclosing the courtyard had the remains of a painted decoration with architectural elements. The central part of the courtyard is occupied by a garden, with trees and other ornamental plants typical of this type of construction.

Ceiling of the main hall decorated with three episodes of Rome's war against the Etruscans.





Sicilian landscape at the bottom of the imperial staircase.



The first floor was the noble floor of the old house, with paintings on ceilings, which did not suffer major alterations in its distribution when the building was acquired by Alfonso Victori in 1951 for use as a furniture shop. The second floor did not undergo any notable alterations either, although its ceilings had signs of a modern restoration. The third floor, used as a warehouse and service areas, had very simple finishes and decoration.

## Procedure

The decision to house an Art Centre in a 19th century palace building required the prior adaptation of the building to the structural, functional and installation requirements of a public facility according to current legislation.

For this, and complying with heritage protection regulations, the project involved emptying the interior courtyard to create a functional space or assembly hall in its place, with an independent access that would also provide light to the interior. The original slabs were reinforced on their lower face where there were no ceilings to protect or the upper one on those with decoration. In the case of the tower, the interior slabs were replaced to incorporate a new staircase and light walkways to allow light to enter.

Imperial staircase with the representation of two winged geniuses, Fame and Commerce, and a medallion in the centre with an anchor and the legend “blossoms with movement and acquires strength while walking.”



New auditorium.

New communication core.

Refurbished courtyard.

Refurbished old dining room of the house.

18th and 19th century furniture.



Restored stables.

Inside the building, the original pavements were conserved and recovered, incorporating new pavement of natural stone or neutral continuous pavement without joints where necessary. The existing canvases were restored and cleaned and the protagonism of the imperial staircase was recovered thanks to the restoration of the fresco painting of a Sicilian landscape on the first landing and the delicate filigree of the openwork wrought iron bannister.

A new communication core with stairs and a lift was incorporated, complying with emergency evacuation and accessibility regulations.

The original carpentry was restored and painted and new pieces of aluminium were incorporated in those windows that had been blocked with the passage of time and which were now being recovered. The original Arabic roof tiles were recovered and reused once heat insulation was incorporated into the roof.



TEATRO PEREZ GALDOS

# Pérez Galdós Theatre

## *Las Palmas de Gran Canaria*

### Promoter

Ministry of Development

The Pérez Galdós Theatre combines the romanticism of 19th century with that which was conceived with advanced stage technologies that allow it to host large-scale operas today. The refurbishment of the historic building, declared an Asset of Cultural Interest in 1994, and its enlargement with a new stage area have allowed it to remain at the centre of the island's cultural life.

### Historical background

The Pérez Galdós Theatre is located in the centre of the city of Las Palmas de Gran Canaria, between the Vegueta and Triana districts. It is an extensive building, rectangular in plan, located near the seashore, so that throughout its history has frequently been affected by waves and floods in the nearby ravine. The site on which it is located is rectangular in shape with the main axis in the north-south direction and the public entrance on the southern façade.

The history of the building is in two stages, marked by a fire that destroyed its wooden structure, an event common to so many theatres of the time. The first period started with the inauguration of what was then called the New Theatre or Tirso de Molina Theatre in 1890. The second phase began with the re-inauguration of the theatre in 1928 after the fire, with the name of the Gran Canaria writer Benito Pérez Galdós.

The nineteenth-century theatre was created according to the design of one of the most outstanding architects of the 19th century, Francisco Jareño y Alarcón. Graduated in 1848, Jareño became director of the Madrid School of Architecture and the author, among many other buildings, of the headquarters of the current National Archaeological Museum and the Spanish National Library in Madrid.

The original "Italian-style" theatre in Las Palmas consisted of only the main volume, with a rectangular floor plan, since the rear volume was added later to enlarge the stage. Only the main façade of Jareño's design, of academicist, neo-paladin character and with three floors, survived the fire. The ground floor has a line of semi-circular arches, the five stone centres with cushioning. The first plant replicates the line of arches on the ground floor but on Ionic columns and with a balustrade while the second one does so with grooved pilasters.

Main façade.





Restored main façade and new stage area.

New administrative and services volume attached to the theatre.

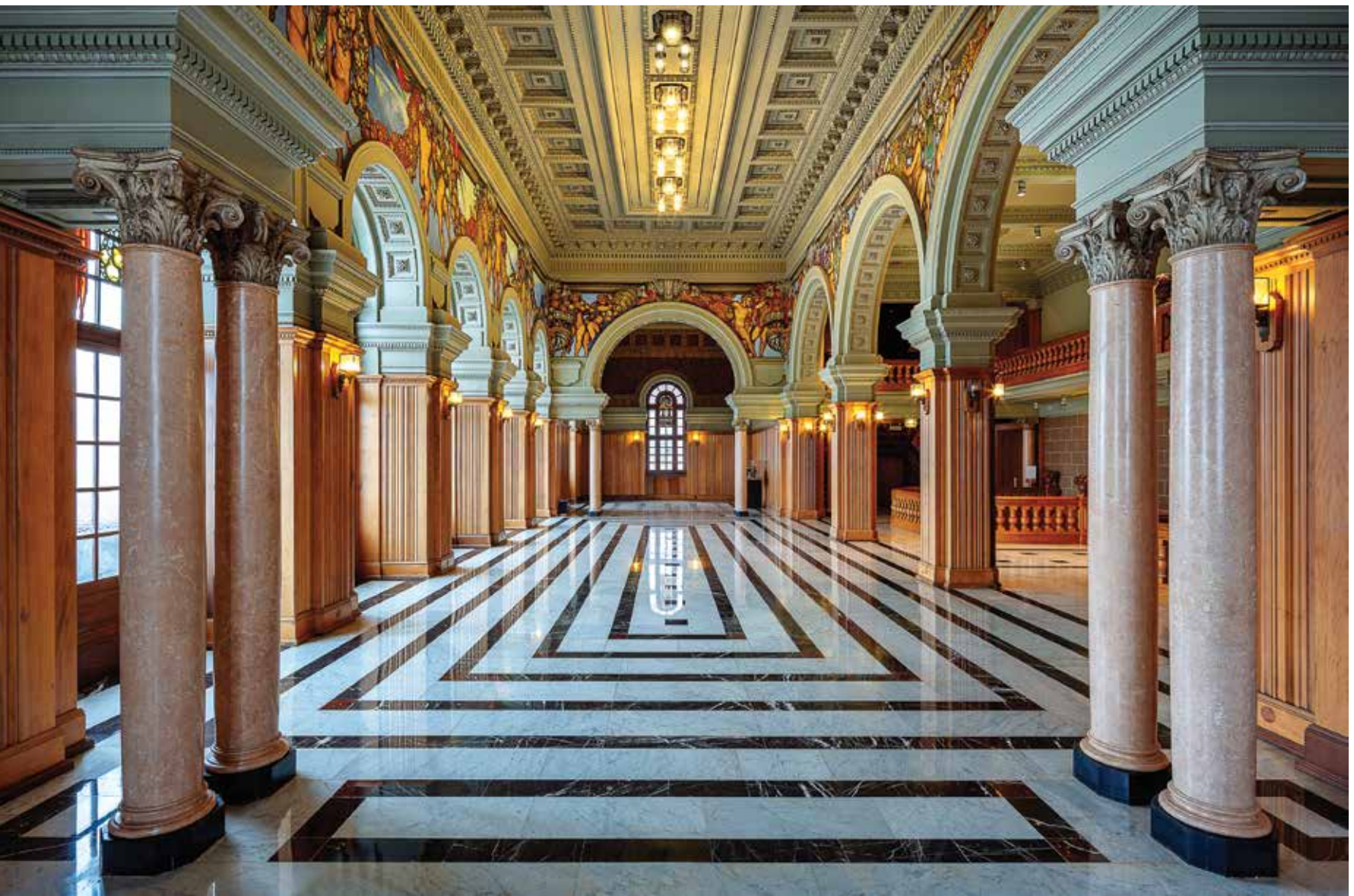


Finish of the original façade.

Refurbished façade and new volumes.

In the reconstruction work after the 1918 fire, it was decided to add a rear body and raise the roof of the stalls to house the “gods,” a solution that altered the original design. At the same time, some modifications to the previous actions were introduced in 1924, among them the change in the design of the staircase of honour, the addition of a body attached to the north façade to enlarge the stage and the redesign of the interior of the auditorium, foyers and services. This reform was also responsible for all the interior decoration on floors, walls and railings as well as the mahogany furniture.

The Salón Saint-Saëns is the most important rest piece of the building, named after French conductor and composer Camille Saint-Saëns, linked to the city’s cultural activity. It is located above the entrance foyer, occupying the full width of the main façade around the corner to the side streets.



Restored Salón Saint-Saëns.

Staircase of honour.



Restored decoration in the Salón Saint-Saëns.

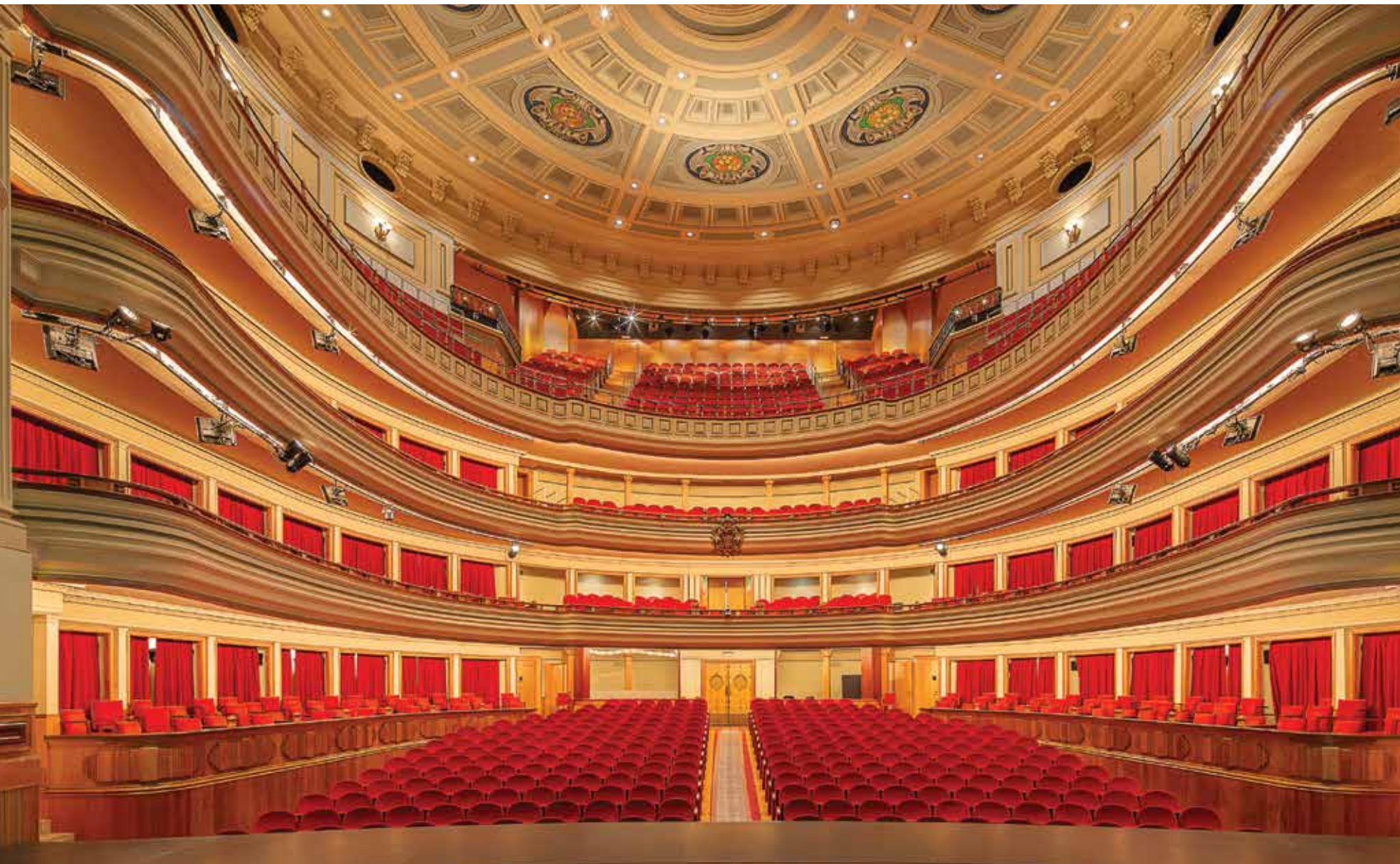


## Procedure

The main objective of the refurbishment of the Pérez Galdós Theatre was to restore and thoroughly reform the entire building, adding a new stage area and a new rear façade.

The refurbishment of the theatre was conditioned by the inauguration in the city of the Alfredo Kraus Auditorium and the Cuyás Theatre, thanks to which Las Palmas was provided with alternative spaces for concerts, plays and small-scale operas that previously could only be performed at the Pérez Galdós Theatre. This motivated the refurbishment of the theatre for performing large-scale operas and ballets, for which it needed to be equipped with a modern infrastructure and technical means to put it on a level with other European opera houses.

The procedure was divided into two areas. On the one hand, the public area was refurbished, including the historic building, the foyer, the entrances and the restoration of the façade, with the elimination of anachronistic elements added in a 1989 reform. Among the actions developed in this chapter was the extension to all floors of the main staircases of the theatre, following the same alignment as the existing ones, the construction of a new balcony in the “gods” floor and the conversion of the terrace as a rest area. The curtain, stained glass windows and panels decorating



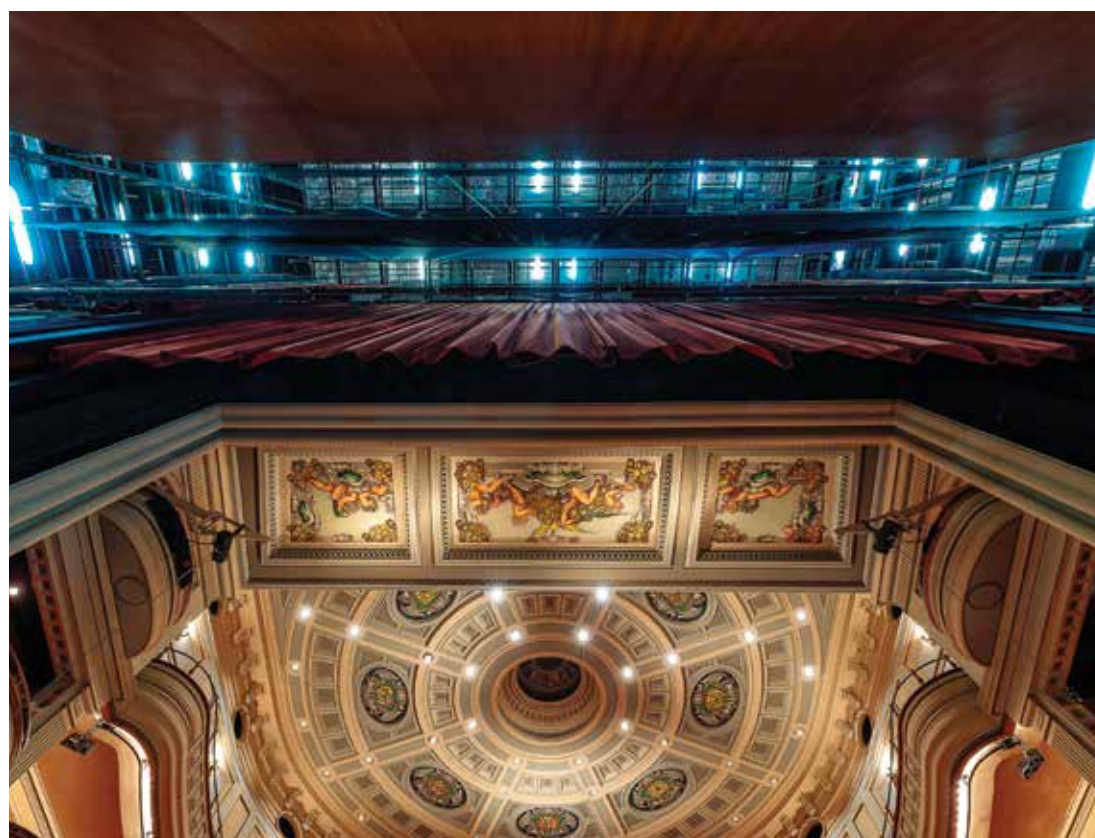
the stalls, the stage and various rooms of the theatre were also restored and the exterior furniture and carpentry were refurbished. The procedure was completed with the incorporation of modern safety measures.

The second area of the procedure sought to enlarge the stage and dressing rooms to provide them with the dimensions and distribution suitable for the new use as an opera house. For this extension it was decided to demolish the pre-existing stage area and build a new concrete one in its place, but giving it the full width of the building, from stage to overhead structure. Thus, the new stage was provided with a proscenium nine metres high and eleven metres wide as well as a

Refurbished main auditorium in the theatre.



View of the overhead structure from the stage.



system of platforms that allows its extension over the pit. At the same time, a porticoed structure attached to the new stage area was built to house the administrative offices and various theatre services, generating a new façade at the rear of the theatre.

The refurbishment of the theatre has recovered the building's functional capacity, increasing the capacity and improving its acoustics and visibility as well as the general comfort and safety of the public and artists. The changes made in the arrangement of traffic in the area have favoured the regeneration of the area with the creation of new urban spaces matching the uniqueness of the building and its surroundings.



# Tapestries Museum in the Collegiate Church of Pastrana

*Pastrana (Guadalajara)*

## Promoter

Diocese of Guadalajara

The declaration of the Collegiate Church of Nuestra Señora de la Asunción in Pastrana as an Asset of Cultural Interest included not only the building in question but its important collection of furnishings, notably the collection of Flemish tapestries.

The refurbishment of the old Collegiate Church sacristy as a museum made it possible to conserve and exhibit these and other cultural assets of great heritage value and to open the space to the public.

## Historical background

The current Collegiate Church in Pastrana is the result of continuous modifications and enlargements to the original Romanesque church built by the Order of Calatrava at the beginning of the 13th century. In the 14th century the Calatrava church underwent its first transformation for defence needs, which caused the construction of a watchtower and bell tower, and for ceremonial needs, which required the expansion of the building from one to three naves.

The church's central nave was built in the 15th century, coinciding with the consolidation of the Council of Pastrana and the overflowing of the hamlet of the medieval town. The general structure of the church was not substantially modified in this procedure but it did alter the dark and secluded Romanesque space.

The next great action on the building was framed within the commercial and demographic growth of Pastrana, which brought with it important urban and architectural changes at the beginning of the 16th century. At this time the new Gothic parish church was built as an expression of the royal power and the union of the Crowns of Castile and Aragon. Thus a church was built with three naves of the same height and a polygonal chancel of great volume with buttresses at the corners. Side chapels, square in plan, were constructed attached to the walls of the tower and as the crowning of the naves. This new construction had two access portals, one in the south nave and the other, the main one, in the north, sheltered under a small portico.

The chancel was covered with ribbed vaults, presumably large. The naves, located at the same height, maintain the system of division with pointed Romanesque arches. The central nave was covered with Gothic cross vaults in each section, preserved except for the first section which was

Urban complex of Pastrana.



later replaced by a dome with a skylight. These vaults have complex decoration and in each section the ribs start from corbels on the pillars separating the naves, with plant decoration of a marked Gothic taste.

The Gothic church remains and co-exists with the urban transformations that occurred in the town throughout the fruitful 16th century, witness to the urban expansion of Pastrana developed first by Doña Ana de Portugal y Borja, II Duquesa de Pastrana, by building the palace and the square, and then by Ruy Gómez III Duque with the construction of the enlargement and the new districts. It also witnessed the great demographic growth and the prosperous industrial

Interior of the Collegiate Church.

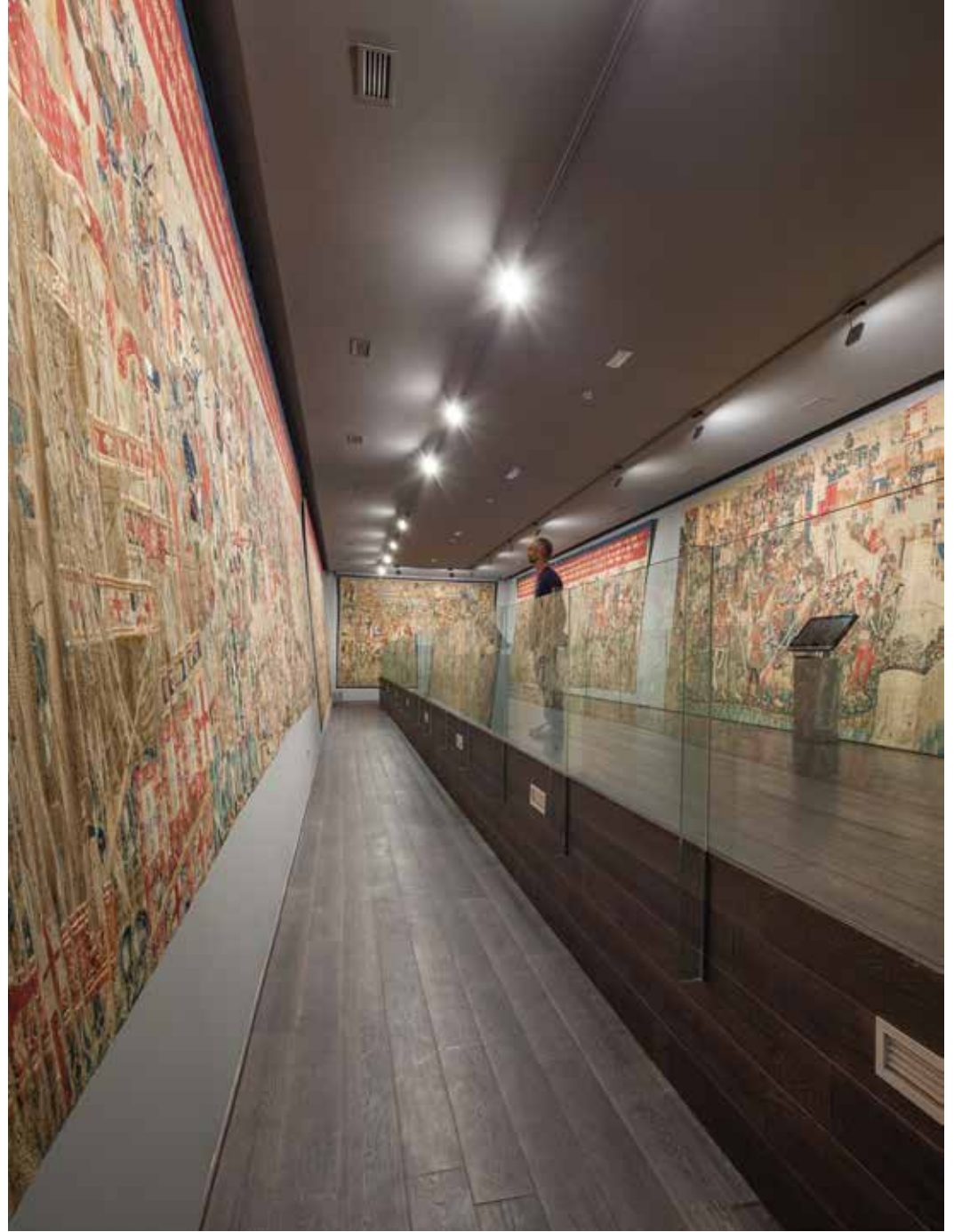
Entrance to the Tapestries Museum.

Gothic entrance to the Collegiate Church.



development, but, above all, it witnessed the change brought about by the conversion of the town into a private Lordship and of the parish church into Collegiate Church, a category that, with the formation of its Chapter and with the solemnity of its worship, brought it close to the cathedrals.

Fray Pedro González de Mendoza promoted the last great refurbishment of the building within his ambitious architectural programme. The works began in 1625 and were not completed until 1639, the year of his death, and included the transformation of the main chapel into a larger one, with crypt and transept. The so-called Escorial classicism style was followed, with Herrerian or classicist roots and following the models imposed in El Escorial.







Exterior of the museum volume.

Ground floor of the museum.

New communication core.

## Procedure

The Tapestries Museum had been in operation since the 1940s on the west side of the Collegiate Church, within the volume of the old sacristy next to the baptistery. This museum housed pieces of great importance and size that required a space that guaranteed adequate conservation conditions. It was therefore necessary to prepare the museum to house, with all the guarantees and in a definitive way, the Flemish tapestries of Alfonso V of Portugal, dated between 1472 and 1475, attributed to the workshop of Passchier Grenier, representing *El desembarco de Ardía*, *El Cerco de Arcila*, *El Asalto de Arcila* and the *Toma de Tánger*. This collection is completed by two other late 15th century Flemish tapestries representing the *Cerco de Ciudad Seguer* and the *Entrada en Ciudad Seguer*, and other objects such as a 17th century funeral set of Princess Eboli and Miranda catafalque and altarpiece, with the portraits on board of Don Juan Miranda with St Francis of Assisi and Doña Ana Hernández with St John the Evangelist, painted by Juan Bautista Maíno.

Faced with space limitations and the impossibility of occupying other areas of the Collegiate Church, the entire volume of the old sacristy was used, doubling its levels and unifying the initially divided space. This resulted in two open-plan floors with sufficient free height to exhibit the largest tapestries, up to 4.20 metres high, connected thanks to a new communications and evacuation core.

It was decided to exhibit five tapestries on the ground floor level and four more on the upper level next to the chest of drawers from the old sacristy on which other liturgical objects are exhibited.

Following the current recommendations on textile exposure and conservation, the necessary cavities were provided to insulate the tapestries from any moisture in the walls. Ventilation and HVAC systems were installed as biocontrol measures. With regard to lighting, natural light was totally eliminated due to its high level of ultraviolet rays and excessive brightness. Artificial light was designed using halogen lamps with UV-stop filters equipped with dimmers to obtain a flat, non-focal light on the fabrics.

A series of large-format touch screens was incorporated for the proper interpretation and explanation of the tapestries and exhibited objects.

On the façades, it was decided that the entire volume occupied by the museum should be clad with stone in a homogeneous manner, distinguishing it externally from the rest of the walls of the Collegiate Church. The openings of the windows were maintained, although they were covered with decorative and advertising motifs of the tapestries exhibited inside for better light control.

The facilities were located in the technical façade at the west end, where fans are integrated with service doors that allow the large tapestries to be rolled up and packed into the rooms.



# Old Infants School in Toledo

## | Cathedral Tapestries and Textiles Museum

*Toledo*

### Promoter

Chapter of the Holy  
Primate Cathedral, Toledo

The Old Infants School building, very close to the Primate Cathedral of Spain and designed by Alonso de Covarrubias, is one of the most representative buildings in the city of Toledo, the reason why it was declared an Asset of Cultural Interest in 1996. Closely linked to the history of the cathedral, the Infants School was intended for the education of the so-called cathedral clerics or “sixes” in subjects such as music, grammar and mathematics.

With the passage of time, the school moved to new premises and the building was closed, awaiting a new destination. At the beginning of 2011, the Cabildo decided to use it to house the collection of tapestries and objects that until then were on show in the cathedral sacristy, among them, the famous tapestry of the Astrolabe or Horoscopes. The Old Infants School thus became the new Cathedral Tapestries and Textiles Museum in 2004.

### Historical background

Cardinal Don Juan Martínez Silíceo, Archbishop of Toledo between 1545 and 1557, founded the Colegio de Nuestra Señora de los Infantes in 1552 to offer schooling to children, called “clerics,” to assist as acolytes and singers in the liturgical celebrations in the Primate Cathedral. The clerics received both cultural and liturgical education and the four best voices were chosen from among them. This changed in the 15th century when six voices were chosen and since then they were called the “sixes.”

According to the Cathedral Building and Masonry Books, the first Infants School payments were made in 1550, although the constitutions were signed seven years later and the school opened in 1562.

The ecclesiastical disentailment that began in the 18th century and the suppression of the tithe in 1841 forced the closing of the school for lack of income until it was put back into operation in 1873, although with only eight singers, and in 1880 Cardinal Moreno y Maisonave promoted the works of enlargement. In 1961 the school was reformed to cease as a boarding school and was adapted to the educational legislation then in force. In 1985 the building was left unused, as the school was moved to a new and much larger building.



Old chapel in the Infantes School.

Entrance portal.

Coat of arms of Cardinal Silíceo on the façade.



Located on the south side of the historic centre of Toledo, in the so-called Barco descent, the Old Infants School is a large free-standing building with masonry fixtures between brick buttresses that form boxes between double courses of brick on all its façades. It is a house with an irregular floor plan with rooms arranged around a quadrangular courtyard. Originally there was a secondary courtyard that was absorbed by the building itself after the works carried out in the 19th century.

Its façades show a certain regularity in the distribution of the openings, whose grilles are the work of Master Domingo de Céspedes, the cathedral's grille maker, and Simón de la Mar.

The porch giving access to the building is on the northern side, made of granite by Francisco de Villalpando in 1555 and with the same ornamental vocabulary as the grille in the Primate Cathedral. The fundamental element in the composition of the porch are the canephorae framing a lintelled opening and surrounded by a cushion superimposed on the masonry wall. Above the lintel of the door is the coat of arms of Cardinal Silíceo. At the crown there is a circular ornament with the Virgin and Child flanked by figures of Justice and Faith, of clear Italian inspiration. Above this porch there is a window with a grille that was originally the room of the school's vice-rector.

The school chapel was next to the main entrance, with a wooden coffered ceiling formed by squares and octagons in deep relief and decorated with pine cones and flowers. The noblest room of the building was also on this ground floor, with a coffered ceiling of large beams, which was used as the school's assembly hall. The rest of the rooms on the ground floor were used as classrooms.



Refurbished roof.

The main staircase that connects with the upper floor is next to the main courtyard, on its east side. This staircase, dated 1880, is the product of the great reform promoted by Cardinal Moreno y Maisonave in the 19th century. There were more classrooms on the upper floor and, on the northern side, the bedrooms.

In the basement, a Roman cistern with its own spring found here shows the importance of the building; in earlier times, this cistern may have fed the Caballe baths and the Cenizal baths, next to it.

## Procedure

The building's refurbishment required reconciling the conservation of its history and identity with the adapting of the spaces to a new use and exhibition programme open to the public, in accordance with current building regulations.

The programme of needs made it necessary to look for large walls to serve as supports for the Primate Cathedral's tapestries collection. For this, and after an exhaustive historical study, the interior divisions resulting from successive reforms were removed and the original ample spaces were recovered. At the same time, the interior courtyard was covered with a large skylight, which allowed the monument to Maundy Thursday designed by Ignacio Haan to be included in the exhibition route. Finally, a new staircase on the south side gave coherence to the museum route.

Main staircase.



New communication core.

The roof of the building was refurbished by reusing its wooden supporting structure and the original tiles. The façades were cleaned and the cracks were stitched, recovering their unity. The interior walls recovered a vigour that appeared in the entrance hallway from the school's initial days.

To adapt the spaces to the new use, slabs were reinforced and wainscots and coffered ceilings were restored. The original granite pavements on the ground floor were also preserved. On the other hand, panels were installed on the windows in the exhibition spaces to control the entry of natural light and prevent damage to the tapestries.

The entrance door and the altarpiece of the chapel were restored, as were the staircase next to the courtyard and the parapets that connect with the Roman cistern at a depth of five metres.

The new HVAC and lighting installations followed the criteria for energy efficiency and the preventive conservation of the exhibits as well as the safety and fire protection requirements for the new museum.

The use as a museum and its public nature made accessibility, understood as the universal right of access to culture and heritage, of great importance. Access to the building for the disabled is now guaranteed with ramps and a lift, which also allows emergency evacuation.



Monument to Maundy Thursday.

Astrolabe Tapestry.





Tapestries room on the first floor.



Finally, the new museum was inaugurated on 5 November 2014 to exhibit of the Chapter's important religious and cultural legacy. Inside, part of the 78 tapestries that adorned the cathedral walls are exhibited, among them those in the illustrious series *Apoteosis de la Eucaristía*, *Historia de David y Salomón*, *Historia de Moisés*, *Vida del Hombre*, *Obispos Toledanos* and *Historia de Alejandro*. Next to them, important examples of liturgical clothing and textiles, goldsmithery and sculpture are also on display.

The chapel can also be visited, with its original altarpiece and showcases designed with the most advanced museum techniques in which some of the best liturgical objects of the cathedral are exhibited: works of art in ivory, gold, silver and very fine enamels, unique in the world for their high artistic quality. Next to them, the famous *Tanto Monta*, the *Pendón de la Batalla del Salado*, the *Pendón de la Toma de Orán* by Cardinal Cisneros, the tapestries with the coats of arms of various cardinals and suits and rain cloaks of cardinals who presided over the Archiepiscopal chair of the Cathedral, all of rich cloths and embroidered with gold, silver and silks of exquisite meticulousness and artistic quality.



## Old power station

### | La Fábrica de Luz. Museo de la Energía

#### *Ponferrada (Leon)*

#### Promoter

Fundación Ciudad de la  
Energía

The Minero Siderúrgica de Ponferrada (MSP) power station was a complex of two industrial buildings designed to produce electricity from coal. Its implementation meant the modernisation of Ponferrada and the take-off of coal as a dynamic sector in the region.

The refurbishment of the buildings won the 2012 Europa Nostra Prize in the Heritage Recovery category. The museum was also nominated as the best European museum of the year in 2015 in the EMYA awards (European Museum of the Year Award).

#### Historical background

It was not until late in the 20th century that awareness arose of the patrimonial importance of the buildings destined for industrial production, designed without artistic or compositional intent beyond the utilitarianism and rationality imposed by their strict adapting to the use for which they were intended.

Apart from its formalisation, this heritage is also the repository of the way of producing goods and the organisational systems of the people on whom they depended. All these values have meant that structures created in the 20th century itself, although lacking the patina of antiquity, are today considered worthy of protection.

In the case of this power station, the first buildings and auxiliary installations entered into service in 1920. The power plant was initially intended to meet the energy needs of the company that owned it, supplying the excess. Subsequently, successive enlargements were carried out to increase its generation capacity. The importance of this infrastructure led to the creation of the Ponferrada-Villablino railway line near it, used for both goods and passenger transport.

A bank of the River Sil was chosen for its location, from which it could take in the necessary water for cooling the machines. This process was carried out through a channel parallel to the river.

The building that originally housed the power station has a T-shaped floor plan, a pitched roof and a large brick chimney and is currently dedicated to the museum's offices, cafeteria and classroom.



Boiler hall.

The first enlargement of the complex was carried out in the 1930s with the construction of a building with a composite structure of solid brick and rolled steel, located south of the original power station. It consisted of two separate halls, one for producing steam by burning coal (boiler hall) and the other, slightly smaller and more forward, to house the turbines and the control panel (turbine hall). A system of conveyor belts was built outside the former to carry the coal from the quay.

The MSP plant was enlarged again in the 1940s and it remained active until 1971, although in its last years it had ceased producing energy and depended on the supply from Compostilla I, also in Ponferrada. Since its definitive closure it remained abandoned until its refurbishment for its current use as a museum.

The complex now includes the old power station, the coal quay, the boiler hall and the turbine hall. Once refurbished, these spaces together with a new building where the coal quay was located, house the Fábrica de Luz Energy Museum.

Coal quay, where the Baldwin locomotive number 8 “La Ponferrada” arrived, loaded with coal.



Interior of the turbine hall housing three turbines and the control panel.



## Procedure

The adapting of the old power station to its new museum use posed the challenge of re-establishing one of the most important industrial heritage complexes in the country and the need to enlarge it with the construction of a new building that would solve all the needs of a cultural infrastructure of these properties.

The situation in which the power station was found, abandoned, practically unknown and with its back turned to the urban morphology of Ponferrada, required urgent action to safeguard it as a heritage asset but also as an element of tourist and cultural dynamism, capable of promoting imaginative and innovative criteria in the process of restoration, refurbishment and museography in the 21st century.

The refurbishment was proposed with the aim of transforming industrial buildings into cultural containers, respecting their original morphological properties and their tangible and intangible heritage values. The rescue of this forgotten heritage sought to generate a feeling in the population of reunion with this important legacy so that the industrial complex would be integrated into the territory in which it is located and the survival of its historical and social values would be guaranteed.



Boiler hall with the water tank at the end.



The putting into practice of these concepts was carried out respecting the physical framework of the buildings, conditioned by the topography of the environment. At the same time, new languages were introduced in the architectural proposal, complementing the qualities expressed by the old industrial structures and types from museography. In this way, the heritage values of the complex were assumed through the recognition of its structures and installations, the configuration of which had fortunately not been seriously altered.

Existing material elements were also recovered, such as concrete structures and metal levers for opening gates on the coal discharge hoppers as well as loading wagons and conveyor belts.

As a sign of identity, the project included the maintenance of the façades once restored and the conservation of the existing structure in its current state as far as possible, that is, leaving visible the defects attributable to the passage of time that did not compromise safety. These conditions made it necessary to carry out a very precise study of the strength of the elements and to analyse the durability in relation to the structure's remaining service life.

The work as a whole therefore involved a great variety of actions and structural types, such as the bracing of façades, micro-pile screens in the boiler hall and the building of an installations gallery. It also included the underpinning of footings, the construction of new foundations, composite decking anchored to existing pillars and the new solid slabs, among others.

Thus the existence of several buildings, each with its own personality and function, and in different states of conservation, made it possible to implement restoration programmes totally differently, although all under the same premise: carry out the minimum procedure to achieve maximum conservation. In addition to conditioning the space and ensuring its conservation, the refurbishment carried out allows museum visitors today to recognise the patina of time and the traces of use left by former workers.



New building on the old coal quay.

Main entrance.



MUSEO  
DAS PEREGRINACIONES E DE SANTIAGO



# Museum of Pilgrimages and Santiago

## *Santiago de Compostela (La Coruña)*

### Promoter

Santiago de Compostela  
City Consortium

The Museum of Pilgrimages and Santiago was created in 1951 although it opened its doors to the public permanently in its headquarters in the Gothic House, the building that currently houses the museum's offices and library, in 1996. In November 2015, the headquarters of the Plaza de las Platerías, located in the former headquarters of the Bank of Spain, was opened to the public, located a few metres from Compostela Cathedral, to host the museum's permanent exhibition, among other functions.

With the refurbishment and enlargement of the new museum headquarters as well as a renovated exhibition space, visitors have an alternative view of the cathedral and the adjacent buildings from inside the building.

### Historical background

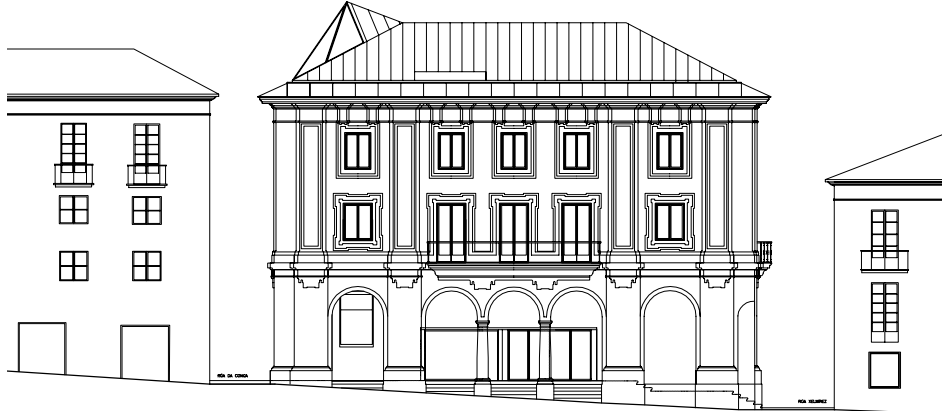
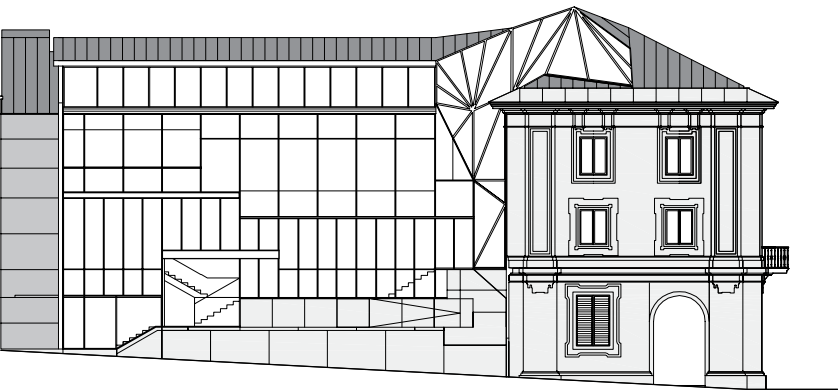
The building for the Bank of Spain's headquarters in Santiago, the initial design of which was the work of the architect Romualdo Madariaga Céspedes, was inaugurated in 1949 on a site made up of small plots in the residential area of central Santiago. Its image was finally consolidated as one more element of the city's monumental complex due to its location between the Plaza de Platerías and the Calle Conga and Calle Xelmírez, a few metres from the southern façade of the cathedral.

The Bank of Spain branch in Santiago de Compostela, whose activity began in the city in 1886 long before the construction of this headquarters, closed its doors in 2004 and the property awaited a new use.

Since its creation, the Museum of Pilgrimages and Santiago had been installed in a building in the Calle de San Miguel which today still houses many of the museum's services such as the offices of the research, conservation and dissemination departments, as well as the workshops, the library and the cultural property warehouse.

With the in-depth refurbishment of the old Bank of Spain headquarters between 2009 and 2012, the museum's exhibition space and all its adjacent services were moved to its new 3,500 m<sup>2</sup> headquarters.

Main entrance in the Plaza de las  
Platerías.



Plaza de las Platerías and museum exterior.

Main entrance.



## Procedure

The refurbishment of the building sought to create a flexible space, adapted to the museum's functional needs. Since the offices and internal spaces remained in the original headquarters in the Casa Gótica, exhibition use was dominant in the new building, with the exception of the cafeteria.

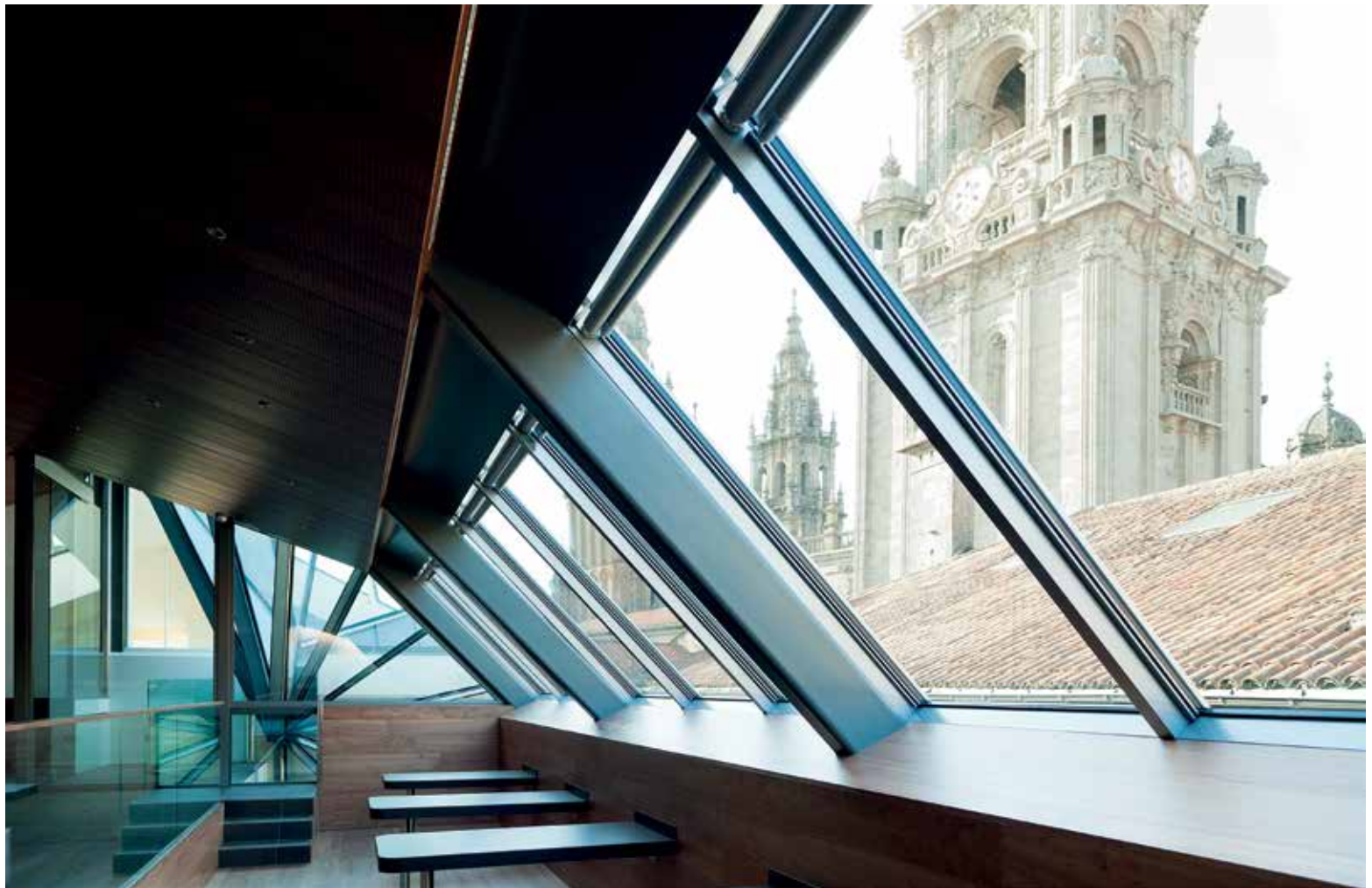
The project's great difficulty lay in making two criteria coherent and compatible: respect for the historic building and sensitivity to adapt it to its new use.

Regardless of the formal and design properties, the building had suffered much damage before its refurbishment. The structure had serious carbonation problems, meaning that corrosion had already affected part of its reinforcements. At the same time, given the period of the original construction, the structural iron was limited to smooth steel bars so that the estimated maximum loads were much lower than those permitted today for the new museum use, making it necessary to demolish the interior.

In the studies before undertaking the work, archaeological remains of the moat of the first walled enclosure of the city were discovered, which led to an archaeological excavation that was compatible with the construction of the building. These findings partly conditioned the project, which had to be adjusted in detail, especially in the basement.

Given its unique location, and taking into account the city's ordinances, the use of reinforced concrete was minimised to reduce the passage of the large and heavy trucks needed for transport through the historic centre. As an alternative, a mostly steel structure was built that allowed

Elevations in the Calle Xelmírez and the Plaza de Platerías. Architect Manuel Gallego Jorroto.



Attic floor.

Second floor foyer.

Façade in the Calle Xelmírez.



elements to be divided and later welded on site. The construction in large pieces made in the workshop partially conditioned and oriented its plastic expression through the large plates or shanks in the stairs.

Thus the new building conserved the original façade, except in the new module, which was enclosed with a light façade built with layers of various degrees of opacity, the exterior being carpentry made in place with metal plates with partitions that evoke the traditional galleries in Galicia.

Maintaining the criteria of flexibility of use, the unitary character of the space, together with the height of the first and second floors, led to the search for an integrating and relational space that would provide easy orientation for visitors. This was achieved by creating a space generous in height which provides the visual relationship from the various floors, a newly-created space that is incorporated into the old building.

The incorporation of a complementary element of new architecture, which is close to the old one, was carried out without stylistic dependencies, but respecting the existing one. For this reason the new added building approaches the old Bank of Spain building with delicacy to avoid mutual contamination and, nevertheless, it is integrated through certain parameters, such as the height and the cornices that it preserves as important references.

Cafeteria with views of Santiago Cathedral.



Museo de Pontevedra

# Pontevedra Museum

## *Pontevedra*

### Promoter

Pontevedra Provincial  
Council

The current Pontevedra Museum consists of six buildings, all located in the city's historic centre. The refurbishment of the Sarmiento building, together with the construction of a new building, known as the Sexto (sixth building), has enabled the museum to increase its services and display its collections in a much larger exhibition space.

### Historical background

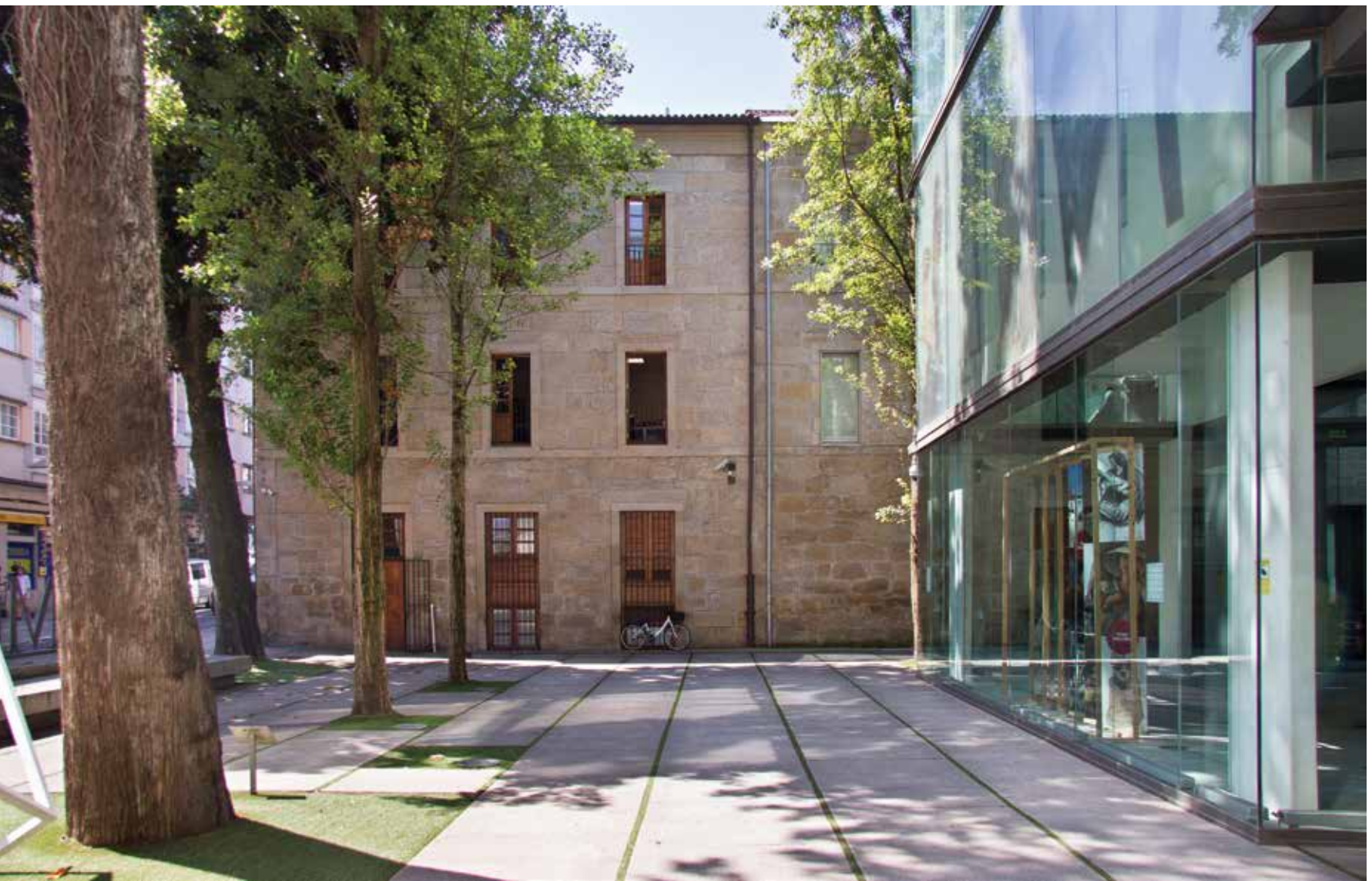
The Pontevedra Museum was founded in 1927 by the Provincial Council to continue the work of the Pontevedra Archaeological Society. Since then, the museum has expanded in various buildings in the historic centre to occupy six spaces today.

The oldest building of those forming the museum is that of the ruins of Santo Domingo, from the 14th to 15th centuries, added to which are the 18th century Castro Monteagudo palace building, the García Flórez building, a late 18th century stately home, and the Fernández López building, built between 1962 and 1965.

In 1978 the Justice Ministry authorised the transfer of an old Jesuit school building to the Pontevedra Provincial Council to house part of the museum, which was integrated into the institution under the name of the Sarmiento building. Finally, the Sexto Edificio arose from the need to enlarge the museum.

The Sarmiento building was ordered built by the Society of Jesus between 1685 and 1714 with the intention of bringing all the schools in the city together in a single centre. The building of masonry, sober, with the openings enclosed and the portal marked with Doric pilasters that support an entablature on which there is a heraldic shield. The design, of Baroque traces, was certainly the fruit of a prototype project prepared in Rome that the Company provided for adapting to local conditions. It was financed by a foundation whose board of trustees consisted of several noble families in the city.

Museum entrance plaza.



Sarmiento building and new building.

Construction of the Sexto Edificio next to the former Company of Jesus, now the Sarmiento building.



Sarmiento building cloister.



The two-storey building is arranged around a courtyard. Notable inside are the cloister, also of two floors, with lowered semi-circular arches, and the sumptuous stone staircase that leads to the second floor, built in 1722 and located in the south-eastern corner. Also noteworthy is the basement on the eastern side, with its powerful arcades. Later, a body of lesser quality masonry was added, overlooking Calle Padre Amodeo.

After the expulsion of the Jesuits in 1767, the school changed its use and hosted different institutions, among which were the Schools of First Letters and Latinity sponsored by the City Council, a textile factory, warehouses, companies and the first high school in Pontevedra. Between 1903 and 1974 it was occupied by the Hospice and the Inclusa, unified in the fifties with the name of Hogar Provincial.

After coming under the Provincial Council in 1979, the adaptation works began immediately and it was inaugurated as a museum in 1984, named the Sarmiento building in memory of the wise Benedictine monk Fray Martín Sarmiento (1695-1772). This decade saw the opening of the ground floor rooms for exhibiting prehistoric and archaeological collections, with specific sections dedicated to cave engravings, milestones, altars, funerary steles and Roman epigraphy as well as various late Roman and late Medieval elements.



Refurbished rooms in the Sarmiento building.

Refurbished Sarmiento building cloister.



Refurbished staircase leading from the basement to the second floor in the Sarmiento building.



## Procedure

The enlargement of the Pontevedra Museum involved the refurbishment of the old school of the Society of Jesus, known as the Sarmiento building, and the construction of a new volume called the Sexto Edificio.

The former being the historical part of the complex and being in a good state of conservation, all its original elements were maintained except for some deteriorated elements such as carpentry, interior partitions, claddings, false ceilings and obsolete installations. The roof was renovated, dismantling the tiles with special care for later reuse, with the replacement of gutters and downpipes and the waterproofing of walls and roof.

New solid wood parquet was installed on the upper floors and the stone flooring was renovated by changing the deteriorated parts. The staircase, balustrade and cloister arches, all of granite, were also restored. In the cloister, new glass enclosures were placed in its openings, the exterior woodwork was restored carpentries and new interior doors of solid enamelled wood were installed.

Finally, all the plumbing and sanitary, sanitaryware, electricity, HVAC and fire protection installations were renovated.



Walkways connecting the Sarmiento building and the Sexto Edificio.

Sexto Edificio northern façade.



Interior of one of the connecting walkways.

Simultaneously, a new building was built behind the Sarmiento building in what had been the orchard of the original Society of Jesus complex, with more than 10,000 m<sup>2</sup> dedicated to permanent and temporary exhibition rooms, restoration workshops, an auditorium with capacity for more than two hundred people and a cafeteria. The new permanent exhibition rooms show the evolution of Galician art from the Gothic to the present day as well as some artistic works of the contemporary period undertaken in other parts of Spain.

This new building was built with a structure of pillars and walls in exposed white reinforced concrete, solid and ribbed slab and very deep beams of the same material. The roof was built with an inclined slab and the finish of the exhibition halls façade was built with raw granite while that facing the historic building was resolved with a totally transparent open-plan enclosure.

The new building is connected to the historic building by two glass walkways on the first and second floors.



Glazed façade of the Sexto Edificio.



# Eduardo Torroja Museum

*Madrid*

## Promoter

Fundación Eduardo  
Torroja

After the integral refurbishment of the Zarzuela Hippodrome, declared an Asset of Cultural Interest in 2009 for the innovative structural solution applied in its grandstands by the architects Carlos Arniches and Martín Domínguez and the engineer Eduardo Torroja, the Eduardo Torroja Museum was inaugurated in the same building in 2016.

The aim of the museum is to make known the work of one of the greatest international leaders in the history of 20th century civil engineering.

## Historical background

The Zarzuela Hippodrome, which comes under the Patrimonio Nacional (National Heritage institution), is considered one of the masterpieces of 20th century Spanish architecture. Its construction was an important advance from the structural point of view as well as for the types of materials used in its construction. Engineering was a fundamental part of the design, especially visible in the complex of roofs and grandstands with their wide cantilevers.

The work, construction of which began in 1935 and was paralysed by the Civil War, was inaugurated in May 1941 and represented a real innovation in the constructional systems of the time. It currently conserves its structure as it was designed, after the damage caused by the impacts it suffered during the war was repaired.

Its construction stands out for the overhangs on the grandstands, an innovative project signed by the civil engineer Eduardo Torroja, which is still being visited today by national and foreign specialists to study its structural solution. Responsible for the undertaking of important civil buildings in the 1930s, Torroja specialised in the study of new materials of great strength, especially reinforced concrete.

The main innovation of this design was that the grandstand roof was built of reinforced concrete sheets in the shape of hyperboloids that, only 5 cm thick at the end of the cantilevers, support all the stresses without ribs or reinforcements, simply with a rear anchorage of braces, spaced five metres apart. Thanks to this system, the laminar canopy overhangs by 13 metres.

Reinforced concrete stands.







Exhibition rooms in the Eduardo Torroja Museum in the Zarzuela Hippodrome.

The upper part of the grandstand is supported by a main vertical support and underneath by a very rigid support, whose position is conditioned by the functional need to house a gallery under the grandstand with direct exit to the track. A service and maintenance gallery not open to the public, was provided extending on brackets from the main support, under the front gallery.

## Procedure

Located in the Zarzuela Hippodrome, under the northern stand and with access from the lawn, the Eduardo Torroja Museum is one of the few in the world with the privilege that its content is the work of the same author as its container.

The museum is divided into six spaces organised into three thematic areas. The first deals with the legacy of Eduardo Torroja, the second with innovation in engineering and architecture and the third and final space with the world of horse racing.

In the area dedicated to the legacy of Eduardo Torroja, the first space, focuses on presenting the figure of the engineer through a biographical review and the inclusion of his outstanding works, with special attention to the design of the Zarzuela Hippodrome. The second space shows his works undertaken between 1927 and 1957, both engineering works (bridges, dams, aqueducts, etc) and architecture (markets, churches, stadiums, etc), as well as his models. The third and final space in this area is dedicated to the Institute of Construction Sciences, which bears his name and belongs to the Spanish National Research Council (Consejo Superior de Investigaciones Científicas, CSIC), in the construction of which he was able to undertake research activities and the diffusion of the progress of civil and architectural construction during the decades of modernity.

The following spaces are for temporary exhibitions, the history of horse racing in the hippodrome and a space for projections.

The works selected for the permanent exhibition follow the same criteria applied by the author in his book *The Structures of Eduardo Torroja*, published for the first time in English in 1958.

The aim of this museum is to bring the figure of this distinguished civil engineer, designer, scientist, researcher, manager and teacher closer to everyone. He played a leading role in the scientific and technical renovation that opened the way to the development of reinforced and pre-stressed concrete in the first half of 20th century and contributed to the evolution of the construction industry.

Model of the racecourse grandstands.



Centre Duquoy

# Old Conde Duque Barracks

## | Cultural centre

*Madrid*

### Promoter

Madrid City Council

The Old Conde Duque Barracks, one of the largest buildings in the capital, is considered the last great example of Madrid's architecture before the introduction of the Italian style with the works of the new Royal Palace (1738-1755). In it, the architect Pedro de Ribera knew how to combine French military engineering and Madrid's Baroque.

Protected as an Asset of Cultural Interest, after it was acquired Madrid City Council a process of restoration and refurbishment was started to house a large municipal cultural centre, the headquarters of a municipal library and archive, as well as various spaces for hosting artistic and cultural events.

### Historical background

The Conde Duque Barracks was the building that housed the Royal Guard Corps Companies (the elite military corps that guarded the kings, known as much for its bravery as for the wealth and beauty of its uniforms) belonging to Felipe V, first King of the Spanish House of Borbon. Its construction was commissioned by the Marquis de Vadillo from the architect Pedro de Ribera, master of works until 1717, although the work was completed by Manuel López Corona in 1754.

Of great dimensions and rectangular plan, following French military engineering, the building was organised around three courtyards, two smaller lateral ones and a larger central one that served as a parade ground for formations, parades and marching. The façades, composed with great horizontality based on a rhythmic succession of spans, were interrupted on the ground floor of the main façade only by small circles in the intermediate spaces and by the grandiose porch that gives access to the central courtyard. The walls were built of rough brick reinforced with ashlar at the corners while the porch was built of stone, of a rustic order wrapped by garlands, trophies and military symbols and topped by a large coat of arms of the Crown. Originally it was planned that the building would be finished with towers at the corners.

Initially the ground floor was intended for stables and the two upper floors for offices, officers' pavilions and troop dormitories. During the 19th century it was also a military academy, astronomical observatory and part of the optical telegraph communications system (the telegraphy tower was the first in the Castile Line that communicated Madrid with Irún). However, a devastating fire in

Main entrance to the Old Conde Duque Barracks.



Main porch principal in the central courtyard and entrance to the observatory.

1869 changed the history of the barracks: it destroyed the upper floors, nearly wiped out the entire west façade tower (which had been used as a prison) and marked the beginning of the building's decadence.

In 1969 it became the property of Madrid City Council and ceased its military use in favour of cultural purposes. Its declaration as a Historic-Artistic Monument in 1976 prevented its demolition and following the drafting of the Master Plan for the monumental complex, the process of integral refurbishment was started to adapt it to the needs of new cultural uses.

## Procedure

The main objective of the refurbishment and adapting of the Old Conde Duque Barracks was creation of a headquarters for the City Archive, a library and a support centre for museums.

The City Archive was located in the volume that divides the north and central courtyards. It consists of three storeys above ground level, space below ground for installations and storage for archives in basements 1 and 2 under the central courtyard.

To respect the building and adapt it to the users' needs, the ground floor respects the steps between courtyards that appeared in the first plans of Pedro de Ribera, protecting them with glass walls. There are spaces on the first floor for researchers and originals consultations and on the second for the offices and work rooms. In addition, two new staircases were built to facilitate access to the various floors.

The restoration of the brick on the façade gave the building back the military character of its origins. Cement plasters from previous restorations were carefully removed, recovering their original brick appearance. Missing or damaged parts were replaced by new hand-made units similar to the original ones.

The tiled roof was replaced with a zinc one, as well as the rainwater drains, and a skylight was included to allow natural light to enter the lower floors. A new area of facilities that serves much of the barracks was located under the roof. Finally, underground excavations were carried out to communicate the basements under the north and central courtyards.

The library facilities were located in the volume limited by the central courtyard, the north courtyard and the Callejón de las Negras. Before the works, this space was altered with previous actions, the last in the 1980s. This new procedure gave greater openness to the floors and a zone of spatial interconnection was generated in height.

City Archive information counters.

Entrance to the municipal library after refurbishment.





Research room in the City Archive.

Main library staircase.

Municipal library.



The main entrance to the library was through the original granite door by Ribera, from the central courtyard. The information and control point, loan, novelties and children's library and the "24 hours" area were located at the access level. The two upper floors, in which the open spaces were maintained, were connected by an open staircase and a lift.

The steel structures of pillars and floor slabs from previous actions were reinforced in accordance with the loads of the new uses. The coatings on walls, pavements, ceilings and installations, also from previous actions, were renewed.

The brick façades were restored, with the replacement of missing pieces, and the carved granite porch was cleaned, sealed and consolidated. Its exterior carpentry was replaced with solid iroko woodwork, of unique and special dimensions, made specifically for the barracks.



Openings refurbished in the ascent to the observatory.

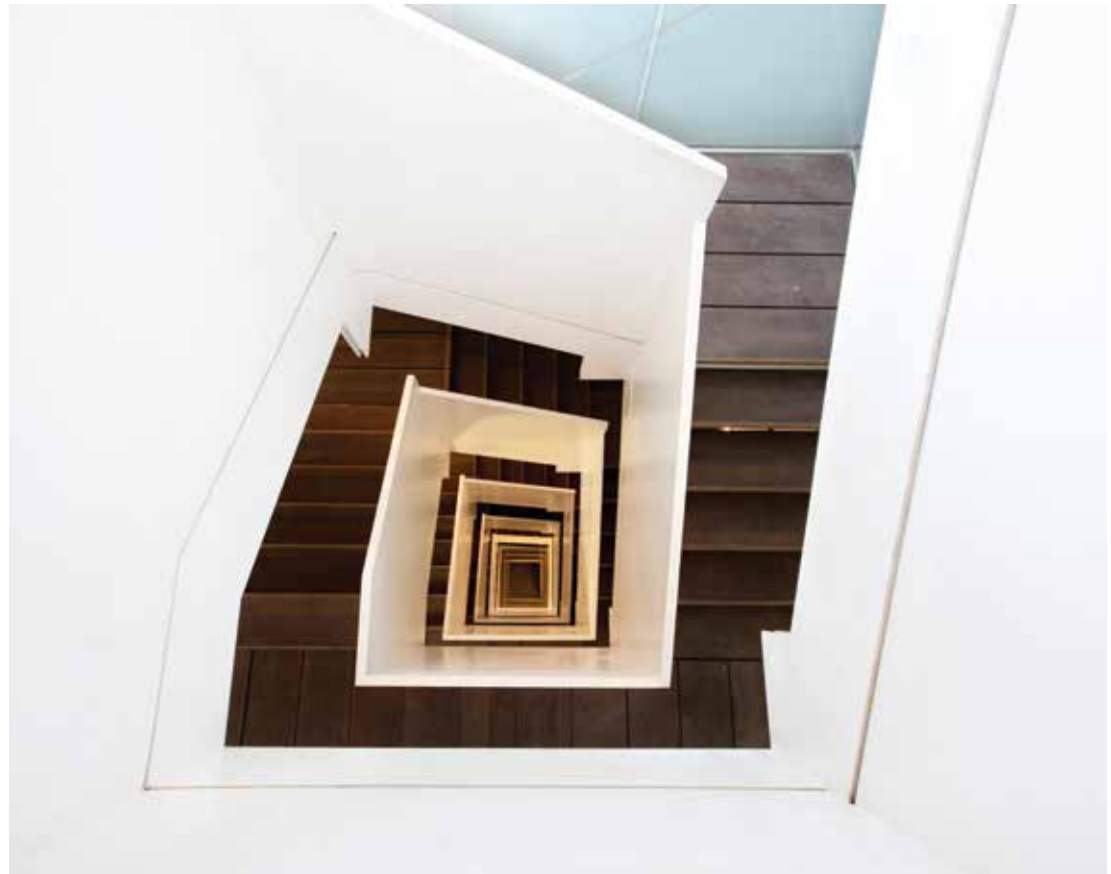
New observatory access stairs.

Upper observatory platform.





New staircase giving access to the observatory.



Views from the observatory.

The observatory area, damaged during the fires in the 19th century, was given a significant role in this refurbishment, raising its structure up to 36 metres high from the Callejón de las Negras and crowning it with a curtain wall that illuminates the visitor's ascent to its terrace with natural light. Its façade, with missing pieces, was reproduced mimetically by making silicone moulds on site to copy its ornamental elements exactly.

Finally, the eastern corner of the former barracks was refurbished for use as a support space for the museums and collections in the new cultural centre, including demolition, conditioning, improvement of accessibility as well as the refurbishment of walls and the installation of an intermediate floor with a steel structure.



# Madrid History Museum

## *Madrid*

### Promoter

Madrid City Council

The Madrid History Museum building (previously the Municipal Museum) is located in what was the seat of the old Ave María and San Fernando Hospice. Its entrance porch, the work of Pedro Ribera, is considered a masterpiece of Madrid's baroque style. For this reason, the main bay of the complex and the chapel have been declared Assets of Cultural Interest.

With the refurbishment of the chapel, one of the most important spaces of the building was recovered and the exhibition route of the Madrid History Museum building was completed.

### Historical background

The building that today houses the Madrid History Museum has its origin in the former Ave Maria and San Fernando Hospice, founded in 1673 by direct procedure of Queen Mariana of Austria. Its construction was slow, mainly due to the lack of funds, and this process included constant remodelling and expansion, such as that carried out by Pedro de Ribera, who gave the hospice the distinctive feature by which it is still known today, its porch, with which he succeeded in conferring dignity on a building generally poor in decoration and materials.

It seems that the original plan of the hospice was due to the Madrid architect José de Arroyo, who directed the works in the early years without managing to build the chapel apart from a few foundations that later proved unusable. The plan laid out by Arroyo for the hospice followed a usual scheme of bays around courtyards.

As in the rest of the building, difficulties were not lacking in its construction. The Arroyo design was unbuildable so the architects Felipe Sánchez, Teodoro Ardemáns, Filippo Pallota and Francisco de Sevilla proposed a chapel with a similar floor plan but of smaller proportions, which was built between 1699 and 1703. The result is a chapel based on the 17th century tradition with a saloon nave and a transept with short arms topped with a dome. The elevation of the nave, which alternates Doric pilasters and semi-circular arches, shows a taste for classicism. The roof is a barrel vault with oculi opening in its base that match the arches of the lower body. The decoration is austere, based on the enhancement of architectural elements and geometric motifs.

Porch of the old Ave María and San Fernando hospice, the work of Pedro Ribera.



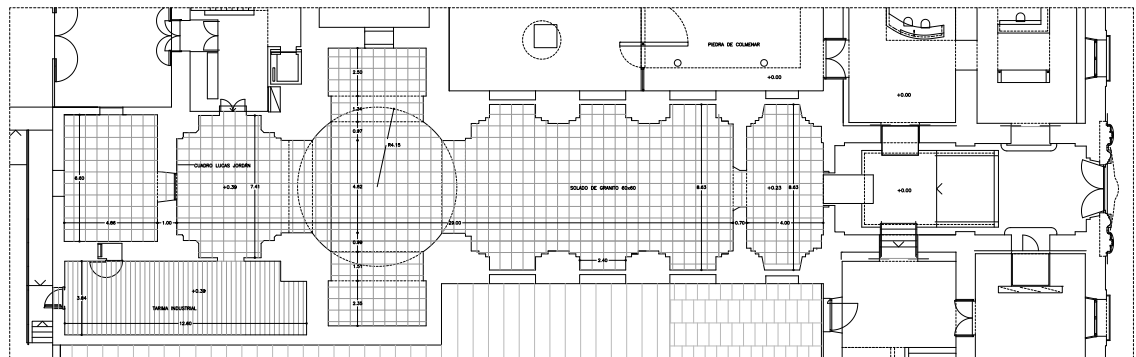
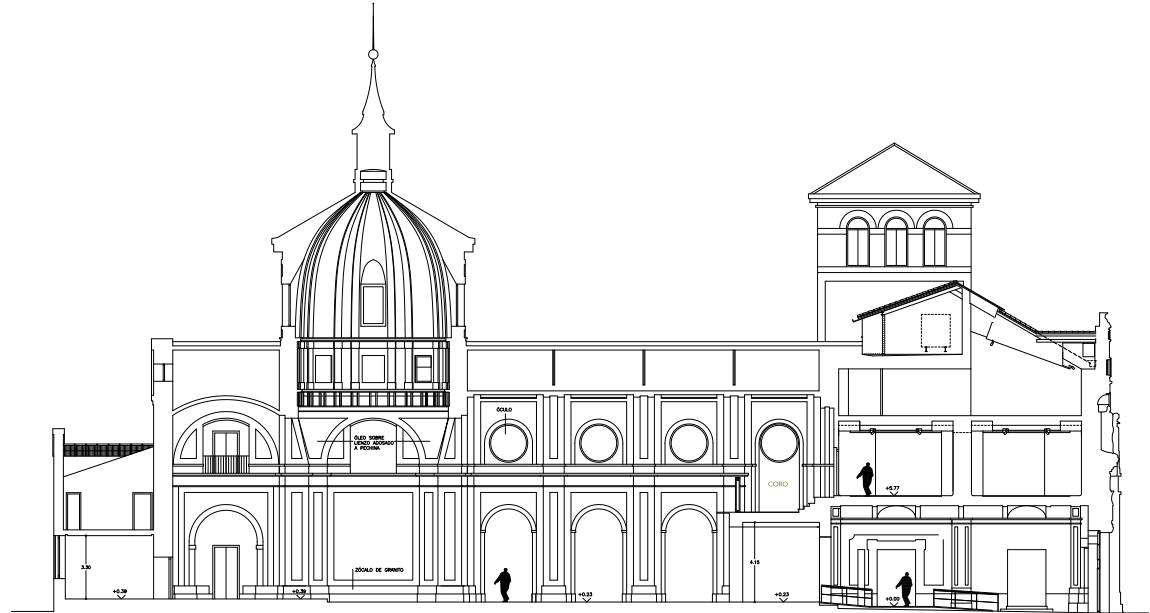
Entrance to the museum and chapel.

The octagonal dome crowned with slate roof and topped with a steeple stands out on the outside, a model of great profusion in Madrid's Baroque style due to the influence of the architecture of El Escorial. Openings on their faces let light penetrate into the interior, where the dome is curved.

Painting of Luca Giordano on the high altar.

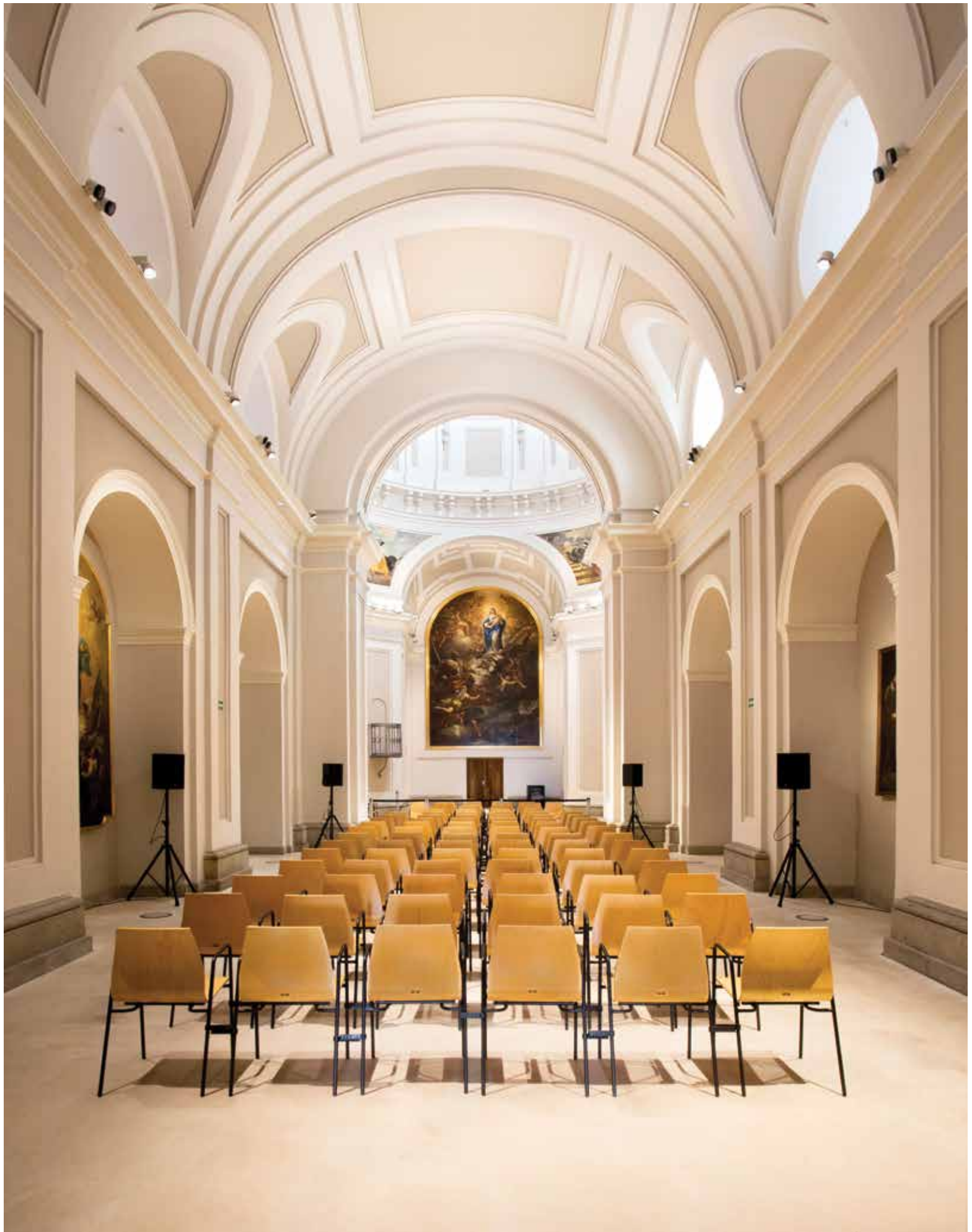
At its completion in 1703, a painting commissioned from Luca Giordano, dedicated to San Fernando, to whom the chapel consecrated, was installed on the high altar.

Cross section and floor plan of the chapel of the Madrid History Museum.  
Architect Juan Pablo Rodríguez Frade.



In 1922 the building ceased to function as a hospice and a few years later it seemed doomed to disappear. The part of the original construction protected as a National Monument was saved from destruction and dedicated to a museum and municipal library by a decision of the City Council, being inaugurated in 1929.

It was not until 1989 that another milestone in the history of the chapel took place. In that year, the Municipal Library, which shared the old hospice building with the museum, was moved to the Conde Duque Barracks, a fact of great importance for the chapel which had been used as a storehouse for the library until that time. Freed from this function, its refurbishment process was started.



Restored dome.



The painting by Luca Giordano dedicated to St Ferdinand was installed in the space of the high altar in 1994. The original painting had remained on the front of the chapel, although it was considered lost since the second half of the last century because it had been repainted to make it more modest, fleeing from the Baroque taste. With a clear religious theme, the painting shows the capture of Seville by Fernando III el Santo, who appears offering the city to the Virgin with the Child. The painting was restored and shown publicly in the chapel exhibition held in 1994.

Also outstanding in the chapel are the four panels painted in oil representing the figures of the four evangelists found in the spandrels, the structural and constructive elements that form the encounter between the circular base of the dome and the lower square space formed by the union of the nave and the arms of the cruciform floor plan. Each face was painted by a different artist, each is signed by its author and are dated 1909.

Refurbished chapel.



Restored pendentive: St John.

Restored pendentive: St Mark.

## Procedure

After the refurbishment of the Madrid History Museum and the future installation of a new permanent exhibition, it was necessary to remodel and refurbish the museum's chapel so that the entire building could be visited. The procedure followed the needs arising from the future use of the chapel as a multifunctional cultural space, valuing constructive elements of a historical nature.

Two side openings were created in the ante-chapel to facilitate controlled movement in the museum itself, conserving the access ramps from the hallway to guarantee accessibility for everyone, including an automatic glazed windbreak.





Restored pendentive: St Luke.



Restored pendentive: St Matthew.

An underfloor heating system was installed inside the chapel for heating or cooling according to the time of year. The oculi and window carpentry was replaced to solve water tightness problems and alabaster was installed to control natural lighting. Lighting and ventilation systems were installed that adapted it for exhibition use, respecting the ornamental nature of the space.

The paintings of the four evangelists on the spandrels were restored in a workshop by cleaning and removing repaintings, colour reintegration and varnishing, and were then reintegrated into the original wall.



Azkuna Zentroa

# Old Wine Warehouse

## | Cultural centre

*Bilbao*

### Promoter

Bilbao City Council

This Modernist-style wine warehouse, the work of the architect Ricardo Bastida, has been recovered and transformed into an enormous cultural container distributed in three thematic buildings, adding a total of 43,000 m<sup>2</sup> for leisure in its broadest sense. The procedure in the Bilbao municipal Wine Warehouse (Alhóndiga), protected as an Asset of Cultural Interest since 1999, has also known how to respect the heritage value of the building.

### Historical background

Originally, Ricardo Bastida planned the Municipal Wine Warehouse as a large, functional and advanced industrial building to serve as a warehouse for wines, liquors and oil. Built between 1906 and 1909, it was the affirmation of a new idea of a building in terms of its implementation since it was located in one of the blocks of Bilbao's extension and in terms of its construction, due to the use of innovative techniques from the structural point of view.

Today, the building continues to have a great presence in the urban fabric of the city, both for its location and for the fact of its mere survival in an area in which most of the constructions of its time have disappeared.

This is a quadrangular building, flanked by four towers, built of modest materials: concrete, brick masonry and artificial stone worked as rustic cushioned ashlar on the first floor.

On its façades, its stone base has a continuous arcade of moulded panels with arches on which a brick body with simple oculi rests. Above them, the upper floor, of greater decoration, stands out for the succession of openings defined by segmented arches.

In the corners of the building there are semi-free towers of circular plan supported by pulpits with abundant plant decoration. The towers rise to the first and second floors of the building and are topped by a slate roof dome crowned with a cupola. Both the decoration of the façades and their construction based on steel structures show Modernist traces.

Main entrance in the Plaza Arriquirar.



Corner towers with slate roofs.



Details of the original façade.

Widened block occupied by the Wine Warehouse building.

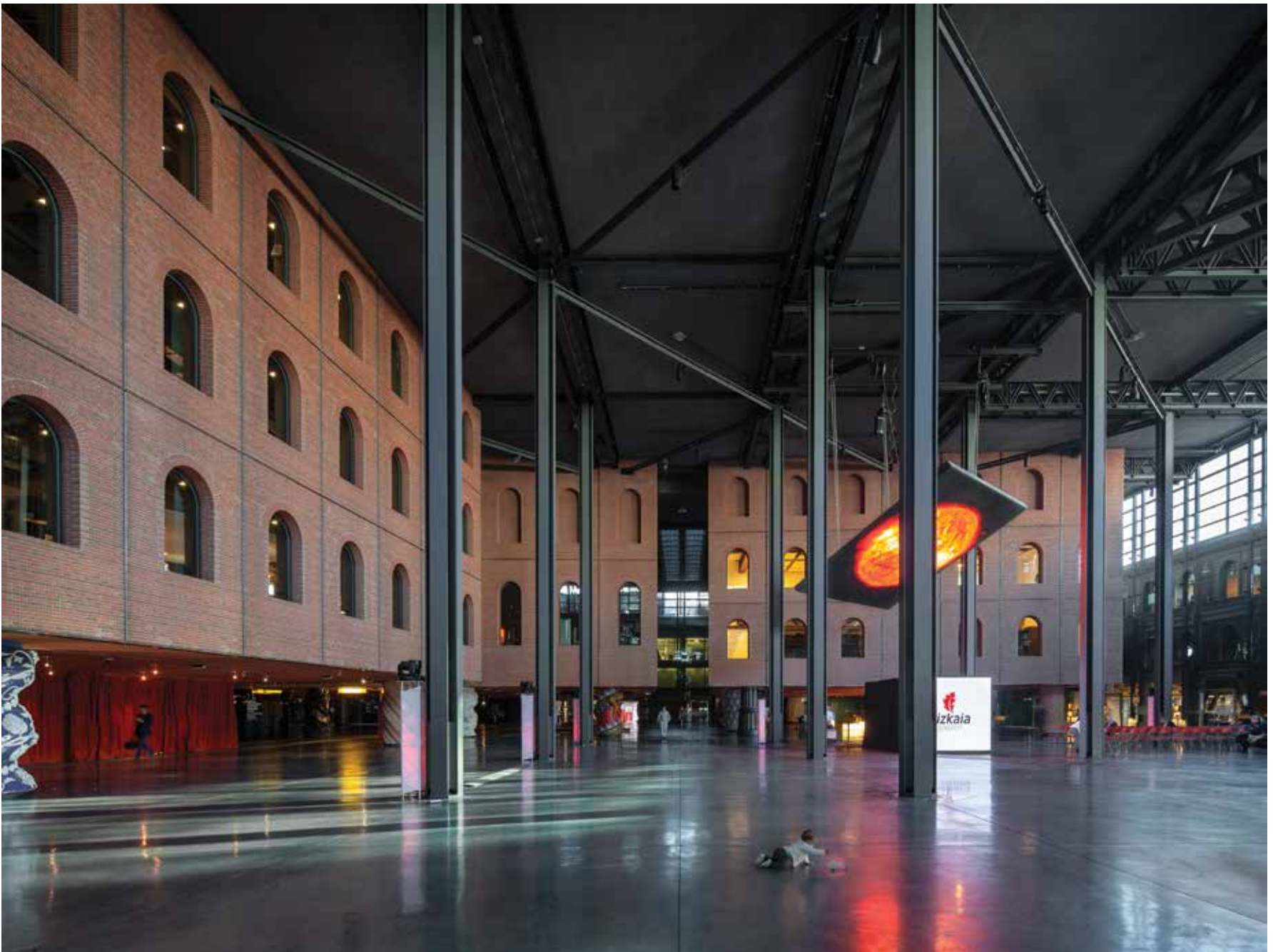


As well as fulfilling the functional requirements for which it was originally designed, the Wine Warehouse transcends the mere nature of a warehouse to become part of the fabric of the expansion as an element with the vocation of shaping the city. However, from the 1970s, when its activity moved to the new Wine Warehouse in the Recalde district, the building awaited a new use for the city.

### Procedure

The complex process of transforming the old municipal Wine Warehouse into a cultural and leisure centre began in 2002 under the auspices of Philippe Starck. For this, important works were carried out, on the one hand to maintain the façade and the crossings as a ring, stabilising, refurbishing and reinforcing the steel structure, and, on the other, to carry out an interior excavation, twenty metres deep, to install five levels of car park below ground level.

The main entrance was moved to the curved and chamfered façade overlooking the Plaze de Arriquirbar with the creation of four openings in the original wall. The old rotunda now serves as an antechamber and is an area of transit, rest and leisure. The existing accesses in the Calle Alameda de Recalde and Calle Iparraguirre were maintained.



Ground floor entrance atrium.

All the accesses converge in a large, open-plan space fifteen metres high which forms the ground floor atrium in which the fifteen large cruciform cross section steel pillars supporting the roof are visible, made of HEA 550 rolled profiles joined by the core. The differences in levels between the public street and the interior ground floor were overcome with a system of sloping platforms, ramps, stairs and lifts.

Inside, the three volumes (media library, sports and complementary activities buildings) were located to house the centre's sports and cultural uses: exhibition hall, cinemas, auditorium, media library, gymnasium, leisure swimming pool, solarium and cafeteria-restaurant, among others. Each of the interior volumes is a building in itself and is separate from the geometry of the pre-existing building. They each have their own façades in all their perimeters and they communicate with the rest of the complex by steel walkways.



New steel structure.

The three volumes are supported by pillars covered with handcrafted sculptures in steel, stone, bronze, brick, wood and marble that recreate different cultures and historical periods. The façades of the three buildings were built with a prefabricated facing system consisting of a reinforced concrete base and 4 cm thick slabs in various tones.

Unlike the media library and the complementary activities building, the sports building has only two floors, as it has double height for the sports courts as well as large spans for open spaces.

Generally, pressed wood shavings were used in false ceilings and coloured and polished concrete in the floors of public and transit spaces to achieve optimal acoustic comfort levels.





Exhibition space.

The conserved crossings have a full-height continuous glass curtain wall that gives views from the atrium of the original structure and the steel reinforcement installed. This glass façade consists of two skins, one of a three-storey laminar glass panel in the atrium, and a second one towards the interior of the two floors with 177 glazed openings. The inner face of the façade maintains the original appearance of Bastida's design, revealing the existing brick, restoring it and protecting it suitably to leave it in view.

The sports and complementary activities buildings are joined on the top floor, generating a single volume containing the swimming pool. This connects the two volumes and is glazed at the back, precisely in the empty area, to illuminate the inside of the atrium as a skylight. The terrace-solarium is accessed from the swimming pool volume.

After its refurbishment, the building - renamed Azkuna Zentroa - is today a leading public space in the city.



Media library building.

Glazed sports swimming pool.

Curtain wall inside the original façade.



# Monterrei Fort

## | Parador

*Verín (Orense)*

### Promoter

Government of Galicia

The Monterrei Fort, which dates from the 13th century, is located in a strategic enclave on the border with Portugal. Declared a Historic-Artistic Monument in 1931 and catalogued as an Asset of Cultural Interest according to current legislation, its refurbishment has allowed it to become part of the Paradores network.

### Historical background

The Paradores network arose at the initiative of the Marquis de la Vega Inclán and the Regia Tourism Commission. The Gredos Parador, inaugurated in 1928, was the first in a long list, to which several castles of medieval origin would be added, among them the Monterrei Fort, located in the Orense region of Verín.

It is a defensive enclosure consisting of three walled perimeters, which over time grew and incorporated buildings for non-military use including a church, a palace and a pilgrims' hospital.

The castle parade ground is accessed through a north-facing gate in the face of the wall. The oldest element of the complex is the so-called Torre de las Damas, dating from the beginning of the 14th century, which has been identified as the ancient Torre del Homenaje of the original fortification. Next to and integrated in it, the Pazo dos Condes was built between the 16th and 17th centuries with a rectangular floor plan and three levels, two of whose façades formed by galleries with arches are still preserved today.

The successive Counts of Monterrei (the first was Sancho Sánchez de Ulloa) built the Renaissance palace and the current Torre del Homenaje, which stands on the other side of the parade ground, with four floors that retain elements of great interest such as coats of arms, vaults, chimneys and staircases, and the pilgrims' hospital. They also reformed the medieval church of Santa Maria, a Gothic style church with a single nave roofed with wood and a rectangular apse with a ribbed vault and a bell tower.

Two bastioned enclosures were built in the 18th century where the Franciscan and Jesuit monasteries were located, under the direction of the military engineers of Felipe IV, Juan de Villarreal and Carlos de Grunemberg. Added to the military function of the fortified complex

Pazo dos Condes. Gardens.



Entrance to the old fort.



Verín area from the fort.



there was an intense cultural activity in the town of Monterrei, considered the cradle of printing in Galicia, from whence came the *Misal Agnese* and the publication of several bibliographic jewels of Galician culture.

The fortress gradually lost its military and defensive status as well as its religious character after the confiscation of the 19th century, which led to its decadence.

## Procedure

The purpose of the work was to convert the complex into a Parador, requiring the refurbishment of the Pazo dos Condes, the Torre de las Damas and the Casa Rectoral as well as the refurbishment of the exterior spaces and gardens in the complex.

The actions respected the original character of the monument, both in the constructional and finishing systems and in the forming of the interiors.

The state of conservation of the Pazo dos Condes prior to the work was quite good, although there were occasional leaks of water from the ceiling, the carpentry and the walls. The hotel was developed on its three floors, which included the incorporation of seven rooms with their services and a new communication core as well as the creation of a series of collective spaces for public use.

Castle parade ground and Pazo dos  
Condes next to the Torre de las Damas.





Monterrei castle fortified complex.

Communication between the various levels and the gardens around the Pazo dos Condes.

It was decided to maintain the original configuration of the Torre de las Damas, a prismatic volume which rises in the Pazo dos Condes and which is divided into three levels. However, the layout of the staircases was modified to adapt to the new levels, to free the windows from the interferences of the slabs and to seek a more suitable exit to the roof where a handrail was installed around its entire perimeter.

The work in the Casa Rectoral, residence of the clergy in the fortress, also consisted in the development of tourist accommodation, with five rooms, complemented by a series of additional services, shared with the Pazo dos Condes. It was a traditional two-storey building with two annexed exterior courtyards. Its construction followed the patterns of popular architecture with masonry walls and wooden structure with roofs of curved tiles. Unlike the Pazo dos Condes, its state of conservation was very deficient, the interior being in ruins and the roof significantly deteriorated. Access to the building was through an originally existing hallway.

For conditioning the exteriors, new paving was installed on the parade ground, its entrance esplanade and the area surrounding the church of Santa María. The most important point of this action was the provision of accessibility between the Casa Rectoral and the atrium of the church with the superimposition of wooden platforms supported so that they define the route from the parade ground to this point.

The refurbishment of the complex included the landscaping of the courtyard annexed to the Torre de Damas. This small space conserved a pair of holly bushes to which small areas dedicated to the cultivation of typical plants of the region were added. A steel staircase was incorporated into the garden, which can be accessed from the loggia on the ground floor of the Pazo.

The entire architectural procedure of the refurbishment has contributed to maintain the character of a medieval fortress and its Renaissance essence.

Torre del Homenaje from the Pazo dos Condes.



ANTIGO HOSPICIO MUNICIPAL  
CONCELLO DE FERROL



# Old Municipal Hospice

*Ferrol (La Coruña)*

## Promoter

Ferrol City Council

The old Ferrol Municipal Hospice is located in the La Magdalena district. Built in the reign of Carlos III, it is an example of the rational urbanism of the Enlightenment period. The district was declared an Asset of Cultural Interest in 1983 and in its grid structure, divided into numerous blocks of identical shape and dimensions, two large squares stand out at the ends, the Plaza de Amboaxe and the Plaza de Armas.

Built between 1800 and 1830 at the end of one of these squares, the old Hospice is of a sober neoclassical style influenced by the architecture of the city's military arsenal.

## Historical background

The old Municipal Hospice building arose at the end of 18th century, being originally a large neoclassical house known as the Mesón de Valentín. Ferrol City Council purchased the building in 1875 for use as the Municipal Hospice, an institution created in 1852 and which was originally installed in the old Hospital de Caridad. In 1895, while various refurbishment works were being undertaken, the architect Manuel de la Riva built the children's pavilion that overlooked the Calle María. The hospice suffered a major fire in 1904 and underwent extensive reform that led to the current building with two wings and a central courtyard.

However, in 1908 the building ceased to house the Municipal Hospice to become the Santa Teresa School, which was in operation until 1983. Since then the building had different uses until its refurbishment.

## Procedure

The refurbishment of the old Municipal Hospice was aimed at adapting the building to accommodate a civic centre with an assembly hall and exhibition hall on the ground floor, various classrooms and offices on the first floor, library and rest area on the second floor and archive and administration rooms on the top floor.

The architectural proposal sought to facilitate the reading of the historical evolution of the building using various materials in the original house and in subsequent actions as well as respecting the heritage elements and removing the uninteresting discordant ones.

Main entrance to the refurbished hospice.



Entrance courtyard.

Assembly hall on the ground floor.

Façade of zinc flakes.

Library with refurbished wooden structure.

Refurbished rendered façade walls.



Refurbished staircase.

Thus the original doors in the façade in the Calle del Sol, the block courtyard that had been closed generating important humidity problems and the façade of zinc flakes were recovered.

The main entrance was located in the Plaza de Amboaxe with the assembly hall on the ground floor so that it could function independently of the timetables of the other uses of the building, while access from the Calle Méndez Núñez allowed the entry of large items, increasing the possibilities of use of the building.

The procedure consisted of the dismantling and replacement of the roof as well as the replacement of the deteriorated wooden structural elements of and parquet and the protective treatment of the recoverable parts. The rendered masonry walls were preserved and lined inside with plasterboard panels and heat insulation. The façade of zinc flakes in the courtyard was renovated with new pieces and heat insulation.

Finally, the facilities were upgraded according to regulations and a hydraulic lift was included to ensure accessibility.



Sala de Batallas, El Escorial Monastery.

# Accessible heritage





The aims of the Fundación ACS include the conservation and dissemination of the Spanish historical heritage for its better knowledge. For this, is developing a programme for the elimination of barriers in the heritage in favour of the disabled.

This programme is carried out through partnerships between the Fundación ACS and various public institutions involved in the conservation of heritage and the defence of the rights of the disabled. The ultimate goal is to respond to a growing social demand and to the Convention on the Rights of Persons with Disabilities (United Nations, 2006) which states that accessibility to the cultural and natural heritage is a right of citizens and a duty of the institutions that preserve it.

Among them, it is worth mentioning the alliance established between the Fundación ACS, Patrimonio Nacional (National Heritage institution) and Real Patronato sobre Discapacidad (Royal Disability Trust), which has allowed seven Royal Sites to be made accessible. The process started in 2009 with the elimination of barriers for the disabled in the Royal Monastery of San Lorenzo de El Escorial and which today includes other measures to improve accessibility for the blind and deaf.

Within the framework of this programme, and on the occasion of the celebration in 2018 of the 8th Centenary of the University of Salamanca, the Fundación ACS has contributed to improving accessibility to the students' residence buildings and the Archbishop Fonseca Students' Residence in that university.

Special mention must be made of the support provided between 2008 and 2015 to Avila City Council in the implementation of its municipal accessibility programme, making its historic centre accessible to everyone, an international benchmark as an example of compatibility between heritage conservation and equal rights.

In collaboration with the Ministry of Foreign Affairs and its Spanish Agency for International Development Cooperation (AECID), the Fundación ACS has also collaborated in the removal of barriers in the architectural heritage linked to our country abroad. Notable in this heritage is the Royal Spanish Academy in Rome (Italy) and the Jesuit Missions of Jesús and Trinidad (Paraguay).

The results shown below allow Assets of Cultural Interest and sites declared World Heritage by UNESCO to be visited and enjoyed under equal conditions today, becoming leaders nationally and being recognised internationally by the United Nations for their pioneering nature and great social impact.





# Royal Monastery of El Escorial

*San Lorenzo de El Escorial (Madrid)*

## Promoter

Patrimonio Nacional

The Royal Monastery of San Lorenzo de El Escorial is one of the most important and visited monuments of our country. Promoted by Felipe II, it sums up the ideological and cultural aspirations of the Spain of the Golden Century, synthesising the Italian and Flemish artistic forms of the times to achieve its own language. The monastery forms part of the Patrimonio Nacional Royal Sites and has figured on the UNESCO World Heritage sites list since 1984.

## Historical background

The monument originated as a monastery of monks of the order of San Jerónimo, whose church was to serve as the pantheon of Emperor Carlos V and his wife, Isabel of Portugal as well as his son Felipe II and his relatives and successors. In it the friars were to pray uninterruptedly for the salvation of the royal family. It also had a palace to house the king and his entourage, a school and a seminary to complete the religious function of the complex and a library to serve the three centres, a scheme that is maintained to a certain extent to the present day.

Its construction began in 1562 according to the project or “universal trace” of the architect Juan Bautista de Toledo and continued under the orders of Juan de Herrera, always under the watchful supervision of King Felipe II. Juan Bautista de Toledo, who had worked at the Vatican as Michelangelo’s assistant, was responsible for the layout of the general floor and most of the alignments. His death left the final design of elements as important as the main porch, the basilica, the library and the church of the Evangelists in Herrera’s hands.

Although Felipe II already lived in the Monastery of El Escorial from Easter to autumn, especially at the end of his life, it was Felipe V who started the custom of spending the whole autumn there, until the beginning of December. This rule was followed by the rest of the Borbons until Isabel II.

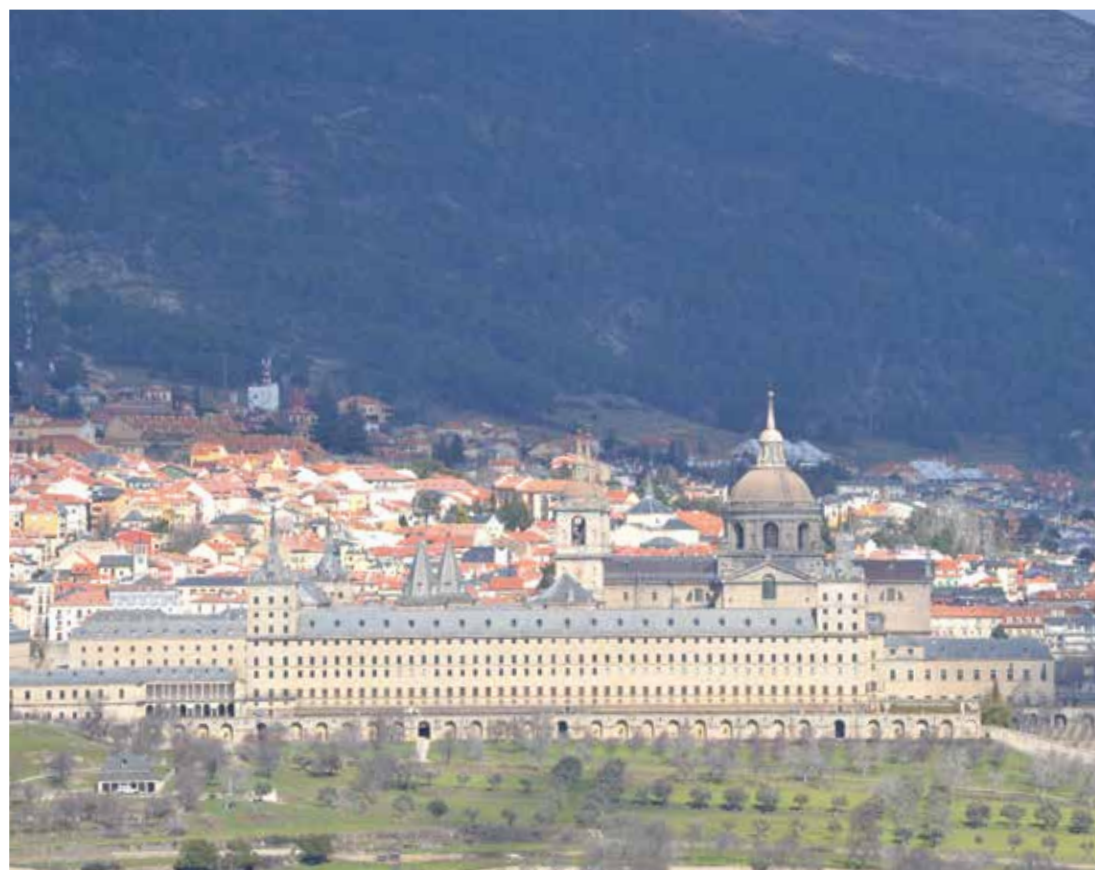
The monastery remained isolated in the middle of the countryside until Carlos III ordered the creation of a small court town around it. Juan de Villanueva was in charge of planning this new city, his design combining his Italian classicist training with the nationalist spirit with which the Spanish Enlightenment had associated Royal Monastery of San Lorenzo de El Escorial.

Main façade of the monastery.



Royal library.

View of the monastery from the Chair of Felipe II.



Bedroom of Felipe II in the monastery.

### Accessibility improvement

The original route for the public's visit to the Monastery of El Escorial covered various levels or floors including the Museum of Architecture, the Paintings Museum, the Palace of the Austrias, the Royal and Princely Pantheons, the Battle Room, the Royal Library, the Basilica, the Chapter Rooms, the Main Cloister and the Courtyard of the Kings. However, the existence inside of numerous staircases, of limited width in some cases, made access by the disabled very difficult in many of these spaces.

A detailed study of the complex was required to improve accessibility in the route of the Royal Site to adapt the technical possibilities and implement systems that would avoid the frequent changes of level, looking for a balance between the maximum respect for the spaces, movements and materials and accessibility for the greatest number of people

As well as being the object of visits, the monastery is a place where numerous institutional and cultural events take place. Thus another of the premises of the procedure was the reversibility of the actions, allowing them to be dismantled easily if necessary.



Monastery gardens.



Architecture Museum.

Carriages Courtyard.



Taking into account these two premises, it has become possible to visit the various spaces in the complex thanks to the installation of ramps to overcome small differences in level, wheelchair stair climber operated by specialised staff and a hydraulic lift for the largest differences in level.

Thus the Royal Monastery of San Lorenzo de El Escorial, of which only a minimal percentage could be visited by the disabled (the Basilica and the rooms around the Main Cloister, the Chapter Halls and the Old Church) with the added disadvantage of being entered from an inadequate access, today has a new accessible route.

After the procedure, the Borbon Palace, the Battle Room, the Royal Library, the Architecture and Painting Museums and the Austrias Palace are accessible for the first time. The Royal Library and the Research Rooms are open to researchers with disabilities who can now also exercise their right to research and study.





Detail of the Basilica access ramp.



Basilica dome.

With the exception of pantheons, which due to safety requirements for evacuation are beyond the scope of the procedure, the rest of the tourist route allows access for the disabled. Access to the Basilica is also greatly facilitated for those who attend religious services independently of the monastery visit.

All these actions have made it possible to significantly increase the areas accessible to visitors, covering more than 90% of the route, and to guarantee the safety of the disabled in the event of evacuation, thanks to a side ramp that allows evacuation directly to the Jardines de los Frailes from the Paintings Museum.

Patio de los Reyes and Basilica access.





# Convent of Santa María la Real de Las Huelgas

*Burgos*

## Promoter

Patrimonio Nacional

The Convent of Santa María la Real de Las Huelgas is part of the network of Royal Sites managed by Patrimonio Nacional. Catalogued as an Asset of Cultural Interest, it houses some of the best examples of Almohad art in the peninsula. Its monumentality and formal beauty have been witnesses to the close connection between the monastery and the monarchy since its foundation.

## Historical background

The convent was founded in 1187 by Alfonso VIII and his wife Leonor. The Queen took the French abbey of Fontevrault as her model (the spiritual centre of the Plantagenet dynasty to which she belonged) to establish a convent of Cistercian nuns destined to be the head of all the houses of the Order in Spain. It was also intended to be a pantheon for the dynasty, the reason for the institutional and architectural splendour of the convent between the reign of the founding kings and that of Fernando III, a monarch who was not to be buried here but in Seville on his death in 1252.

Although the monument as a whole fully follows the typical schemes of a European Cistercian convent of the time, the weight of the Hispanic tradition at the time of its founding was very important. For this reason, the first building erected by Alfonso VIII, temporary in nature, was dominated by the Mudejar forms of the Alarifes brought by the king after his campaigns in the south and only later would the grandiose Gothic abbey emerge.

Of the Mudejar construction with a square floor plan, the beautiful Romanesque cloister known as the Claustrillas stands out, with twelve arches on each side supported by paired columns and with buttresses in the corners and centre of each side. The rooms of the original convent were distributed around this cloister. The chapel of the Assumption was in the northern crossing, in the eastern, the Chapter House, in the southern, the refectory and kitchen, with other rooms in the western one. Currently, these last two crossings are courtyards and in the other two there are no other recognisable original remains other than the walls of the cloister and the chapel of the Assumption.

The chapel of the Assumption, formerly the main chapel of the original convent, is a work of purest Almohad art. The chapel functioned as the presbytery of the church, which contained the tombs of the founding kings and other members of the royal family until 1279. The decoration



Entrance to the Santiago chapel.



Paired columns in the Claustrillas.



of the plaster on the arch at the entrance to the chapel and of the windows illuminating the headwall is typically Almohad as is the vault, in which the uncrossed ribs in the centre form an eight-pointed star.

The chapel of Santiago is also next to the Claustrillas and probably originated as a public church for the court during the stays of the founding kings. Its structure is also Mudejar, rectangular, with a horseshoe arch that divides it into a nave and a presbytery. The latter is square, higher and covered with a richly-decorated Mudejar wooden armature the original colouring of which is well preserved.

There are other Mudejar elements in the cloister of the Convent of Las Huelgas, not in the Claustrillas area but within the Gothic abbey. These are the refectory and the El Salvador chapel. In both spaces, the Mudejar style can be seen on the ceilings while the wall coverings are of stone and the arches are fully Gothic.

Construction of the great Gothic church began well into the first half of the 13th century, during the reign of Fernando III, accompanied by the San Fernando cloister and various annexes such as the Chapter House, the refectory and the tithe barn.

The Claustrillas.



Central nave in the church.



Space reserved for converts in the church.

Medieval fabrics museum.



The mass of the church is dominated by the bell tower and lightened by the porticoes. The so-called portico of the confessionals covers the entire length of the nave and the similarity of its capitals with those of the oldest sector of Las Huelgas, the Claustillas, has led us to believe that these are elements reused in the mid-13th century work.

A large square vestibule that provides access to the church is attached to the north wall of the transept, illuminated by a curious rose window. To the east of the vestibule, the lower body of the tower leads to the chapel of the clergy or of San Juan Bautista, slightly later than the church and consecrated in 1288. The chancel, the only public part of the Las Huelgas church, is typically Cistercian in the layout of the main chapel, flanked by four smaller ones.

The presbytery underwent a radical reform in the 17th century, when the great altarpiece of Policarpo de La Nestosa, the organ and the chaplains' masonry were built, forming a coherent Baroque ensemble. In front of it, a thick wall separates the transept from the choir, from which the altar is visible through a large double grille that allows the congregation to follow the service.

The large cloister, called the San Fernando cloister, is accessed through a door in the nave of San Juan. The original openings of its galleries were walled up, replacing the columns with thick walls and leaving only the pointed arches open above them. Only the two sections of the immediate angle to the entrance preserve the original order.



Chapter House.

Royal or Las Cadenas gate.



Its partitioned vaults in the galleries have plasterwork derived from Almohad forms and the sacristy door in the cloister gallery is example of 14th century Toledan Mudejar carpentry.

Finally, the Chapter House stands out, where the space is divided by four pillars of cylindrical cross section with eight adjoining columns, covered with fine vaults. The semi-circular arch door and two large windows with pointed arches on the cloister side, as well as three other windows on the opposite side, illuminate the room under whose floor some of the most illustrious abbesses are buried.

### **Accessibility improvement**

The aim of the project was to allow everyone to make the journey through the Convent of Santa María la Real de Las Huelgas and to enjoy the singular works of art within it.

The work was designed in such a way that all the actions were fully reversible and could be dismantled as easily as possible to return the monument to its original state at any time. At the same time, it complies strictly with current regional and national legislation on accessibility and heritage.



Entrance to the church from the San Fernando cloister.

Generally, the accessibility improvements consisted of compacting the ground and levelling the granite flooring to facilitate the route and the installation of small wooden or sheet metal ramps, depending on use and location, to bridge the barriers and differences in level.

The visit to the convent begins on the north side of the complex, where the paving was repaired to avoid the flooding that occurred on rainy days and made access difficult. Thanks to the replacement of the access pavement drainage and the reform of the entrance door to the complex, reinforcing its hinges and adjusting its measures, as well as the installation of a ramp in the Compás de Afuera, safe access for everyone is guaranteed.





Wooden ramp in the Compás de Afuera.

Improvement of accessibility to the Compás de Afuera.



The procedure was completed with the construction of a glass windbreak at the church entrance, replacing the previous existing wooden one of no heritage value, and thus extending the visual connection. The original door and pavement were also restored.

After this procedure, the disabled can visit the public part of the convent complex, visiting the church, the Medieval Fabrics Museum, the San Fernando cloister, the Chapter House, the Cloisters, and the jewels of Almohad architecture such as the Santiago chapel and the chapel of the Assumption.



# Royal Convent of Santa Clara

*Tordesillas (Valladolid)*

## Promoter

Patrimonio Nacional

The Royal Convent of Santa Clara, located next to the River Duero as it passes through Tordesillas, in the province of Valladolid, was built in the 14th century. Declared a Historic-Artistic Monument in 1931, is now part of the assets managed by Patrimonio Nacional. As well as maintaining the cloistered convent life of Poor Clare nuns, the complex includes an old Mudéjar palace and Arabic baths, both open to the public since 1955.

## Historical background

The Royal Convent of Santa Clara was founded in 1363 by the Infanta Doña Beatriz, based on the specific wish in the will of her father, King Pedro I. The construction of the Mudéjar royal palace, occupied by the nuns and of which very important elements remain, is attributed to Pedro I himself. The Mudéjar decoration of this palace follows Christian models that were developed in Castilian lands and especially in Toledo.

The Mudéjar palace was an archetypal example of a Castilian palace of Andalusian tradition with a porticoed courtyard and halls with *albanías* on its four sides. The large rectangular porticoed courtyard was later used as a cloister and called the “Patio del Vergel” with four sides formed by long halls with alcoves at their ends. Behind the western hall lay the golden chapel and a small Mudéjar courtyard. The main porch of the palace, clearly Mudéjar and of which only one square vestibule is preserved, gave access to these main rooms.

The southern hall was undoubtedly the most important one in the palace and, therefore, it was converted into a temporary church when the convent was founded, later remaining inside the cloister as a long choir when the definitive church was built.

The current antechoir was originally a square room with three niches on each side and covered with a dome, forming a pair with the current sacristy; it became a rectangular space when a wall was demolished and extended to the line of the Mudéjar palace façade. Thus a kind of “public church” or “ante-church” was provided in front of the temporary church in the previous hall.

Convent next the River Duero where it passes through Tordesillas.



Convent cloister.

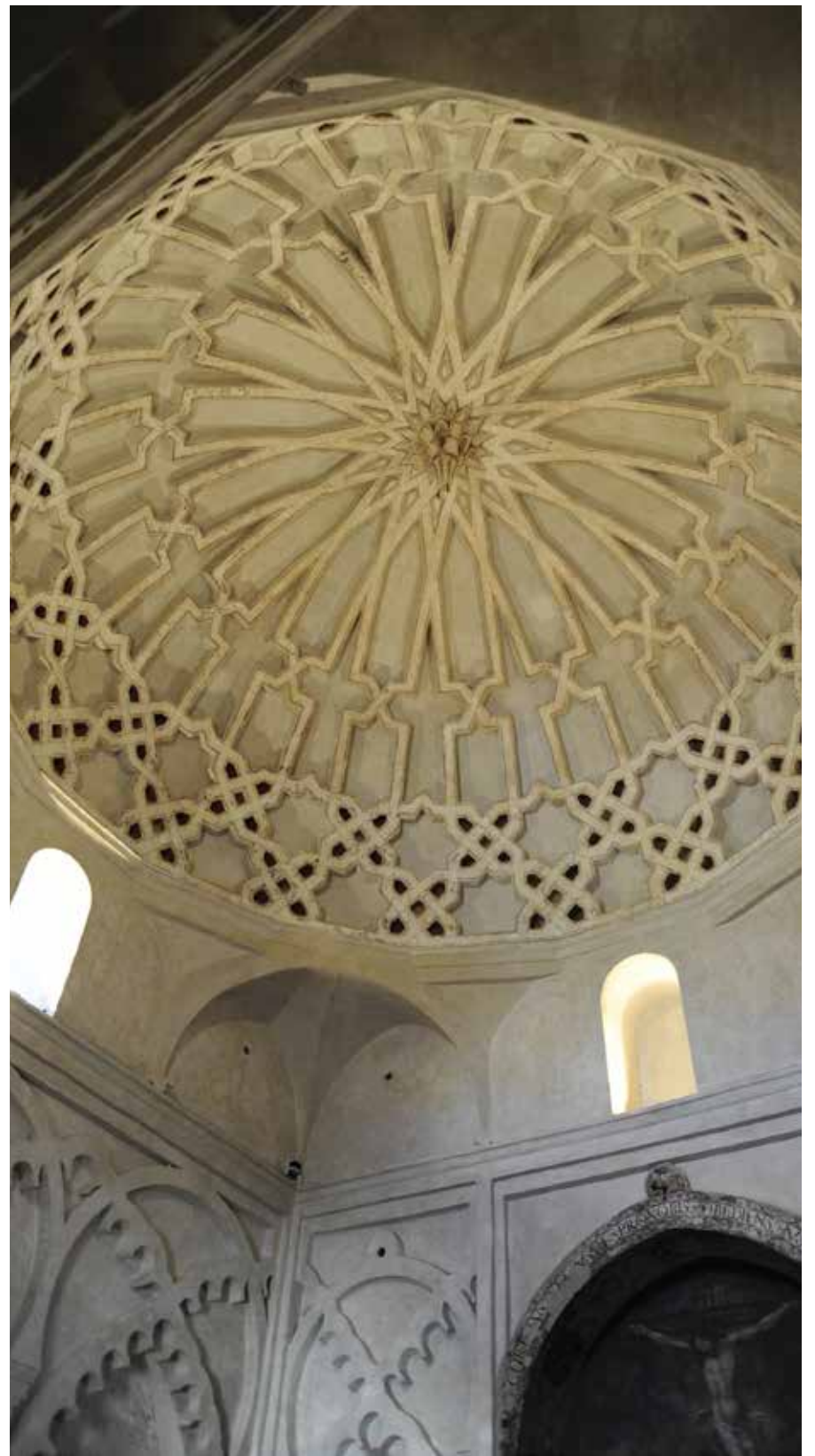
Mudejar entrance to the palace.

Patio del Vergel.



The golden chapel is one of the best examples of Mudejar sanctuaries in the peninsula. Next to it is the Mudejar courtyard which seems to have been the focus of domestic life in the palace. It reached the 20th century in a regular state of conservation, at which time several historicist elements were introduced.

The church is the most enigmatic part of the convent since its various construction phases are confusing and at first sight contradictory. The most notable feature of the church is the Mudejar roof of its large main chapel and the chapel of the Saldaña family. The latter is one of the most elegant displays of the German-Burgundian style, imported into Castile at that time. It was erected in 1430-1435 by Joosken de Utrecht and Guillén de Roan for the accountant of Juan II, Fernán López de Saldaña.



Arabic courtyard.

Golden chapel.

Sacristy dome.



Detail of the Arabic courtyard.

The Arabic baths building is behind the church and isolated from the convent, organised as a central room, divided into nine parts by four central columns.

There is a series of 18th century houses outside the convent and surrounding it. Among them, the one in the corner, called the “casa hospedería” or “Bishop’s house,” where Napoleon I lived and which preserves all the painted paper decorations prepared by the community in 1859 to give worthy lodging to Isabel II, stands out.

### **Accessibility improvement**

The visit to the Royal Convent of Santa Clara takes place especially in its southern half, not affected by the enclosed religious community that lives there. The route runs through its most significant rooms: the vestibule of the old palace, Arabic courtyard, golden chapel, refectory, main cloister, antechoir, long choir, church, Saldaña chapel, vestibule and Arabic baths.



Arabic baths.





Detail of the main chapel.

Saldaña chapel.



The procedure consisted of the removal of physical barriers during the visit, adjusting the different solutions adopted to the reduced dimensions and complying with current accessibility and heritage regulations. Advantage was also taken to extend the route to the area of the former stables, used as exhibition halls. The material used in the solutions was mainly wood with steel profiles on edges and trims where it was considered necessary, all following the same model that provided unity to the procedure.

Thus regardless of the visitor's mobility, today the visit to the complex starts from the compass, entering the old Mudejar palace to walk through the Arab courtyard and the golden chapel, continuing through the refectory, the cloister and antechoir, the church and the Saldaña chapel and ending with a visit to the presbytery and the sacristy. Thanks to the installation of a lift in the Visitors Centre, visitors can access the old stables area located on a lower level and continue the visit through it to the Arab baths.



# Monastery of San Jerónimo de Yuste

*Cuacos de Yuste (Caceres)*

## Promoter

Patrimonio Nacional

Founded in the early 15th century, the Monastery of San Jerónimo de Yuste was declared a Historic-Artistic Monument in 1931 for its artistic value and for its special historical relevance as the retirement residence of Emperor Carlos V, being also the first place where his remains rested. Given its significance among the sites and monuments connected to the history of the Spanish Crown, it was integrated into Patrimonio Nacional by Royal Decree in 2004.

## Historical background

The founding of the Monastery of Yuste dates back to the end of the 14th century when two hermit monks retired to live in the hermitage of San Cristóbal on the outskirts of Plasencia. After several changes of location until arriving in Yuste, the charter founding the monastery was signed on 25 June 1409. But it was from 1554 onwards when the complex underwent a fundamental change with the decision of Carlos V to abdicate and withdraw to the solitary Extremaduran monastery of Yuste.

In 1554 Carlos V himself informed the General of the Jerónimos of his intention to withdraw to the Monastery of Yuste. The emperor wished to end his days living a simple life with little accompaniment and from him came the fundamental ideas for the design of his rooms, specifically the need for direct communication between his bedroom and the monastery church so that he could see the high altar from his bed.

In addition to the private rooms, the orchard and gardens were built and planted with orange, lemon and citron trees with a large pond that provided water for irrigation.

After the death of Carlos V in 1558, the Monastery of Yuste regained its exclusive status as a religious monastery although when Felipe II moved to Yuste in 1570 to visit his father's tomb, he determined some important dispositions such as the preservation of Carlos V's rooms and forbade their occupation by the religious community.

As a consequence, the monastery is structured in two clearly different parts, the monastery and the emperor's residence, its perimeter being perfectly defined by a granite masonry wall built between 1568 and 1573.



Royal bedroom.

Portrait of the Emperor Carlos V.

Renaissance cloister.



The monastery consists of the church, a Gothic cloister and the new or Renaissance cloister. The Gothic interior of the church has a single nave covered by ribbed vaults and with the presbytery very high above the level of the nave. The main altarpiece was commissioned by Felipe II in 1580 from the painter Antonio de Segura from La Rioja, who was working at that time on the Royal Monastery of San Lorenzo de El Escorial.

Adapting perfectly to the architectural structure of the choir loft of the church, its original masonry is one of the most important pieces of the monastery. The stylistic differences between the lower and upper masonry show an extensive chronology of execution between the end of the 15th century and the first third of the 16th. The decoration of the lower stalls is clearly linked to the Gothic world while the higher ones feature grotesque motifs typical of the first Spanish Renaissance.

The crypt is under the floor at the chancel of the church, built according to the instructions given in the emperor's will on how he wished his remains to rest but which he never actually occupied, since they rested behind the main altar of the presbytery until they were transferred to El Escorial in 1574 by order of his son, Felipe II.

Complex and gardens.



House and palace of Carlos V.



The late 15th century Gothic cloister has a simple granite stonework appearance. The ensemble is of great elegance and severity due to its almost complete lack of ornamentation. In contrast, the new or Renaissance cloister dates from the 16th century and is notable for its semi-circular arches in the lower part and lowered ones in the upper part, on columns with capitals with plant and scrollwork motifs and decorated with coats of arms. The new refectory with an important Mudejar plasterwork pulpit is on the north side.

The Palace of Carlos V, next to the south wall of the church, is a simple building of brick and masonry. It consists of two floors with identical floor plans, based on an entrance portico and four rooms separated two by two by a central corridor and without internal communication between them. The upper floor was used in the winter while the lower floor was used in the summer. Currently, these spaces are occupied by offices of the Fundación Academia Europea de Yuste.

The main floor of the palace is accessed on its western side through a ramp-bridge depending on the needs of the emperor's life since through it he could ascend or descend in a litter or on foot on days when his health was better. Inside, the main hall of the palace, known as the emperor's hall, stands out, facing south and with good lighting and temperature. It was the room where Carlos V spent most of his time.

High altar in the church.







Carlos V ramp.

Opposite this room and next to the church chancel is the imperial bedroom or chamber where Carlos V died on 21 September 1558. It is fundamental to emphasize the oblique position of its door communicating with the church presbytery to give a direct view between the bed and the high altar, a requirement that Carlos V himself must have given.

In the ante-sacristy and sacristy, the only spaces open to public visits within the monastery area, a whole series of artistic works has been assembled that are a fundamental part of the Monastery of Yuste as evocative witnesses of the environment lived by the Jerónimos monks in this foundation in the Sierra de La Vera in Extremadura.

### **Accessibility improvement**

The accessibility improvement works in the Monastery of Yuste involved acting on the accesses from the outside, in the monastery itself and its church and in the Palace of Carlos V and its gardens. Generally, the solutions adopted with regard to the physical barriers in the original route were resolved outdoors by means of granite slab ramps and indoors with autoclave-treated wooden wedges and ramps with steel structures and interlocking wood with glass parapets on the greatest differences in level.

There is a car park reserved for disabled visitors next to the door in the southern façade, which leads to the monastery. From there, access to the complex is via granite slab ramps leading to the shop and lockers, with a counter adapted to the requirements of the disabled.

Two glazed windbreaks were installed at the entrance to the refectory and the emperor's palace to improve movement and provide the entry of natural light and interior comfort. New accessible lavatories were also installed in accordance with current regulations.

The installation of new ramps outside allows the disabled to descend to the gardens where the joints with the pre-existing granite and stone pavements were re-arranged and improved, thus ensuring the use of and movement in the gardens.

Side access to the church.

Access to the House/Palace of Carlos V.

Access to the museum.



# Royal Palace in Madrid

## *Madrid*

### Promoter

Patrimonio Nacional

The Royal Palace in Madrid, the official seat of the Head of State, is where the most solemn ceremonies of the Spanish Crown take place. As well as having been declared an Asset of Cultural Interest and being part of the Patrimonio Nacional Royal Sites, it is the largest Royal Palace in Western Europe and one of the largest in the world. It houses a valuable historical and artistic heritage, notably the Stradivarius Palatinos, the panels by Caravaggio, Velázquez and Goya and the frescoes by Corrado Giaquinto, Giovanni Battista Tiepolo and Anton Raphael Mengs.

### Historical background

“A Moorish castle that Enrique IV restored, Carlos V enlarged and Felipe II decorated; it was consumed by fire on 24 December 1734, but Felipe V rebuilt it, so that it has to face Eternity, in 1738.”

Thus reads the inscription on the first stone of the Royal Palace in Madrid, placed under the centre of the main façade on 6 April 1738. The construction was essentially finished in 1754 but it did not begin to be inhabited until ten years later, with Carlos III, when the Royal Palace in Madrid became the official residence of the King of Spain and the symbolic and representative seat of the Monarchy. However, since it occupies the place of the old Citadel of Madrid, it can be said that such a high function has lain in this same location since Felipe II took the decision to establish the court in Madrid in 1561.

As the official seat of the Monarchy, the New Palace was the centre of the system of Royal Sites, a system of seasonal royal residences which was defined at the same time as the capital was established in Madrid, and which was enlarged and perfected with new palaces during the following three centuries.

Felipe V wanted the architect of his palace to be the best in Europe, the most famous at the time. For this, the Italian Filippo Juvarra was called to Madrid at the beginning of 1735 and devised a first design. But Juvarra died in 1736 and the kings, delighted with his style, decided to call on his disciple, Giovanni Battista Sacchetti, to take over the building of this great project.

Main façade of the Royal Palace.



The definitive form of the palace was the product of a complex process, the fundamental points of which were Juvarrá's project, the adaptation of his designs, which in reality was a completely new project by Sacchetti, modified in turn in many details during its construction, and the reforms that the palace underwent through the work of Sabatini, Carlos III's architect.

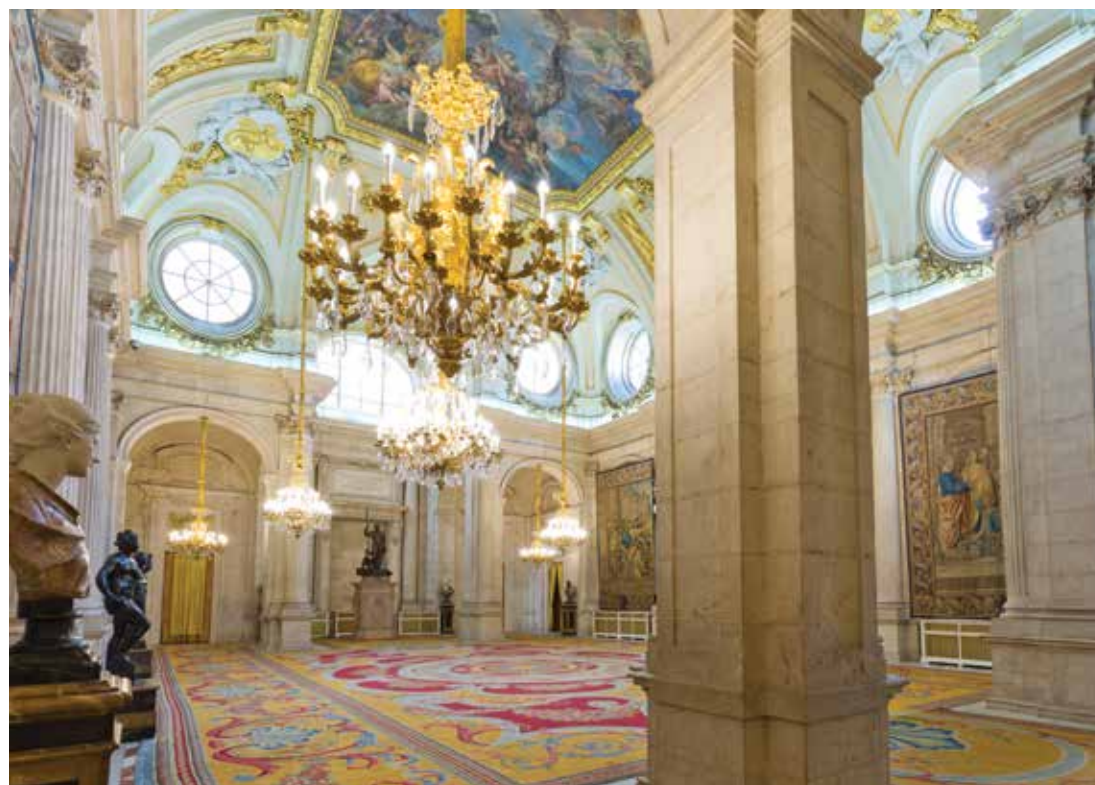
The memory of the fire that had destroyed the previous palace was apparent in the royal wish that all floors were vaulted and the building was fireproof and enduring, for which walls had to be made so thick as to support the thrusts. The general plan of the palace had not changed since that first project, dated 9 March 1737: square, with a single main courtyard, also square, in the centre and surrounded by galleries with arcades, and three small courtyards to illuminate the interior rooms in the corners. The decoration of each room is explained only by the function it fulfilled at that time and the taste then current. Although the current result is from the reign of Alfonso XIII, the last monarch who effectively lived in the palace, the decisive contributions in this sense were those of its first inhabitant, Carlos III, and those of his son, Carlos IV.

The Royal Library was moved to the northwest corner when María Cristina de Borbon ordered it moved from the main floor to use its rooms as private rooms. Almost all the beautiful "English style" fine wood bookshelves commissioned by Charles IV are now in the reading room and the remaining rooms are lined with shelves from the time of Isabel II and Alfonso XII.



The Armoury Plaza.

The Hall of Columns.

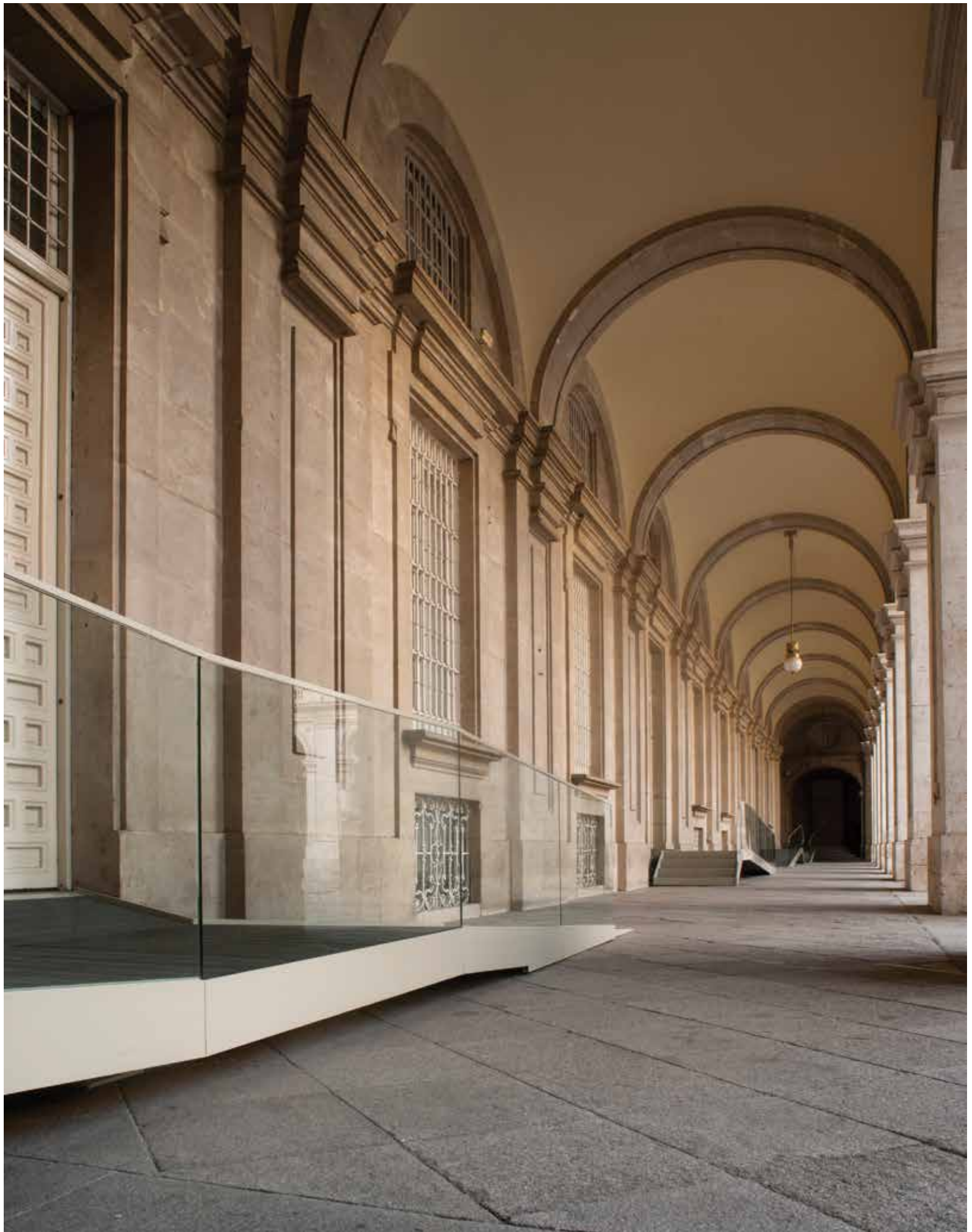


The Palace Archive, the second in Madrid after the National Historic Archive for the richness of its collection, remains where Fernando VII installed it, in the wing along the parade ground towards the park. The Royal Armory occupies a purpose-built pavilion at the end of that same wing to house the collection of weapons installed by Felipe II.

Various projects were devised for the gardens during the construction of the Royal Palace in the 18th century. José Napoleon showed special interest in this park - since he could not move to the Royal Sites - and commissioned Juan de Villanueva to lay out the garden with tree-lined paths and connect it to the Casa de Campo by a tunnel and a bridge, undertaken in the reign of Fernando VII. Isabel II ordered the complete replanting of the garden in 1843 according to projects by the main architect Narciso Pascual y Colomer who followed a formal layout still visible today, although the current landscape type design was commissioned by the Queen Regent Maria Cristina of Habsburg with curved paths that form the current historic garden.

### **Accessibility improvement**

The Royal Palace in Madrid was conceived as the place where the King of Spain was visible and accessible to all his subjects. The current accessibility improvement for visitors therefore updates a basic principle in the building's original function. As well as fulfilling this original mission, as one of the most prominent civil monuments in the peninsula it must also serve cultural objectives.



Patio del Príncipe.



The accessibility improvement actions at the Royal Palace focused mainly on the adapting and improving of access with ramps to various areas of the route through the palace such as the Royal Armory or the Official Rooms located on the main floor, as well as the rooms for temporary exhibitions and the rooms for researchers, both the General Archive of the Palace and the Royal Library, and other rooms in the palace.

At all times, the access ramps to the various areas sought suitability and integration into the environment with the choice of the most appropriate materials and colours. Being elements that can be dismantled in sections, they are a reversible action. Their steel structure with a technological wood platform is combined with steps at the opposite end and completed with a tempered glass railing with a U-shaped metal finish that protects the open free of the platform, steps and ramp.

Thanks to this procedure, the disabled now have access to the Royal Armory, the Palace General Archive, the Royal Library, the exhibition halls, the offices, the medical centre and the lifts of Charles III and the Damas. Due to lack of space in the case of the General Archives, mechanical means have been used, such as a lifting platform, to guarantee accessibility to the researchers' room.

Likewise, in the temporary exhibition area, the lavatories were adapted to incorporate accessible units and their facilities were modernised. In this area, the carpentry of the vault and the granite window and opening was recovered, all of which had been hidden over time.

To attend to other disabilities, a magnetic loop and information point adapted for the sensorially disabled was installed in the Palace Visitor Reception Centre, a measure applied in all the actions carried out in the Patrimonio Nacional Royal Sites.

Accesses to the ground floor exhibition rooms and the Carlos III lift.





# Royal Convent of La Encarnación

*Madrid*

## Promoter

Patrimonio Nacional

Among the Royal Patronages administered by Patrimonio Nacional, whose best-known example is probably the Descalzas Reales Convent, there are several of great historical and artistic importance, such as the Royal Convent of La Encarnación and the Royal Basilica of Nuestra Señora de Atocha, both recognised with the category of Asset of Cultural Interest. La Encarnación, a convent of the Augustine nuns near the Royal Palace in Madrid, was erected in the times of Felipe III.

## Historical background

The proximity of the Royal Convent of La Encarnación to the Royal Palace in Madrid allowed kings to enjoy direct access to the convent from the ancestral royal residence. This communication was possible through the “Incarnation passageway,” a long succession of galleries that ran along the second floor of the Treasury House, that is, along the present south and east sides of the central gardens of the Plaza de Oriente. Thus the sovereigns could access their royal tribune at the foot of the church through the hall called the Hall of Kings. This privileged access of kings and high nobility to the tribunes of the churches under their patronage was a frequent feature of the time.

The origin of the current convent dates back to the times of Felipe III. The king had brought the court back to Madrid in 1606 and was undertaking important architectural works in the Citadel when, in 1611, his wife, Queen Margarita de Austria, founded the Royal Convent of La Encarnación of Augustine nuns. The Queen did not live to see it terminated since she died in October of that year, but the widower King continued with the idea until it was completed in 1616.

Typical schemes of Francisco de Mora, one of the architects of the project, were applied in La Encarnación, especially in the main façade, of the type called Carmelite of which this is one of the most outstanding and influential examples.

The floor plan juxtaposes a cloister to the church, around which the monastic rooms are distributed. The cloister elevations have two floors with semi-circular arches on smooth square pilasters with a capital band, all in granite. The north aisle is occupied by the main staircase and the choir, whose front opens onto the church presbytery, behind which is the reliquary, while the sacristy and former sacristy occupy a protruding body to the north, between the garden and the Calle de la Encarnación. An open space, once a garden and later an orchard, lies between these

Porch of the Royal Convent of La Encarnación.



Convent church, remodelled by Ventura Rodríguez.

Entrance from the Calle Encarnación.

Removal of barriers in the convent.

two wings whose façades, linked by a cloister corridor that was apparently modified in the 19th century, are the originals, although they have been slightly altered in small reforms. Since the other courtyards were rebuilt in the 19th century, little can be said about the layout of the other rooms, although it should be noted that the original façade of the convent facing the orchard in the fig trees courtyard is preserved.

The most remarkable part is the church, which instead of showing one of its sides to the street as was usual, is surrounded by the adjoining rooms, which also form an entrance courtyard in the manner of a deep closed market. The rich stone façade of the church at the end of the atrium and the dome over the transept, are the focal points of such a coherent complex.

The church's façade follows the prototype composition of Spanish architecture of the 17th and 18th centuries: a portico of three arches in a high and narrow rectangle crowned by a pediment and framed by two thin pilasters gives access to a narthex under the tribune at the feet of the nave so that it is free of the overhang of the choir and creates a transition space between the exterior and the interior. All this façade, its market and the façades facing the Plaza de la Encarnación are one of the most symbolic and best-preserved places in the Madrid of the Austrias.

Thanks to the support of Fernando VI, the church interior was remodelled by Ventura Rodríguez who applied the classicist rule with precision. All this decoration has been preserved without any alteration, an exceptional case in Madrid. As far as the works in the convent during the 18th century are concerned, those carried out under the direction of Sabatini should be highlighted since in 1772, part of the garden had to be separated to open the "New Palace Exterior Street," today the Calle Bailén, and the same architect also then carried out several functional repairs in the convent.

The Royal House celebrated the funeral honours for monarchs in this church during the 17th and 18th centuries.

### **Accessibility improvement**

The aim of the procedure was to improve and extend the Royal Convent of La Encarnación's tourist route so that was accessible to everyone. The new accessible tourist route resulting from the procedure begins in the Calle de la Encarnación with a new piece on the outside that incorporates a ramp on one side and stairs on the other.

To guarantee access, the differences in level in the atrium and in the visitors' reception centre were resolved by levelling existing steps where possible and incorporating stone ramps outside and wooden ramps inside. Likewise, different solutions of wood and technological wood were used to overcome the accesses to the paintings room, cloister, sacristy and ante-sacristy with granite solutions for the differences in level outside the church. Finally, with this procedure, an accessible call button and lavatories for visitors were included in the route.



# Pantheon of Distinguished Men

*Madrid*

## Promoter

Patrimonio Nacional

The Royal Basilica of Nuestra Señora de Atocha, which contains the Pantheon of Distinguished Men in its cloister, has been one of the essential references of the history and religious life of the city of Madrid since medieval times. Declared an Asset of Cultural Interest, its current architecture is the result of the project of rebuilding undertaken during the Regency of María Cristina de Habsburgo of which the Pantheon of Distinguished Men was one of the first steps, as the integral reconstruction project could never be completed.

## Historical background

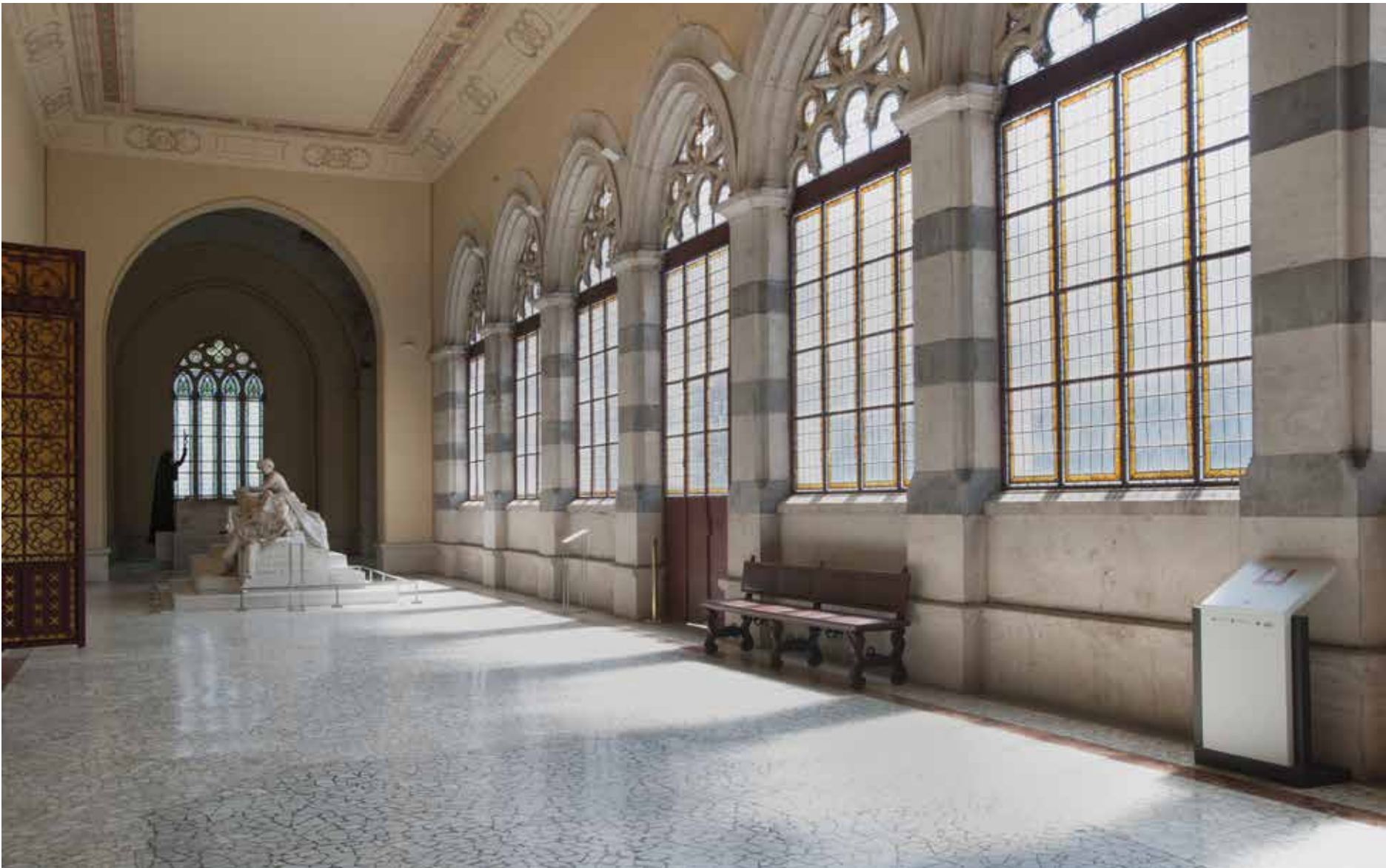
The Pantheon of Distinguished Men was designed by the architect Fernando Arbós in 1890. The church itself, which was never completed, would have been to the west, and its central axis would have been the bell tower behind the high altar. That beautiful tower and the adjacent cloister must therefore be understood as pieces of a grandiose complex that was never finished. But in themselves they constitute a monument of great importance, not only for their quality within 19th century Madrid architecture but also for the sculptures on the tombs and cenotaphs of the political and military personalities buried here.

The reasons why this pantheon was installed here at the end of the 19th century lie in the fate of the convent of Atocha after the disentailment. However, the historical roots of the image of the Virgin venerated here are much older and deeper, dating from the Middle Ages to the present day, and whose importance is linked not only to the history of the capital but above all to that of the Spanish court and monarchy during the Modern Age.

Originally, and until Charles I transformed it into a Dominican convent in 1523, Atocha had been a small hermitage dedicated to an image of the Virgin brought from Antioch, according to legend. When Felipe II installed the court in Madrid, popular piety towards this image became royal devotion and the Virgin of Atocha became the patron saint of the court in competition with the Almudena. Ceremonies of great importance took place in Atocha, such as the weddings of Fernando VII, Isabel II and Alfonso XII.

Completely rebuilt in the 17th century, by the 19th century the Church and Royal Chapel of Atocha were in a very poor state of conservation. Being a royal patronage, the church was not secularised during the disentailment, while the convent was converted into a barracks for invalids

Pantheon of Distinguished Men in the Royal Basilica of Nuestra Señora de Atocha.



Gallery with the funerary monuments.

and, therefore, the church was attached in some way to the military services. At this time it acquired a certain character of pantheon because illustrious military chiefs retired or who died while in service, such as Prim and Gutiérrez de la Concha, were buried in it.

The ruinous state of both the old convent and the church was definitively evident in 1885. The main Palace architect, José Segundo de Lema, was commissioned to rebuild it. After proposing a mere repair, he designed a large church with three naves and a high tower of 75 metres. Lema made a total of four proposals, none of which convinced María Cristina de Habsburgo, whose decision to demolish the church due to its poor condition and the relatively high cost of its repair and build another one in its place was supported by the Real Academia de Bellas Artes de San Fernando.

Having decided on the construction of a new sanctuary, the Royal House decided to convene a public competition of national architects for the purpose. The conditions set in 1890 involved the construction of a court church for state ceremonies. Thus, apart from the daily services to which the basilica was destined, the space had to be thought of in terms of great ceremonies to which Their Majesties and Highnesses had to attend accompanied by the court. The design by Arbós had an unmistakable Italian flavour especially influenced by Venetian and Florentine architecture and which is clear above all in the polychrome and marble treatment of the walls (alternating white and grey bands) as well as in the composition of the entrance openings and the openings in general. The intendency of the Royal House was committed to erecting the pantheon before anything else. Therefore, the construction of the pantheon and *campanile* was contracted in a first phase and this was all that was carried out between 1891 and 1903.

The spirit in which the pantheon was conceived, arising from the generals that the old church had acquired during the 19th century due to the installation of the barracks for invalids, is typical of the Alfonsine Restoration. The demolition of the old building made it necessary to place them with dignity in the new one, but not being limited to this, it was first intended to place them in an independent space and then to dedicate it not only to the military but also to “distinguished men.”

In such a way did the national pantheon arise, certainly at the direct initiative of the Regent. However, the reality was different and the Atocha pantheon was finally conceived by the Restoration State as a military and political pantheon. It was occupied by only politicians and generals of the 19th century and a few of the early 20th century. Not even the initiative to bury a literary figure as friendly to the regime as Echegaray there succeeded. After 1939, the conceptual impoverishment of the pantheon was compounded by the transfer of the remains of Prim, Palafox and Castaños to their home towns. The most notable tombs are those of Sagasta, Canalejas and Dato, by Benlliure, and that of Cánovas del Castillo, by Querol.

### **Accessibility improvement**

The Pantheon of Distinguished Men is on a single ground floor, surrounded by a garden that separates it from the official alignment with the Paseo de la Reina Cristina and the Calle Julián Gayarre. The main entrance to the garden is by a staircase from the latter.

Through the accessibility improvement project, an alternative access was proposed in the area of least difference in level with the Paseo de la Reina Cristina. To carry out the procedure it was necessary to dismantle part of the fence and its base, reinforce the fence and then install a granite ramp inside the garden and rearrange the nearby parterre. The difference in level between the garden and the interior of the pantheon was overcome with a fibreboard ramp.





# Escuelas Mayores in the University of Salamanca

## *Salamanca*

### Promoter

University of Salamanca

The Escuelas Mayores (Upper Schools) is the main building in the University of Salamanca, construction of which began in the first decades of the 15th century. Its main façade, dating back to the 16th century, is the image of the University and an outstanding example of Plateresque architecture.

Declared a Historic-Artistic Monument in 1931, today it is part of the complex of buildings that has been declared a UNESCO World Heritage site together with the old city of Salamanca.

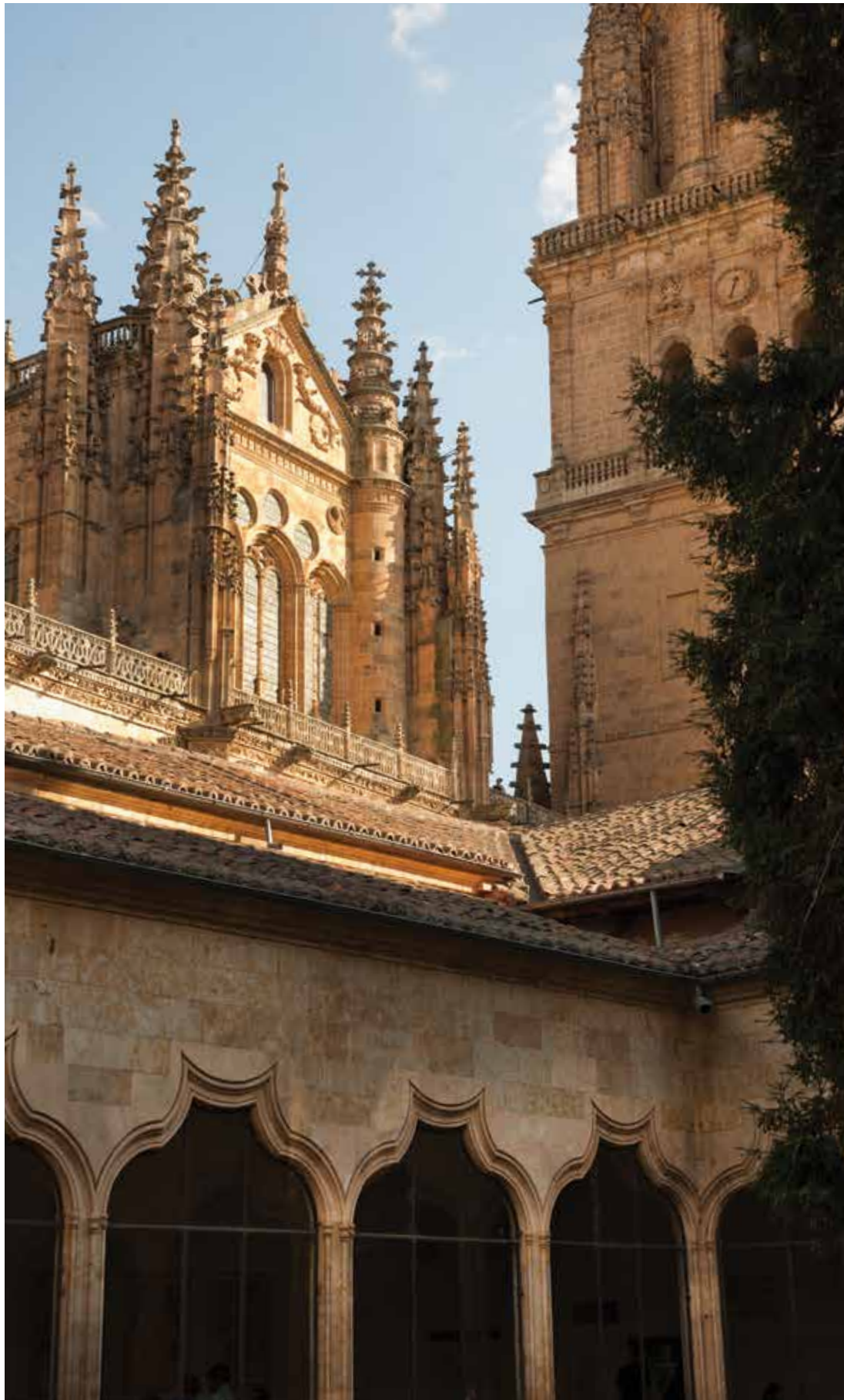
### Historical background

In 1218 King Alfonso IX de Leon issued the order to “bring together professors who are experts in Biblical science and establish that Study take place in Salamanca,” as Lucas de Tuy mentions in his *Chronicon Mundi*, written in about 1237. Ferdinand III el Santo confirmed his father’s the mandate in 1243 and the presence of Study was strengthened by the promulgation of several royal diplomas and Papal Bulls throughout the 13th and 14th centuries, notably the one signed by Alfonso X el Sabio in Toledo in 1254, which instituted new rules for the functioning of the Study.

With Study in Salamanca fully consolidated, the most symbolic buildings began to be built in the first decades of the 15th century — those destined for teaching, Escuelas Mayores and Escuelas Menores as well as for assistance, the Student Hospital — that is, the germ of what is now known as the City of Knowledge. The starting point of the Escuelas Mayores (already so called in 1443) lay in the Constitutions granted by Benedict XIII in 1411, by providing for “four auditoriums of jurists and three of theologians, doctors and philosophers” to be built there. At the end of the 15th century this building already had a quadrangular floorplan organised around a more or less trapezoidal courtyard with semi-circular arches and surrounded by four single-storey galleries onto which the general rooms or classrooms and the chapel opened. The exterior also had a very irregular profile and two access doors, one to the east and the other to the west.

Throughout its long existence, this building has lived through periods of great constructional activity in which the enlargement and reform works finally configured its current image, featuring a great lack of stylistic definition and in many aspects far removed from its original iconography. The first great library, built between 1474 and 1479 by the Muslim masters Yuga and Abrayme and painted shortly afterwards by Fernando Gallego with a unique astrological programme

Main façade.



View of the cathedral from the cloister in the Escuelas Mayores.

with the famous *Cielo de Salamanca* (*Sky of Salamanca*) belongs to the first stage. The first great refurbishment of the chapel of San Jerónimo dates from the same period, with the installation of its main altarpiece with carvings by Philip Bigarny and Gil de Ronza and boards painted by Juan de Flanders, the late Gothic sacristy, the staircase, the magnificent ribbed vault of which connects with the works of Juan Gil and Juan Campero, the second large library, in the same place as the current one, the enigmatic Gallery of Enigmas or Hieroglyphs and the rich façade with the annexed hallway that became an icon, symbol and image of the University of Salamanca and one of the main attractions of the city of Tormes

In 1749 Andrés García de Quiñones devised a project that put an end to the tectonic problems that had plagued the library since ancient times, adapting it to the taste of the new times and also giving it a vault since the previous one had collapsed. Shortly afterwards, the Rector's House and the current Unamuno House/Museum, were built according to a project by the same architect to house the summer Cloister Hall. A few years later, and also with the desire to reconcile this area with the art of the time, the vault and the altarpiece of marbles and jasper in the San Jerónimo chapel were built. In 1774 the architect Juan de Sagarbinaga added a new space to the library to house the 12,000 volumes from the school of the expelled Jesuits - the Room of Manuscripts, Incunabula and Forbidden Books, which stands on the hallway attached to the rich façade. And in 1791 it was agreed to renovate the old Cloister Hall, the "quadra alta," an area in the southeast corner of the upper floor that was of great representative value and essential for institutional functioning. It was built following the project by the master Lesmes Gabilán Sierra, who also directed the work.

The last major construction phase carried out in the Escuelas Mayores took place between 1875 and 1879. The architect José Secall directed a new project to enlarge the University based on the erection of the current eastern façade, that of Las Cadenas, in the classicist eclecticism used at that time in public and institutional buildings, and of the northern and eastern crossings in the upper cloister and also that of the southern wing; with its galleries formed by seven mixtilinear arches identical to the quinientista ones in the Gallery of the Enigmas, with which it sought the regulation and spatial uniformity of the building. Without doubt, this procedure was the most important nineteenth-century work undertaken in the university infrastructures in the midst of the desolate panorama of the 19th century and this completed the image of the Escuelas Mayores, this living monument that has systematically modified its physiognomy throughout the centuries.



San Jerónimo chapel.

### **Accessibility improvement**

The project to remove physical barriers in the University of Salamanca's Escuelas Mayores building consisted of raising the pavement at the main entrance, the relocation of the stone steps of the rooms around the courtyard, lowering their level, and the inclusion of a lift to connect the floors, thus providing access to the classrooms and the chapel.



# Archbishop Fonseca Students' Residence

## *Salamanca*

### Promoter

University of Salamanca

The Archbishop Fonseca Students' Residence building, by the architects Juan de Álava, Diego de Siloé, Rodrigo Gil de Hontañón and Alonso de Covarrubias, is one of the most outstanding examples of the Renaissance in Spain. A University of Salamanca residence, it was declared a Historic-Artistic Monument in 1931 and today is part of the complex of buildings in Salamanca declared a UNESCO World Heritage site.

### Historical background

The Archbishop Fonseca Students' Residence, or that of Santiago el Zebedeo, one of the six students' residences that existed in Spain, was founded by Alonso de Fonseca y Acevedo (1476-1534). Archbishop of Santiago de Compostela and of Toledo, the highest dignity to which an ecclesiastic could aspire in the Spain of the time, Fonseca had been a former student at the University of Salamanca, a consummate humanist and a personal friend of Erasmus of Rotterdam, for which reason he sponsored many important artistic works in Santiago de Compostela, Salamanca and Toledo.

Designed in 1518 by the architect Juan de Álava - work began in 1521 - the Fonseca Residence is typical in plan and elevation of the scheme of this type of buildings intended for study, where internal seclusion and the ecclesiastical connection were essential elements. In this sense, it should be remembered that life in the students' residences was very monastic despite their being a secular foundation and was perhaps the closest institution to the organization of religious orders regarding the idea of individual life within a community.

It is organised on the basis of an interior courtyard or square central cloister with sides 40 metres long, surrounded by four two-storey corridors that, animated by 128 medallions arranged in the spandrels of the arches, are communicated by two good cloister staircases in which the scholars' cells or dormitories are located in the west and in the north, all with windows opening to the exterior. Both the cloister and the main porch were built between 1529 and 1534 in a phase featuring the use of a profuse and careful decoration. They were designed by the architect and sculptor Diego de Siloé and the humanist Fernán Pérez de Oliva, Rector of the College and the University, although the undertaking fell on Juan de Álava and Juan Martín.

Façade and main entrance.



Cloister and cupola.

Because of the difference in level of the ground, the main façade is preceded throughout its extent by an elevated atrium that gives it great importance and that is accessed by two parallel staircases arranged in the porch section. The atrium is bordered by granite columns joined by wrought iron chains, a symbolic element that is very common in buildings under special jurisdiction. Following the traditional layout, the entrance hallway is in the main façade, designed by Juan de Álava, flanked to the left by the “great general, aula magna or auditorium,” used for the most important events of college life, and over which the great library was arranged in the second body, and to the right by the chapel. In the headwall there is the exceptional high altarpiece created by Alonso de Berruguete between 1529 and 1532. The eastern wing of the ground floor was occupied by the refectory, the kitchen and adjoining spaces, while the upper floor of the same area, the northeast corner, was reserved for the rectoral room, rectoral anteroom and the Rector’s room, the latter the fruit of the work directed by Juan de Sagardinaga between 1764 and 1765.



Students' Residence cloister.



### Accessibility improvement

The main objective of the procedure was to guarantee access to the Archbishop Fonseca Students' Residence from the street, trying to affect the exterior view of the building, so typical of it, as little as possible. For this, the installation of a ramp behind the retaining walls was proposed, with the same materials as the existing pavement and with references to an old ramp that existed in the same place, as shown by historical references.

In addition, the existing steps were lowered, the lavatories were adapted for the disabled and wooden or technological wood ramps were incorporated into the interior to facilitate access to the most significant spaces of the residence such as the assembly hall, the cloister, the paintings room and the chimney room.

The existing lift was replaced by an accessible lift to allow comfortable access to the upper floor for everyone. The procedure was completed with the incorporation of an accessible bedroom within the accommodation offered by the residence.

Access ramp integrated in the façade.





# Historic centre of Avila

## *Avila*

### Promoter

Avila City Council

Avila, a city declared a World Heritage site by UNESCO, is a reference in the field of the integral and inclusive refurbishment of heritage. Among other awards, its historic centre received the 2008 Queen Sofia Universal Accessibility Award, recognition as the first European Accessibility City in 2011 and the Queen Letizia Universal Accessibility Award for Municipalities in 2016 for the actions promoted at the municipal level taking into account the diversity of capabilities of its inhabitants and visitors. These multiple awards show that accessibility to heritage is possible and the city of Avila is a good example of this.

### Historical background

Situated along the course of the River Adaja, Avila has one of the best-preserved medieval walls in the world and its historic centre contains an extraordinary number of remarkable civil and religious buildings, the result of its intense history.

Its first settlers were the Vettones in the 7th century BCE although it was the Romans who consolidated its urban structure, with the name of *Abula*. The forum of the Roman city was located in the current Plaza del Mercado Chico, around which the first walled enclosure was built.

Its present appearance began to arise during the repopulation policy carried out by the Kingdom of Castile after the reconquest of Toledo by King Alfonso VI in 1085. It was then, between the end of the 11th century and the beginning of the 12th, when the great birth of the Romanesque in Avila took place, and the construction of its walls and some of its main churches began.

Later, during the 16th century, Avila lived its era of greatest demographic, social, cultural and economic splendour. Witnesses of those years are the numerous convents and monasteries erected by different religious orders thanks to the patronage of noble families who built palaces and civil buildings that today are preserved, converted to private or public use.





Plaza de la Santa made accessible.

Remodelled Calle Madre Soledad.



San Juan Bautista church.

Remodelled Calle Santo Dávila.

## Municipal accessibility programme

The accessibility programme promoted by Avila City Council includes a series of actions that, since 2008, seek to ensure that heritage can be enjoyed by everyone regardless of their abilities and needs, especially in view of the celebration of the 5th Centenary of the birth of Saint Teresa of Avila in 2015.

One of the first actions promoted was the improvement of access to churches open to worship. The transoms in the accesses, integrating them in the area swept by the doors were eliminated. This type of procedure was carried out in churches such as that of the Inmaculado Corazón de María and Santa María de Jesús, popularly known as Las Gordillas. In both churches the atrium floor was also raised to eliminate the entrance step and in their surroundings, isolated steps were eliminated and stones grouted to prevent possible falls.

Access was also improved in the church of San Pedro Apóstol with the installation of a system of removable ramps since it was necessary to combine the usual entrance with the possibility of opening the large door on some occasions.

In the walls, the greatest monument in the city of Avila and the one that receives the most visitors, an accessible section was opened to visits in 2008 in its lower area, next to the Puerta del Puente. In addition, taking into account the functional diversity of its visitors, typhological models of each of the gates in the walls and one of the walled complex were installed in the Visitors Reception Centre. These walnut wood models make it possible to touch a monument that has a perimeter of two and a half kilometres and is more than twenty metres high at some of its points. Each model is placed on a table that allows wheelchair users to approach it at a height that makes it easy to explore. Next to it there is a location map and an information plate in text and Braille as well as a QR code that links to the walls' Web site where the static information is also offered in sign language.

In 2015, the initiatives for the 5th centenary of the birth of Saint Teresa of Avila included the promoting of an accessible route connecting two very important monuments related to the life of the saint, her birthplace, where a convent was erected in the 17th century, and the church of San Juan Bautista, the parish in which she was baptised.

In the saint's convent, her birthplace, the main entrance was made accessible by playing with the two heights of the square. The accessibility of the nearby streets on the route such as the Calle Madre Soledad, the Plaza del Corral de las Campanas and the Calle Sancho Dávila was improved. To end the route, in the church of San Juan Bautista the exterior street level was raised, the transom was eliminated, the floor of the gate was raised and the gate's lateral wooden cubicles were replaced by others of glass, which allows the interior of the church and the baptismal font of Saint Teresa to be seen without having to enter when the church is closed.

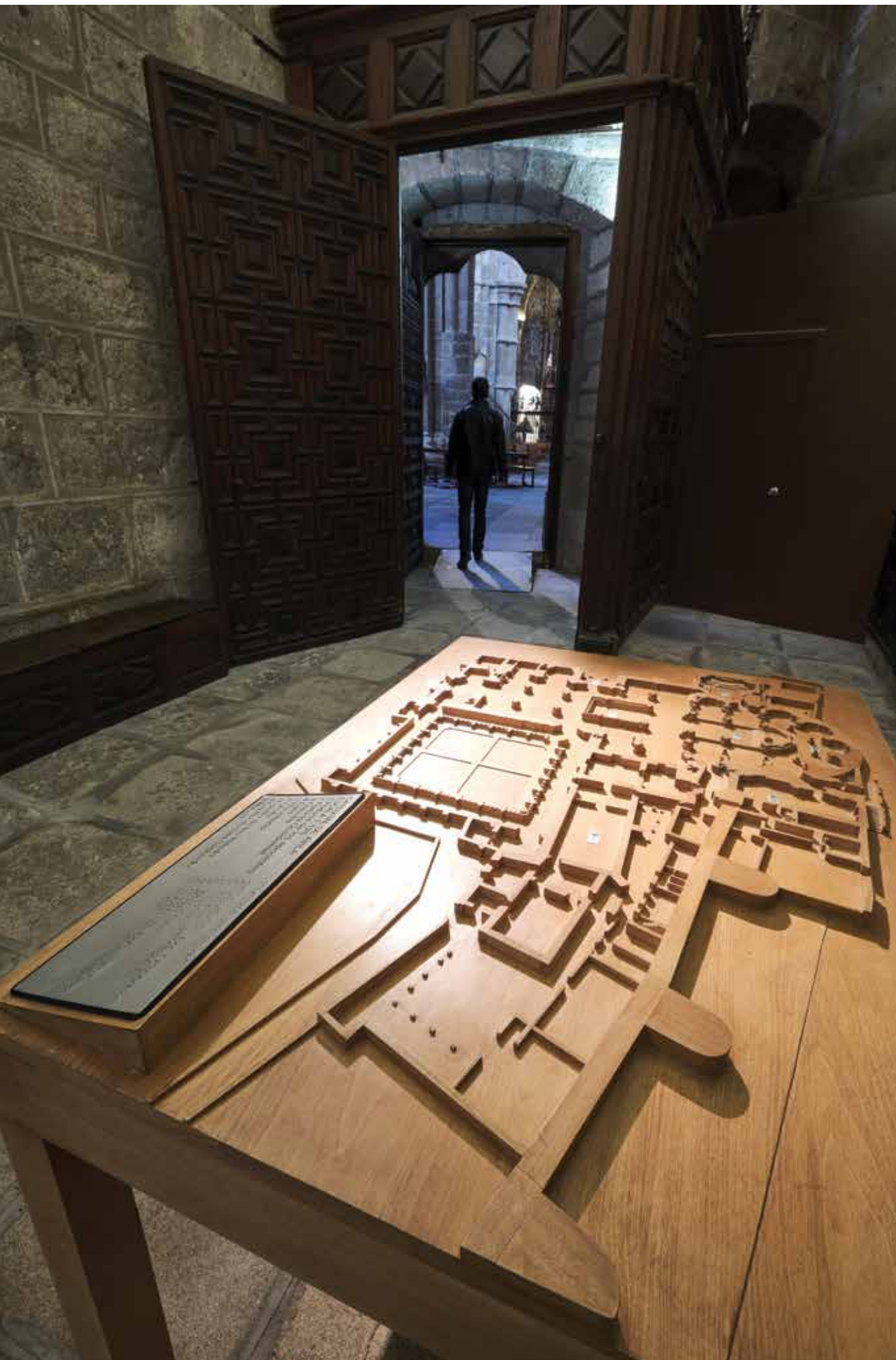


Refurbishment of the historic centre  
reconciling accessibility and heritage  
conservation.

Accessible wall entrance.



As well as the pedestrian route, the 5th Centenary of the birth of Saint Teresa was recorded with the creation of a painting accessible with the Didú technique of the portrait of Teresa of Avila attributed to Fray Juan de la Miseria. This accessible replica is located in the Visitors Reception Centre and can be explored by touch and an audio explanation.



Typhilological plan of the cathedral.



Accessible wall section.



Plaza Corral de las Campanas.

To contribute to the accessible enjoyment of the heritage, two relief location plans were installed in the San Francisco Municipal Auditorium and in the Palacio de Superunda with indications in text and in Braille and with the rooms differentiated by colour. In addition, typhological maps of the monuments' floor plans were installed in the Cathedral and the Basílica de los Santos Mártires Vicente, Sabina y Cristeta, sectioned at a given height to differentiate the types of pillars and columns and the various rooms forming part of the monument. Magnetic induction loops for people with hearing aids or ear implants were also installed in various municipal premises, many of them of heritage interest.

These actions and installations have been complemented with the publication of easy-to-read leaflets on some monuments in the city such as the walls and its nine gates, Saint Teresa and the places associated with her and the Palacio de Superunda with its collection by the painter Guido Caprotti.





# Royal Spanish Academy in Rome

## *Italy*

### Promoter

Ministry of Foreign Affairs  
and Cooperation

The Royal Spanish Academy in Rome, an institution that comes under the Ministry of Foreign Affairs, European Union and Cooperation, was created in 1873 with the aim of contributing to the education of Spanish artists and intellectuals and is today an essential instrument of Spanish foreign cultural policy.

The Academy occupies a complex of great heritage interest located on the Gianicolo Hill, the origin of which is closely linked to the Catholic Kings. Next to it are other Spanish institutions in Rome such as the Ambassador's residence, the Spanish Cervantes Liceum and the Spanish School of Archaeology.

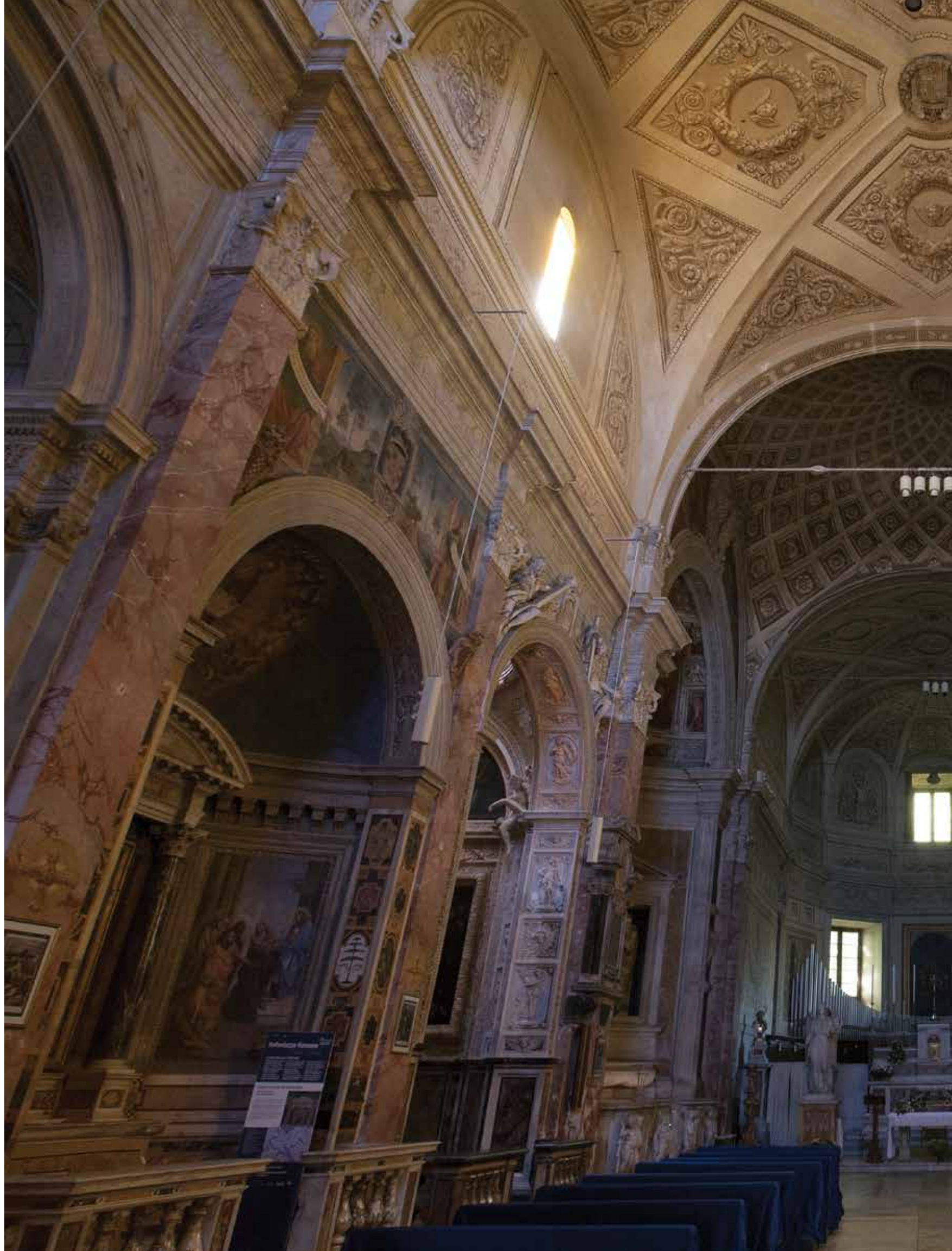
### Historical background

In 1472 Pope Sixtus IV gave the convent of San Pietro in Montorio to his confessor Amadeo Menes da Silva, like him a Franciscan, to build a new Franciscan monastery where tradition placed the martyrdom of the apostle St Peter. Amadeo started the refurbishment of the complex for which, after first receiving help from the King of France Louis XI, he won the favour of the Catholic Kings, who became the main benefactors of the transformation of San Pietro in Montorio at the end of 15th century.

It was then that the constructions constituting the current monumental complex consisting of the church, the convent, the two cloisters and the chapel were defined.

The Church of San Pietro in Montorio was built under the direction of Amadeo Menes da Silva and with the sponsorship of the Catholic Kings. The works lasted until 1498 and were consecrated in 1500 by Pope Alexander VI on the occasion of the Jubilee Year. Its interior was decorated with actions of the highest level due to the interest of prestigious persons connected with this space. One example of this was the Florentine merchant Pierfrancesco Borgherini, who in 1516 commissioned Sebastiano del Piombo to decorate the chapel with the *Flagellation of Christ* based on sketches by Michelangelo.

Bramante Chapel in the Royal Spanish  
Academy in Rome.







Previous double page: Church of San Pietro in Montorio.

Chapel cupola.



Portrait of Donato Bramante, by Juan Agustín Ceán Bermúdez, 1794. Spanish National Library collection.

Bramante chapel.

The high altar was presided over from 1523 to 1797 by the *Transfiguration* by Raphael, donated by Cardinal Julio de Medici, the future Pope Clement VII. As a consequence of the Treaty of Tolentino it was moved to Paris until it was returned in 1816 after the fall of Napoleon, when it became part of the Vatican collection. In the 19th century the church suffered great damage from the French bombardments of Napoleon III against the Roman Republic in 1849, when it was used as a hospital. After the subsequent restoration, the ceiling was decorated in the mid-19th century with geometric paintings by Paolo Quattrini.

In the northern cloister, the current configuration of which is due to Cardinal Clemente Dolera da Moneglia, the frescoes created between 1587 and 1590 by Nicolò Circignani “Il Pomarancio” constitute one of the longest cycles dedicated to the history of St Francis and his order.

The Bramante chapel is in the southern cloister. Bramante, who had arrived in Rome in 1499, fully assumed the ideals of Renaissance humanistic architecture and managed to build the chapel which, although it seemed to reproduce a classical model with elements and lessons from Antiquity, constituted an absolutely new three-dimensional space with respect to the two-dimensional perspective of the Renaissance *quattrocento*.



For the chapel in San Pietro in Montorio he used the classic form of *tholos* or peripterous circular church, surrounded by 16 columns, a number recognized as perfect by Vitrubio. Traditionally, this type and the Doric order were dedicated to heroes, identifying St Peter as a Christian hero. To this was added the medieval custom of using buildings of central plan for the *martyria*, combining pagan and Christian traditions. Thus the role of St Peter as the first pontiff and founder of the Roman Church was strengthened. The chapel thus acquired a special significance around the saint, where the crypt symbolised his martyrdom, the peristyle the contemporary militant Church and the dome the Triumphant Church in the glory of Heaven.

In the chapel Bramante managed to embody the absolute idea of perfection and was assimilated to the ancient monuments by the critics and treatise writers of the Renaissance of Serlio and Palladio, consolidating itself as one of the most typical constructions of the Italian Renaissance. The crypt was renovated in 1628 thanks to the financing of Felipe IV, which allowed the door to



Academy entrance volume.

Dolera cloister.



Church and Academy complex.

be enlarged, a double staircase to be built, the interior to be clad with marble and the cupola to be decorated with the monarch's four coats of arms. A few years later, the crypt vault was covered with stuccoes representing symbols and episodes from the life of St Peter as follower of Christ and guide of the Church, attributed to the sculptor Giovanni Francesco de Rossi, who worked with Bernini and Borromini.

With the founding of the Royal Spanish Academy in Rome in 1873, under the ideals of the Enlightenment and with the aim of offering artists a place of contemplation and rehearsal in the capital city of art, adapting work was started in the monastery complex consisting of a new skin for the building, an increase in its height and the construction of two towers flanking the northern façade.

The Academy was officially inaugurated on 23 January 1881 with the inscription "Academia de España" and the coat of arms of Alfonso XII on the façade.



“Tempietto per tutti” accessible route.



Entrance to the Dolera cloister.

New exhibition rooms.



Chapel cloister.



### **Accessibility improvement**

The accessibility works undertaken at the Royal Spanish Academy in Rome sought to enhance the value of the heritage and contribute to the economic sustainability of the property with its inclusion in the tourist circuit of the city.

With these works, the Academy began a process of adapting its facilities to the diversities of its visitors, offering a new public route with the name of “Tempietto de Bramante per Tutti” which allows the enjoyment of its temporary exhibitions, the appreciation of the artistic production of its scholarship holders and knowledge of its important heritage legacy that directly links Spain and Italy. In addition to promoting inclusion, this tour allows visitors to get to know and understand the architectural heritage through its documentary sources, historical archives and new technologies.

Thanks to this procedure, everyone, regardless of their capabilities, can now access the spaces that constitute the visit open to the public, including the temporary exhibition halls, the permanent exhibition, the Bramante chapel and the cloisters. This project will continue with the accessibility improvement to the assembly hall, the library and the rest of the rooms on the first floor.



# Jesús and Trinidad Jesuit Missions

## *Paraguay*

### Promoter

Government of Paraguay  
and Spanish International  
Cooperation Agency for  
Development

The Jesús de Tavarangué and Santísima Trinidad del Paraná Paraguayan Missions form part of the group of Guaraní Jesuit missions declared World Heritage sites by UNESCO. Their origin lies in the 16th century European colonial policy in the new continent, whose development was accompanied by the missionary orders. The included the Society of Jesus founded by Saint Ignatius of Loyola, which was present in the region until its final expulsion in 1767.

### Historical background

The Guaraní Jesuit Missions, also known as Jesuit reductions, was a group of thirty missionary villages founded between the 17th and 18th centuries by the Society of Jesus among the Guaraní Indians and related peoples to evangelise them. They were located around the Paraná and Uruguay Rivers in the current provinces of Misiones and Corrientes in Argentina, the departments of Itapúa and Misiones in Paraguay and in the state of Rio Grande do Sul in Brazil.

The Jesuits arrived in the region in 1588 with the approval of Felipe II and with the main mission of Christianising the indigenous population. The Indians were brought together in the reductions and encouraged to adopt a sedentary way of life and, unlike other missions in the New World, they were not forced to “Europeanise” their ways of life, so that many of the indigenous traditions, such as the cultivation of mate, were preserved and fostered. To date, seven of these missions have been declared World Heritage sites by UNESCO, among them those of Jesús de Tavarangué and Santísima Trinidad del Paraná in Paraguay.

The Jesuit mission of Jesús de Tavarangué, founded in 1685 on the banks of the River Monday by the Jesuit Geronimo Delfín, was forced to change location on several occasions until its definitive settlement on the current site in 1760. Its architectural design was the work of the architect Antonio Forcada, of Spanish origin, who imposed his own style with triple arches typical of the Muslim culture that had developed in Spain.

Santísima Trinidad de Paraná mission  
church, Paraguay.



Location of the missions in Paraguay and Latin America.

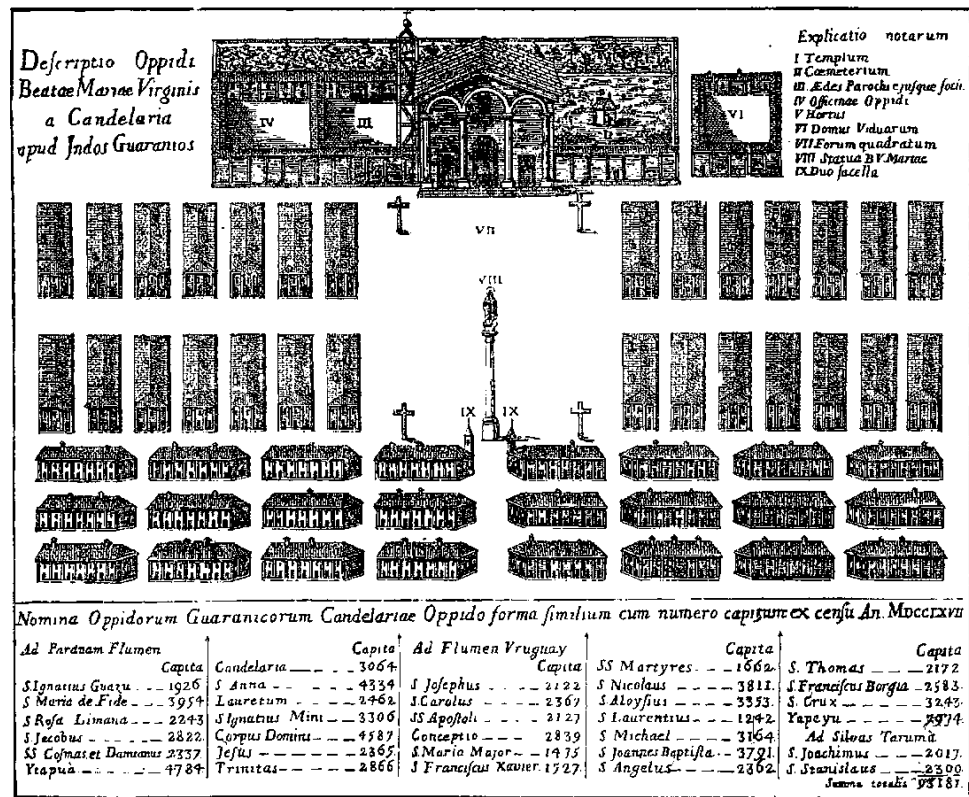
On this site, construction began of one of the largest churches of the time, with a main structure 70 metres long and 24 metres wide, a replica of the church of Loyola in Italy. The church, of masonry, consisted of three naves delimited by two rows of seven pillars. However, it was unfinished due to the expulsion of the Jesuits by Carlos III of Spain in 1768, the work being interrupted at the level of the start of the vaults. The cloister was surrounded by porticoed galleries, the bases of which today show the location of the pillars.

The remains of the foundations of the houses, known as “indigenous houses,” as well as the school and other urban structures such as the orchard and the cemetery can be seen in the mission complex.



DOCTRINAS GUARANÍES DE LA COMPAÑÍA DE JESÚS

Design of the village of Candelaria. P. Pablo Hernández (1913), *Organización social de las doctrinas guaraníes de la Compañía de Jesús*, Barcelona. Hispanic Digital Library, Spanish National Library (BNE).



1767.—DISEÑO DEL PUEBLO DE CANDELARIA, residencia del P. Superior de Misiones.

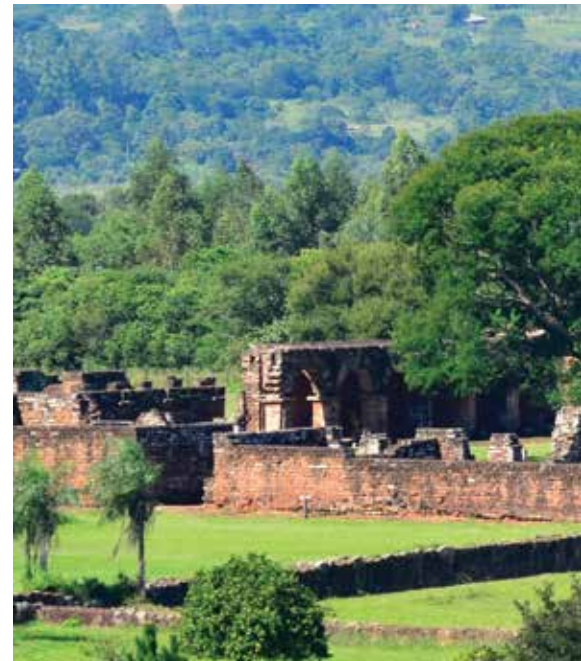


Jesuit route in Paraguay.

The Jesuit mission of Santísima Trinidad del Paraná, founded in 1706, is the largest Guarani reduction in Paraguay and the one that best preserves the urban scheme of the Jesuit Missions. The work of the architect Juan Bautista Prímoli, it is located 10 kilometres from Jesús de Tavarangué.

The main church, built around 1745, was the centre of life of the reduction and was the largest church of all those in the Jesuit reductions. It has valuable elements such as the baptismal font, a carved stone pulpit, the sacristy portico, several engravings, statues and other elements such as the frieze of angel musicians. The two doorways giving access to the sacristy, which show Portuguese and Hispanic influences, and the crypt in which some of the main Spanish religious leaders were buried deserve special mention.

The mission was laid out around the square, with the main church, the cemetery, the orchard, a courtyard, the school and the indigenous houses with semi-circular arches, whose ruins can now be visited. This Jesuit province was organised in 1607 and lasted until 1768, when its priests were expelled.





Jesús de Tavarangé mission church.

Triple arches in the Jesús de Tavarangé mission.



Frieze of angel musicians, Trinidad.

Mission complex in Trinidad.





Santísima Trinidad del Paraná mission church.

Project institutional sign.



## Accessibility improvement

The accessible enhancement of the missionary complexes of Jesús de Tavarangué and Santísima Trinidad del Paraná is framed within the *Accessible Tourism Plan for the Jesuit Missions of Paraguay*, promoted by the Paraguay National Tourism Secretariat (SENATUR) with the support of Spanish Cooperation and the Fundación ACS. This plan was born with the objective of incorporating tourism accessible to all for the first time in the missions.

The process, started simultaneously in the two missions, sought to improve accessibility for the disabled, as well as comfort and safety for all its visitors so that they could all enjoy this complex, declared a World Heritage site by UNESCO, on equal terms regardless of their capabilities.

The actions in this plan followed the criteria of maximum respect for the heritage property, reversibility of the actions, easy maintenance, universal accessibility, safety of people and compliance with current regulations.

With the improved route in the missions, it was possible to guarantee the chain of accessibility from the car park to the heritage complex and throughout the entire mission complex, as well as all its services and the museological contents provided.

Access to the plaza in the Santísima Trinidad de Paraná mission.



Jesús de Tavarangue mission church.

Jesús de Tavarangue mission reception centre.

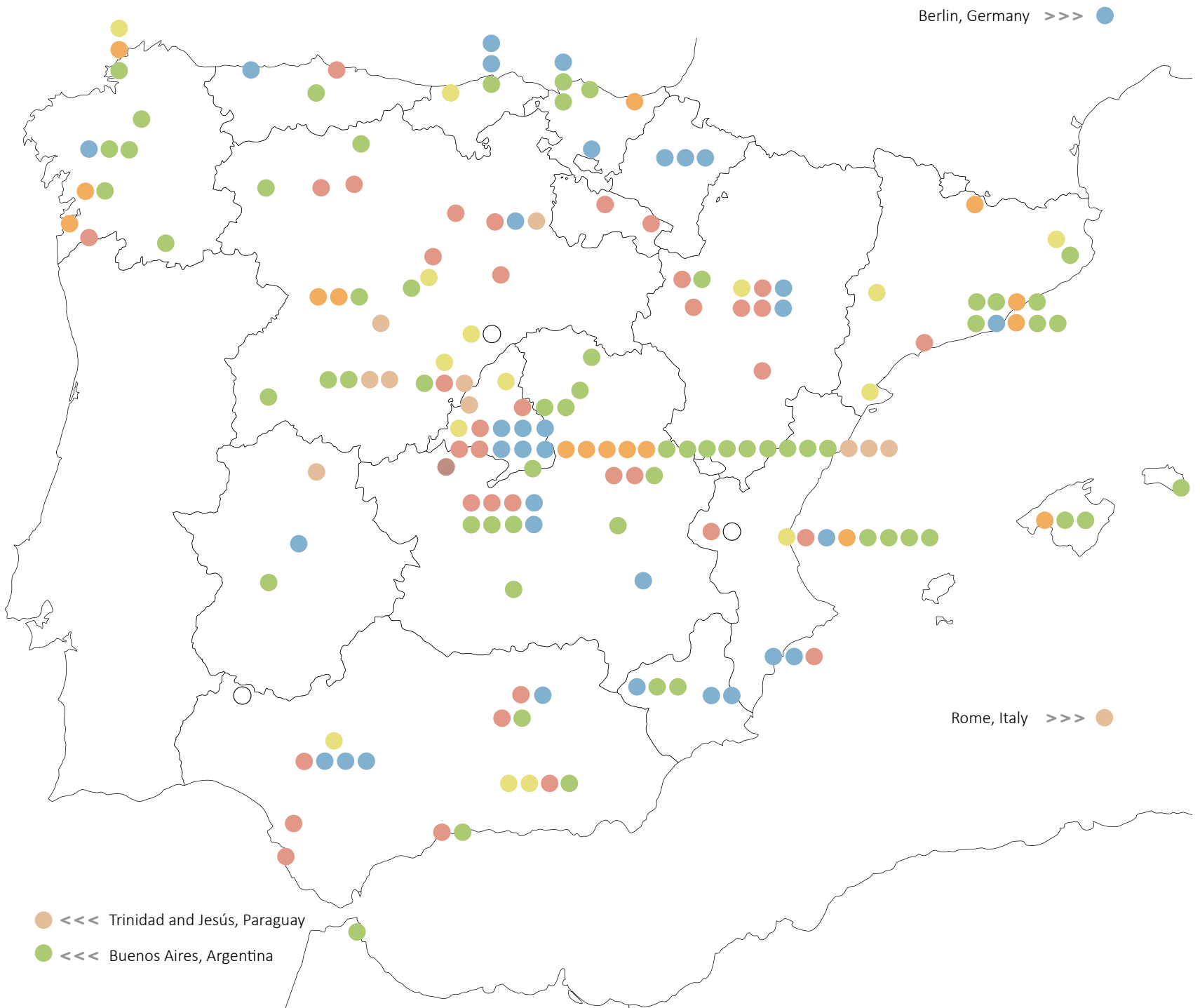
Platform in the Santísima Trinidad de Paraná mission church.



For this, reserved and signposted spaces were made available for the disabled, the counter for the purchase of entrance tickets was reformed to allow the approach of a person in a wheelchair, accessible lavatories were provided and the differences in level that impeded the autonomous movement of the disabled were eliminated.

In the Trinidad mission, the new route incorporated technological parquet raised platforms on steel frames with height-adjustable legs to adapt to the irregularities of the ground with neoprene protections on the supports to protect the original flooring and overcome steps. These platforms lead the visitor along the church, the Lithic Museum and the priests' cloister or courtyard.

The Jesús mission was recovered and a viewpoint made accessible for a visual connection between the missions of Jesús and Trinidad as well as for recognising and enjoying the surroundings of the complex and its topography.



Berlin, Germany >>> ●

Rome, Italy >>> ●

● <<<< Trinidad and Jesús, Paraguay

● <<<< Buenos Aires, Argentina

- Old architecture and engineering
- Buildings for religious use
- Buildings for institutional, ceremonial or symbolic use
- Spaces for work, industry and trade
- Spaces for culture, leisure and social services
- Accessible heritage
- Spaces for urban public use

# Projects in The Art of Renovation collection

## Old architecture and engineering

Segovia aqueduct | AR I  
Bridge in San Vicente de la Barquera (Cantabria) | AR I  
Archaeological crypt in San Vicente Mártir, Valencia | AR I  
Imperial Canal in Aragon | AR II  
Suspension bridge in Amposta (Tarragona) | AR III  
Medieval bridge in Cabezón de Pisuerga (Valladolid) | AR III  
Medieval bridge in Sant Andreu del Terri (Gerona) | AR III  
Roman bridge in Mediana de Voltoya (Avila) | AR III  
Toledo Bridge, Madrid | AR III  
Moor's Seat in the Alhambra, Granada | AR III  
King Don Pedro Citadel, Carmona (Seville) | AR IV  
Castillo del Rey- La Suda, Lerida | AR IV  
San Felipe Castle, Ferrol (La Coruña) | AR IV  
Buitrago Castle, Buitrago de Lozoya (Madrid) | AR IV  
Las Granadas Cate in the Alhambra and Generalife Gardens, Granada  
| AR IV

## Buildings for religious use

Alcalá de Henares Cathedral (Madrid) | AR I  
Burgos Cathedral | AR I  
Cathedral Cuenca | AR I  
Jerez de la Frontera Cathedral (Cadiz) | AR I  
Southern tower of Leon Cathedral | AR I  
Malaga Cathedral | AR I  
Bell tower and main apse in Tarragona Cathedral | AR I  
Cloister in the Collegiate Church of Santa María La Real de Sasamón  
(Burgos) | AR I  
Monastery Church of San Jerónimo, Granada | AR I  
Cúpula de la Basílica de San Francisco el Grande, Madrid | AR I  
Cathedral de Cadiz | AR II  
Cathedral de Jaén | AR II  
Cathedral de Tarazona (Zaragoza) | AR II  
Toledo Cathedral: San Blas chapel | AR II  
Toledo Cathedral: Santiago chapel | AR II  
Tuy Cathedral (Pontevedra) | AR II

Collegiate Church of Santísimo Sacramento, Torrijos (Toledo) | AR II  
San Sebastián hermitage, Requena (Valencia) | AR II  
Church of Santa María, Alicante | AR II  
Church of Santa María La Mayor, Villamuriel de Cerrato (Palencia) | AR II  
Monastery of San Miguel de la Escalada (Leon) | AR II  
Parish church of Santa María Magdalena, Zaragoza | AR II  
Sanctuary and monastery of Nuestra Señora de Valverde, Madrid | AR II  
Basílica del Pilar, Zaragoza | AR III  
Basílica del Sagrado Corazón-La Ilesiona-, Gijón | AR III  
Cathedral of Santa María, Cuenca | AR III  
Cathedral of Santa María La Redonda, Logroño | AR III  
Collegiate Church of San Miguel Arcángel, Alfaro (La Rioja) | AR III  
Royal Convent of Santa Clara, Seville | AR III  
Church of San Jerónimo el Real, Madrid | AR III  
Church of Santa María de los Reales Alcázares, Úbeda (Jaén) | AR III  
Church of Santiago, Montalbán (Teruel) | AR III  
Church of Santo Tomás de Villanueva-La Mantería-, Zaragoza | AR III  
Sacristy and chapter house in the Primate Cathedral, Toledo | AR IV  
Church of San Pedro, Avila | AR IV  
Collegiate Church of Santa María la Mayor, Calatayud (Zaragoza) | AR IV  
Monastery of San Vicente de la Roqueta, Valencia | AR IV  
Santa María de La Vid monastery, La Vid y Barrios (Burgos) | AR IV

## Buildings for institutional, ceremonial or symbolic use

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San Caetano building | Headquarters of the administrative services of  
the Government of Galicia, Santiago de Compostela (La Coruña) | AR I  
Nuncio Hospital | Headquarters of the central services department of  
the Region of Castile-La Mancha, Toledo | AR I  
San Rafael Hospital | Regional Parliament, Santander | AR I  
Magdalena Palace | Menéndez Pelayo University, Santander | AR I  
Pignatelli Palace | Headquarters of the Government of Aragon, Zaragoza  
| AR I  
San Esteban School | Regional Government, Murcia | AR I

San Telmo Palace | Headquarters of the Government of Andalusia, Seville | AR I

Caravaca de la Cruz Chapel (Murcia) | AR I

Villa Tarsila | Social Security building, Luarca (Asturias) | AR I

La Luz Castle, Las Palmas de Gran Canaria | AR II

Department of Justice and Public Administration of the Government of Andalusia, Seville | AR II

Spanish Embassy in Berlin, Germany | AR II

Monumental building in the Plaza Conde de Rodezno, Pamplona | AR II

Las Cinco Llagas Hospital | Parliament of Andalusia, Seville | AR II

Bishop's Palace in Murcia | AR II

Marquis de Fontalba Palace | Headquarters of the State Attorney General's Office, Madrid | AR II

Marquis de Sofraga or Barrantes-Cervantes Palace | Fundación Pía de los Pizarro, Trujillo (Caceres) | AR II

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Chinchilla de Monte Aragon Castle (Albacete) | AR III

Santa Bárbara Castle, Alicante | AR III

Hércules caves, Toledo | AR III

Fontagud Palace | Headquarters of the Court for the Defence of Competition | AR III

Viana Palace | Headquarters of the Ministry of Foreign Affairs and Cooperation, Madrid | AR III

Former Model Prison | 9 de Octubre administrative city, Valencia | AR IV

Burgos Law Courts | AR IV

Palacio de Comunicaciones | Headquarters of Madrid City Council | AR IV

Parliament Building | Chamber of Deputies, Madrid | AR IV

Headquarters of the Bank of Spain, Madrid | AR IV

Bank of Spain branch, Pamplona | AR IV

Old Customs House, Bilbao | AR IV

Town Hall, Baeza (Jaén) | AR IV

Tarín House/Palace, Zaragoza | AR IV

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Telefónica building, Madrid | AR I

Hotel María Cristina, San Sebastian | AR I

Hotel Torre del Remei, Bolvir de Cerdanya (Gerona) | AR I

Nou Escorxador | Civic shopping centre, Palma de Mallorca | AR I

Central Market in Valencia | AR I

House-Palace of the Marqueses de Urquijo | National Energy Commission, Madrid | AR II

Building in the Calle García Barbón | Galician Health Service, Vigo (Pontevedra) | AR II

Building Castellana 28, Madrid | AR II

Post and Telegraph building, Pontevedra | AR II

Sabadell Market (Barcelona) | AR II

Magdalena Market Fish Hall, Ferrol (La Coruña) | AR II

Doña Urraca Palace, Zamora | AR II

Old municipal printing works, Madrid | AR III

Railway station, Zamora | AR III

Sants Market, Barcelona | AR IV

Old Boetticher factory | La Nave, Madrid | AR IV

### **Spaces for culture, leisure and social services**

Avila Provincial Historical Archive | AR I

Hospital de Santa Creu | Cataluña library, Barcelona | AR I

"El Águila" brewery | Region of Madrid Regional Library | AR I

Monastery and Church of San Miguel de los Reyes | Valencian Library, Valencia | AR I

Casa del Doncel de Sigüenza (Guadalajara) | AR I

Del Carmen Convent | Fine Arts Museum in Valencia | AR I

Viriato Infantry barracks | University of Zamora | AR I

Unamuno House/Museum in the University of Salamanca | AR I

Madre de Dios Convent | Region of Madrid Archaeological Museum, Alcalá de Henares | AR I

"El vapor Aymerich, Amat i Jover" textile factory | Catalan Museum of Science and Technology, Terrassa (Barcelona) | AR I

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Los Águila Palace, Ciudad Rodrigo (Salamanca) | AR I

Atarazanas del Grao, Valencia | AR I

Palace/Marine terminal, Santander | AR I

Montefuerte Palace, Guernica (Vizcaya) | AR I  
Archiepiscopal and Ecclesiastical Curia Palace | Headquarters of the  
Diocesan Museum, Granada | AR I  
Santa Cruz Palace | University building, Valladolid | AR I  
Arriaga Theatre, Bilbao | AR I  
Gran Teatro del Liceo, Barcelona | AR I  
Guimerá Theatre, Santa Cruz de Tenerife | AR I  
Archbishop Fonseca Students' Residence | University building,  
Salamanca | AR I  
Baños del Almirante, Valencia | AR II  
Fermín Caballero Public Library, Cuenca | AR II  
Casa de Europa, Santiago de Compostela (La Coruña) | AR II  
Casa Masaveu, Oviedo | AR II  
Casa Uribe | Museo Festerero, Caravaca de la Cruz (Murcia) | AR II  
Vera Cruz Studies Centre, Caravaca de la Cruz (Murcia) | AR II  
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Marquis de Villena Parador, Alarcón (Cuenca) | AR II  
Almagro Parador (Ciudad Real) | AR II  
Chinchón Parador (Madrid) | AR II  
Jaén Parador | AR II  
Mérida Parador (Badajoz) | AR II  
Enlargement of the Prado Museum, Madrid | AR III  
Cristo de la Luz hermitage, Toledo | AR III  
Caves next to the Los Vargas Palace, Madrid | AR III  
Son Espases archaeological site, Palma de Mallorca | AR III  
Roofs of the Zarzuela Hippodrome, Madrid | AR III  
El Capricho Palace, Madrid | AR III  
Alcalá de Henares Parador (Madrid) | AR III  
Colón Theatre, Buenos Aires (Argentina) | AR III  
Tórtolas Mosque, Tarazona (Zaragoza) | AR IV  
Old Teniente Ruíz barracks | University Campus, Ceuta | AR IV  
Main Theatre in Terrassa (Barcelona) | AR IV  
Gerona Municipal Theatre | AR IV

Palma Main Theatre, Palma de Mallorca | AR IV  
Ca N'Oliver | Art Centre, Maó-Mahón (Menorca) | AR IV  
Pérez Galdós Theatre, Las Palmas de Gran Canaria | AR IV  
Tapestries Museum in the Collegiate Church of Pastrana (Guadalajara)  
| AR IV  
Old Infants School | Cathedral Tapestries and Textiles Museum, Toledo  
| AR IV  
Old power station | La Fábrica de Luz. Energy Museum, Ponferrada  
(Leon) | AR IV  
Museum of Pilgrimages and Santiago, Santiago de Compostela (La  
Coruña) | AR IV  
Pontevedra Museum | AR IV  
Eduardo Torroja Museum, Madrid | AR IV  
Old Conde Duque Barracks | Cultural centre, Madrid | AR IV  
Madrid History Museum, Madrid | AR IV  
The Wine Warehouse | Cultural centre, Bilbao | AR IV  
Monterrei Fort | Parador, Verín (Orense) | AR IV  
Old Municipal Hospice, Ferrol (La Coruña) | AR IV

#### **Spaces for urban public use**

Cumbres Mayores Castle (Huelva) | AR I  
Arabic parade ground wall in Requena (Valencia) | AR I  
Plaza Mayor in Segovia | AR I

#### **Accessible heritage**

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Escorial (Madrid) | AR IV  
Convent of Santa María la Real de Las Huelgas, Burgos | AR IV  
Convent of Santa Clara, Tordesillas (Valladolid) | AR IV  
Monastery of Yuste, Cuacos de Yuste (Cáceres) | AR IV  
Royal Palace in Madrid | AR IV  
Royal Monastery of La Encarnación, Madrid | AR IV  
Pantheon of Distinguished Men, Madrid | AR IV  
Escuelas Mayores in the University of Salamanca | AR IV  
Archbishop Fonseca Students' Residence, Salamanca | AR IV  
Historic centre of Avila | AR IV  
Royal Spanish Academy in Rome, Italy | AR IV  
Jesús and Trinidad Jesuit Missions, Paraguay | AR IV





# Acknowledgements

**The production of this book has been possible thanks to the permanent collaboration of the ACS Group companies, Dragados and its subsidiary Geocisa and the decisive support of the following institutions during its preparation:**

Agencia Española de Cooperación Internacional para el Desarrollo | Spanish International Cooperation Agency for Development

Ayuntamiento de Ávila | Avila City Council

Ayuntamiento de Buitrago de Lozoya | Buitrago de Lozoya Town Council

Ayuntamiento de Calatayud | Calatayud Town Council

Ayuntamiento de Carmona | Carmona Town Council

Ayuntamiento de Ferrol | Ferrol Town Council

Ayuntamiento de Girona | Girona City Council

Ayuntamiento de Madrid - Madrid Destino | Madrid City Council - Madrid Destino

Ayuntamiento de Maó-Mahón | Maó-Mahón Town Council

Ayuntamiento de Tarazona | Tarazona Town Council

Banco de España | Bank of Spain

Centro Azkuna de Ocio y Cultura | Azkuna Leisure and Cultural Centre

Comunidad de Madrid | Region of Madrid

Consell de Mallorca | Council of Mallorca

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Diócesis de Ávila | Diocese of Avila

Excmo. Cabildo de la S. I. Catedral Primada, Toledo | Chapter of the Holy Primate Cathedral, Toledo

Fundación Auditorio Teatro Las Palmas de Gran Canaria

Fundación Ciudad de la Energía

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Museo de Pontevedra | Pontevedra Museum

Obispado de Guadalajara | Diocese of Guadalajara

Obispado de Tarazona | Diocese of Tarazona

Parador Castillo de Monterrei | Castillo de Monterrei Parador

Patrimonio Nacional

Patronato de la Alhambra y el Generalife | Trustees of the Alhambra and the Generalife

Real Patronato sobre Discapacidad | Royal Disability Trust

Secretaría Nacional de Turismo del Paraguay | Paraguay National Tourism Secretariat

Teatro Municipal de Girona | Girona Municipal Theatre

Teatro Principal de Palma | Palma Main Theatre

Universidad de Salamanca | University of Salamanca



# Credits and bibliography

## Photography credits

AITOR ESTÉVEZ OLAIZOLA: Sants Market (Barcelona), Gerona Municipal Theatre.

ANA DAGANZO: Royal Spanish Academy in Rome.

ÁNGEL ALONSO CUEVAS: Old Infants School (Toledo), Sacristy vault in the Primate Cathedral (Toledo).

CQ&CUBI COMUNICACIÓN: Royal Sites Patrimonio Nacional, Salamanca University buildings.

DAVID BLÁZQUEZ CEA: Exteriors, Sacristy and Chapter House in the Primate Cathedral (Toledo).

FERNANDO ALDA: Baeza Town Hall (Jaén).

FG+SG FERNANDO GUERRA and SERGIO GUERRA: Burgos Law Courts.

GORI SALVÁ: Palma Main Theatre (Mallorca).

HÉCTOR FERNÁNDEZ SANTOS-DÍEZ: Ferrol Municipal Hospice (La Coruña).

JAVIER CARNERO PÉREZ: Old Boetticher factory (Madrid).

JESÚS MADRIÑÁN: Monterrei Fort (Orense), Pontevedra Museum, San Felipe Castle (Ferrol), Energy Museum (Ponferrada), Palacio de Comunicaciones (Madrid), History Museum (Madrid), Conde Duque Cultural Centre (Madrid).

JOSÉ ANTONIO ALONSO CAMPANERO and SANTIAGO DURÁN GARCÍA: Buitrago de Lozoya Castle (Madrid).

JOSEMA CUTILLAS: Collegiate Church of Santa María la Mayor (Calatayud), Bank of Spain branch (Pamplona), Old Customs House (Bilbao), The Wine Warehouse (Bilbao), Tarín House/Palace (Zaragoza), Tórtoles Mosque in Tarazona (Zaragoza), Tapestries Museum in the Collegiate Church of Pastrana (Guadalajara).

JUAN JOSÉ GONZÁLEZ: Jesuit Missions in Paraguay.

LOURDES JANSANA: Municipal Theatre in Terrassa (Barcelona).

LUIS ASÍN LAPIQUE: Bank of Spain Headquarters (Madrid).

LUIS GARCÍA GONZÁLEZ: 9 de Octubre administrative complex (Valencia).

MANUEL GONZÁLEZ VICENTE, FUCO REYES, MANUEL GALLEGRO and ELISA GALLEGRO PICARD: Museum of Pilgrimages and Santiago.

PABLO BALLESTEROS SIERRA: King Don Pedro Citadel (Carmona), Granadas Gate and the Generalife (Granada), Church of San Pedro (Avila).

PEDRO BENÍTEZ ORTEGA and ARIDANE SANTANA LLARENA: Pérez Galdós Theatre (Las Palmas Gran Canaria).

RAÚL SANCHIDRIÁN: Historic centre of Avila.

## Images archives

Dragados photographic archive

Geocisa photographic archive

Fundación ACS photographic archive

Patrimonio Nacional photographic archive

Bank of Spain photographic archive

Paredes Pedrosa Architects photographic archive

Buitrago de Lozoya Council photographic archive

Maó-Mahón Council photographic archive

Hispanic Digital Library (Spanish National Library) photographic archive

Fundación Eduardo Torroja photographic archive

Paraguay National Tourism Secretariat photographic archive

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# Fundación ACS publications

## ***Refurbishment of Buildings Collection***

1. San Caetano building | Santiago de Compostela
2. Nuncio's building | Toledo
3. Arriaga Theatre | Bilbao
4. Administrative buildings: Imade y Sgv | Madrid
5. Regional Parliament of Cantabria | Santander
6. Reina Sofía Art Centre | Madrid
7. Palacete Embarcadero | Santander
8. San Esteban Palace | Murcia
9. Hotel María Cristina | San Sebastián
10. Montefuerte Palace | Gernika
11. Church of San Miguel | Morella
12. Villa Tarsila | Luarda
13. Casa d'Altures. Parc de les Aigües | Barcelona
14. Hotel Torre del Remei | Bolvir de Cerdanya
15. Telefónica building | Madrid
16. Nou Escorxador | Palma de Mallorca
17. Guimerá Theatre | Santa Cruz de Tenerife
18. Three university buildings: Abrantes Solís y Fonseca | Salamanca
19. Magdalena Palace | Santander
20. Casa Masaveu | Oviedo
21. Regional Library and archive of the Region of Madrid | Madrid
22. Collegiate Church of Torrijos | Toledo
23. Cinco Llagas Hospital | Headquarters of the Parliament of Andalucía | Seville
24. Tagus Hydrographical Confederation | Madrid
25. Canal de Isabel II installations in the Plaza de Castilla | Madrid
26. Fontagud Palace | Headquarters of the Court for the Defence of Competition | Madrid
27. Viana Palace | Ministry of Foreign Affairs | Madrid
28. Burgos Law Courts

## ***Monographs Collection***

Enlargement of the Prado Museum

Three restoration projects in Zaragoza: Basílica del Pilar, Church of Santa María Magdalena, Church of Santo Tomás

Cathedral of Santa María in Cuenca

Museum of Pilgrimages and Santiago

Sacristy of the Primate Cathedral Toledo

Old Infants School building in Toledo

Bank of Spain branch in Pamplona

## ***The Art of Renovation collection***

The Art of Renovation I

The Art of Renovation II

The Art of Renovation III

The Art of Renovation IV



This book was produced during 2018,  
the European Year for Cultural Heritage,  
and printed in Madrid on 13 June 2019.



