

The rehabilitation of the Sant Antoni Market, as a trampoline for a neighborhood.

Rehabilitation and revitalization of an old iron market in Barcelona.

Type of intervention

Restoration Rehabilitation / Renovation

Concerned elements on the intervention project

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

Site Mercat de Sant Antoni, carrer Comte d'Urgell 1, Barcelona, Catalunya, Spain

Objectives Rehabilitation of an old iron market to transform it into a new market with the same uses and subway loading and unloading.

Property Barcelona City Council

Designer Chief architect: Ravetllat Arquitectura
Structures: ESTEYCO S.A.
Facilities: Miquel Camps Instal·lacions S.L.
Other Collaborators: Olga Schmid, Toledo Villareal S.L.

Date Project development: 2007
Works: 2009-2018



Background to the intervention

The Mercat de Sant Antoni was born from the transfer of the Mercat del Padró to the outskirts of the city of Barcelona at the end of the 19th century. In the location now occupied by the market, archeologists found a 17th century fortified wall of the old city, and remains of an ancient roman street, Via Augusta, from the Second Century Barcino (today's city of Barcelona). For centuries this was effective, and some religious buildings were installed in the vicinity, such as the convent of Sant Antoni Abat (which gave its name to the area), a temple and a hospital. But this ends when the military techniques of the society were improving, and Barcelona needs more protection against external attacks (this idea is also motivated by the defeat in the war of the Reapers (1640 - 1652). It is then when, in 1644, the bastion of Sant Antoni was built, which would also be a gateway to the city.

In the 19th century, after the great demographic growth, the demolition of the walls and the expansion of Barcelona beyond its limits were allowed. This was effective in 1854 and with it began the new urban planning project to order this growth carried out by Ildefons Cerdà. This document, in addition to planning how the houses and streets of the new Eixample (Catalan word for "extension") would be, also specified other aspects such as hygiene and the placement of the city's facilities. This is how it was decided to locate the Mercat del Padró on the border between Ciutat Vella (the old city) and the Eixample, being renamed as Mercat de Sant Antoni.

Antoni Rovira i Trias, who was then the municipal architect, designed the market and on September 29, 1872, the first stone was laid. It was not until ten years later when its construction was completed, after long pauses in the execution of the work.

The market received a large flow of neighbors from the surrounding area on a daily basis, since in addition to being a

comfortable place to shop it was open to the outside but at the same time sheltered and there was a diversity of products. Over the years, in addition to the general aging of the equipment, there were deficiencies in the dimensions of the aisles and stalls and in the spaces for loading and unloading. For this reason, in 2007 a call for tenders was issued for its rehabilitation.

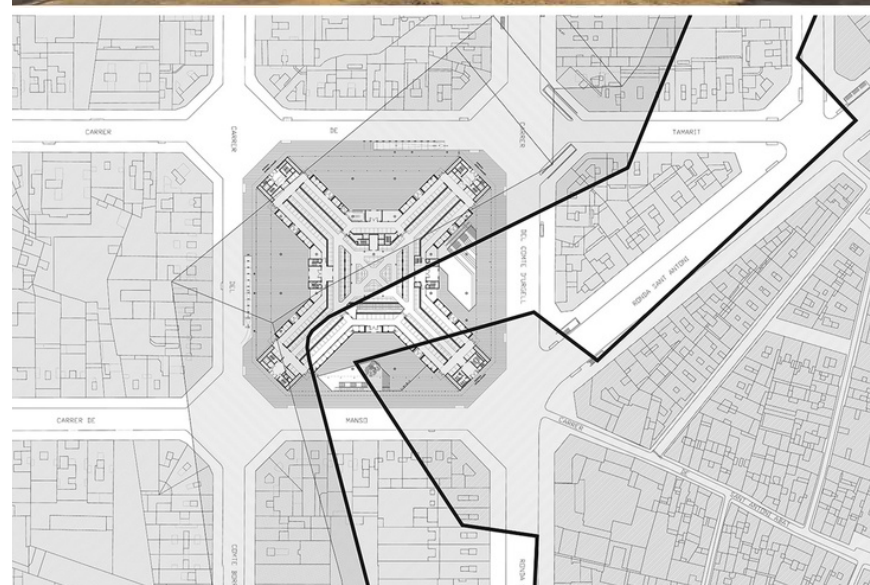


Fig.1: Remains of the original bastion and its position in relation to the market.



Fig.2: Stand at the Mercat de Sant Antoni, before the refurbishment.

Description of the building

The building has a Greek cross shape (evoking the intersection between four blocks of the Eixample) on the ground floor at street level, which contains the largest market use. The building dates from the late nineteenth century and that is why it presents construction systems typical of Catalan modernism, such as experimentation with new materials such as iron. The structure that supports the roof, the vertical structure and several elements of the facade are made with cast-iron. You can also see a lot of glass pieces in the envelope and part of the roof (the lantern). As for the roof, to try to be as faithful as possible to the original Mercat de Sant Antoni, glazed ceramic tiles were used.



Fig.3: Bird's-eye view of the iron market.

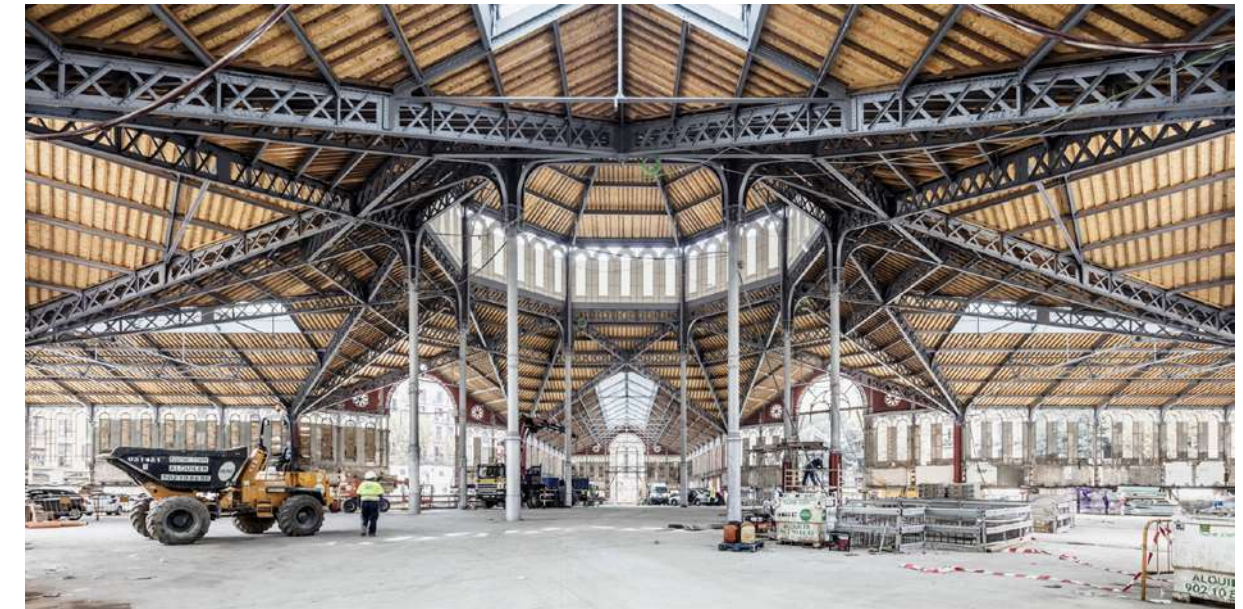


Fig.4: Interior view of the market, where the entire original cast-iron structure can be seen.

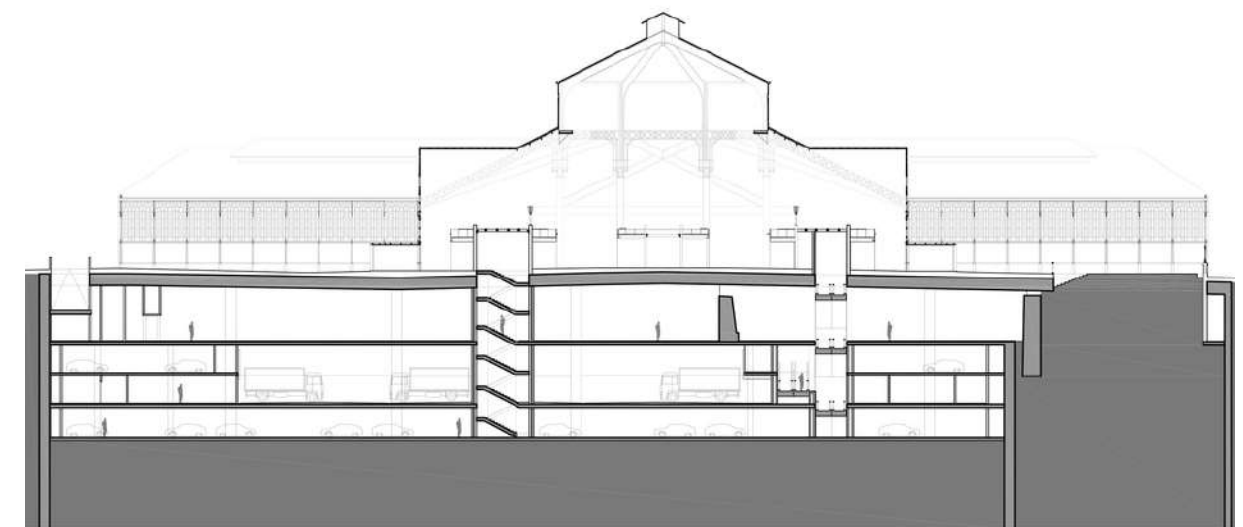


Fig.5: General Section.

The diagnosis of the building (values and state)

Most of the building was in good condition. For this reason, the iron structure was able to be preserved and, therefore the entire envelope. However, the roof required total renovation due to its poor state of preservation.

Restoration and rehabilitation works

Despite having a similar appearance to the original, there are many significant changes. First of all, on the outside (where most of the market is located) the entire facade has been preserved (including the masonry walls, windows and iron parts); to do so, the adjacent buildings and enclosures were demolished, leaving the volume as clean as possible. The main challenge in the refurbishment was the construction of four basement floors under the current floor of the market. These are destined to spaces for loading and unloading of products, parking, storage, and other businesses such as large commercial supermarkets. These operations involved the perimeter strapping of the façade, to be able to support and work under it.

On the other hand, all the components of the roof have been changed since it was originally composed of glazed tiles, then it was changed to fiber cement and, with this rehabilitation, it was decided to return to glazed tiles (for aesthetic and health reasons). In addition, the slab, the floor of the market's ground floor, was re-concreted with a reinforcement suitable for the stresses it will be subjected to.

In addition, the underground floors had to be built again by excavating in the ground. All of them with a robust reinforced concrete structure and pile foundations. The only thing that needed to be rehabilitated in this area are the remains of the bastion of the original wall, which have been entirely preserved by re-shoring them for their support.

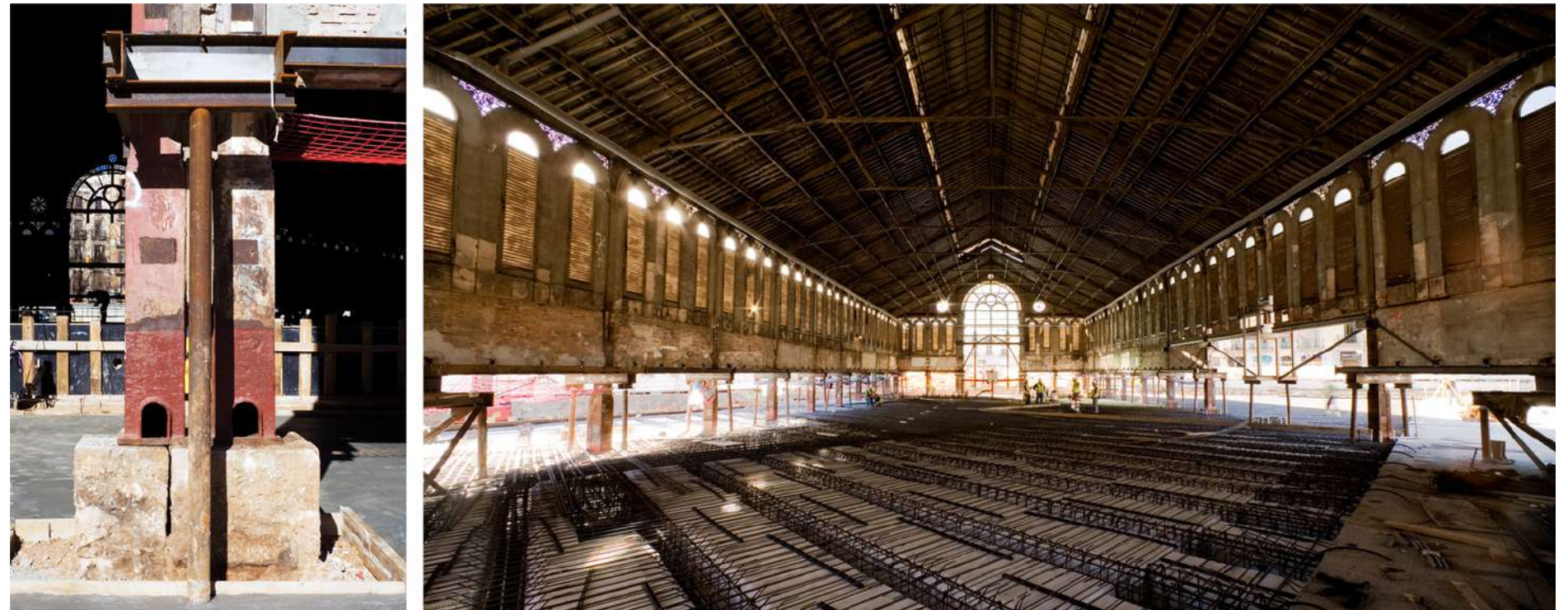


Fig.6: Old façade fastened to allow the concrete to be poured for the new floor slab.



Fig.7: Roof and lantern, covered in colored ceramic tiles with patterns.

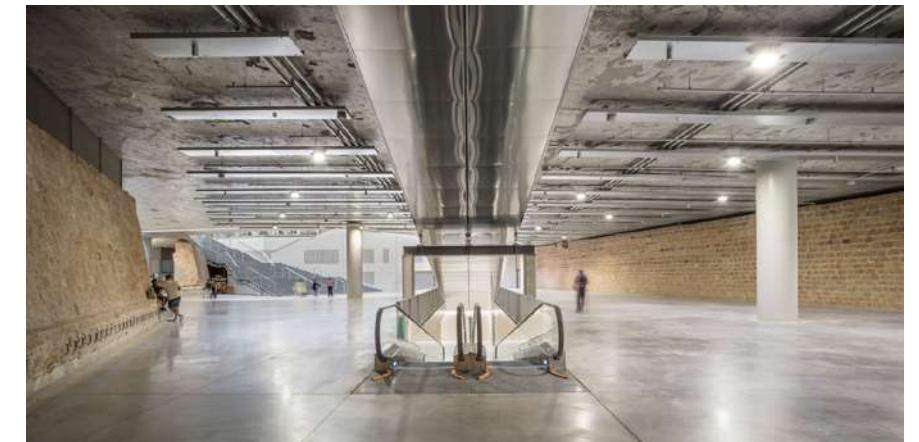


Fig.8: View of the underground floor level, with the remains of the baluard walls.

Assessment of the results

With this rehabilitation it was possible to create a space faithful to the original that, beyond housing the activity of a neighborhood market, generates a new point of interest for the neighbor or visitor, transforming it, at the same time, into a symbol of the city and its history.

Thanks to this, the work of the Catalan architects was awarded several prizes:

- Finalist in the Premis Catalunya Construcció 2014 - Innovation in construction.
- Work selected for the 2nd Mostra d'Arquitectura de Barcelona. Rehabilitation Interventions 2015.
- ACHE Award for Structural Rehabilitation 2017.
- Work selected for the Hispalyt Awards 2017.
- Award to the Best Infrastructure of the Consell Assessor d'Infraestructures de Catalunya 2018.
- Work selected for the AADIPA 2019 Awards.
- Work selected for the Catalunya Construcció 2019 Awards.
- First Prize 3 Diamants 2020.
- Project selected for the 3rd Mostra d'Arquitectura Catalana 2020.

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