

Sanctuary of the Blessed Virgin of the Holy Rosary of Pompeii

**New lighting project and artistic
enhancement of the interiors**



**PONTIFICAL SHRINE OF THE BLESSED VIRGIN
OF THE HOLY ROSARY OF POMPEII**



Picture of the Blessed Virgin of St. Rosary of Pompeii

The painting, is positioned above the central altar as the dominant point of the whole Basilica. It is surrounded by the 20 *Mysteries of the Rosary*, painted on copper.

The canvas was given to Bartolo Longo by Sister Maria Concetta De Litala, from the Rosariello Convent at Porta Medina in Naples. Sister Maria had this icon in custody, and it was given to her by Father Alberto Radente, confessor of the blessed. To transport it to Pompeii, Longo handed it to the carter Angelo Tortora who, wrapped in a sheet, laid it on a wagon of manure.

It was the 13th of November, 1875, the date of birth of the New Pompeii. The Picture, however, needed restoration and was placed to the veneration of the faithful only on the 13th February, 1876. On the same day, in Naples, the first miracle happened through the intercession of Our Madonna of Pompeii: the twelve-year-old Clorinda Lucrelli, judged incurable by the distinguished professor Antonio Cardarelli, perfectly healed from terrible epileptic seizures. Afterwards, Bartolo Longo entrusted the Icon to the painter Federico Maldarelli for further restoration, also asking him to transform the original Saint Rosa in Saint Caterina of Siena.

In 1965, a highly scientific restoration was held at the Pontifical Institute of the Olivetan Benedictine Fathers of Rome, and, on 23rd April, the painting was crowned from Saint Paul VI in Saint Peter's Basilica.

Between October and December 2012, the Picture was the subject of a further conservation intervention by the Laboratories of the Vatican Museums.



Madonna of the Rosary - Painted on canvas, 100x120 cm





History of the Sanctuary of Pompeii

The origins of the Sanctuary

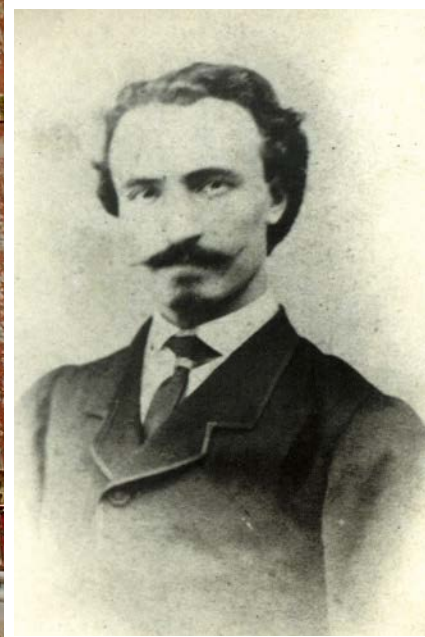
The Sanctuary of the Blessed Virgin Mary of St. Rosary of Pompeii was built, between 1876 and 1891, by the will of Lawyer Bartolo Longo, who was beatified by Saint John Paul II on 26th October 1980. He was the architect of the transformation of an uninhabited valley into a new city, which arose around the Marian Sanctuary, the Orphanages and the Institutes for the children of the Prisoners, as a ray of light of their faith and charity.

Bartolo Longo can be defined as the greatest layman promoter of devotion to Our Lady of the Rosary of the twentieth century. Prayers and commitment on behalf of the weak are in the DNA of the Sanctuary, next to which arise, for over 130 years, social works for the reception of minors and adults in difficulty.

Iconographic expression of high artistic level

The Basilica, between 1934 and 1939, has been enlarged, passing from one to three naves with an area of 2,000 square meters and welcomes under normal conditions about 2,000 faithful.

The interior has marble decorations and numerous mosaics, paintings and frescoes make it an invaluable place of art.



Bartolo Longo - 1863 and 1912

Reality of the existing lighting system since 1978

Where did Metalmek professionals began and what was the lighting situation inside the Basilica

Mapping phase of the existing lighting fixtures and lighting verification with measurements of the values in several points of the Basilica during the hours of the day.

The high-quality instrumentation detected an average value of 65 Lux: 110 Lux maximum on the altar, 25 Lux minimum in the nave and with a maximum of 60 Lux without including the two points near the organ, in the direction of the entrance, where 95 Lux were detected.

The calculation of the installed power on the total lighting fixtures and the verification of efficiency and operation resulting from the old plant were:

- 36 kW of installed power;
- 285 headlamps and 85 backlight ceiling lights for a total of 370 lighting fixtures installed in the Basilica without including suspended chandeliers;
- power/surface ratio of 15.40 W/m².

Life Sanctuary: analysis

An in-depth study was carried out on the actual state of the Basilica during the opening hours of the Basilica to the faithful, to determinate the needs of light in the various activities of worship and in the celebrations of the Sanctuary.

Identification of the primary characteristics and requirements to be taken into account in the new lighting project

The Basilica, in addition to being a place of worship, is also a wonderful museum for its priceless artistic heritage represented by marble structures, paintings, mosaics and frescoes.

The artistic history of the Basilica of Pompeii (1884-1942)

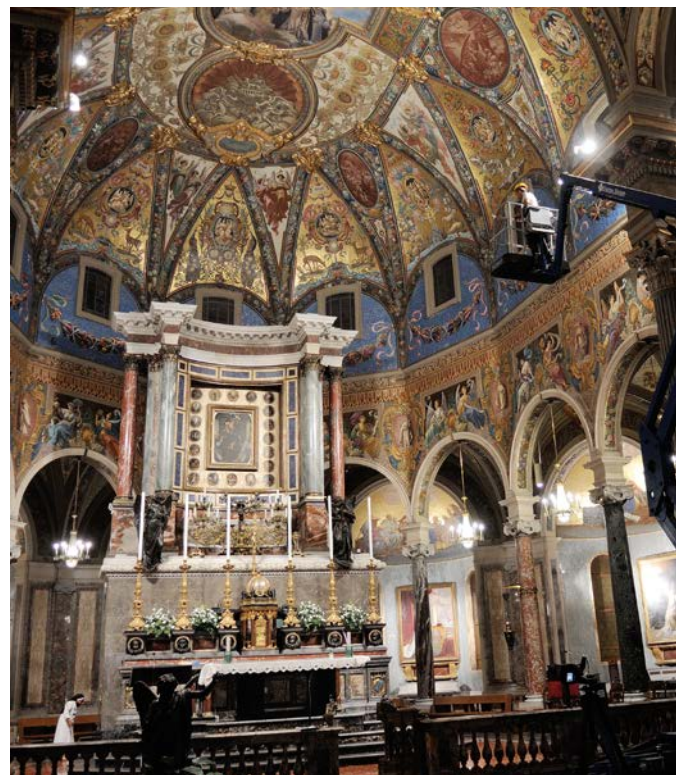
The life of the Basilica is characterized by liturgical functions, from the presence of the faithful and organized groups, to moments of prayer shared in assembly and by personal silent prayer. During the day the needs for light are diversified according to the

time and the liturgical activities of prayer, the celebrations of the various sacraments (Eucharist, Marriages, Confirmations etc.)

The central nave is governed by the Picture of the Queen of the Rosary that, positioned at the top, in the centre of the altar and clearly visible from the central entrance, dominates the entire Basilica with majesty.

In the upper part of the central entrance, there is a wonderful shining organ composed of 5624 pipes.

The side naves are characterized by arches, and domes decorated with frescoes and mosaics but also by individual chapels with religious paintings of saints of Christianity.



View of the apse - frescoes and painting of the Madonna and Child



Skills and expertise

Metalmek

The architectural space of a Sanctuary like that of Pompeii, requires sensitivity and professional skills that take into account both the spiritual character of the place and the artistic-pictorial aspect with the presence of wonderful paintings and frescoes.

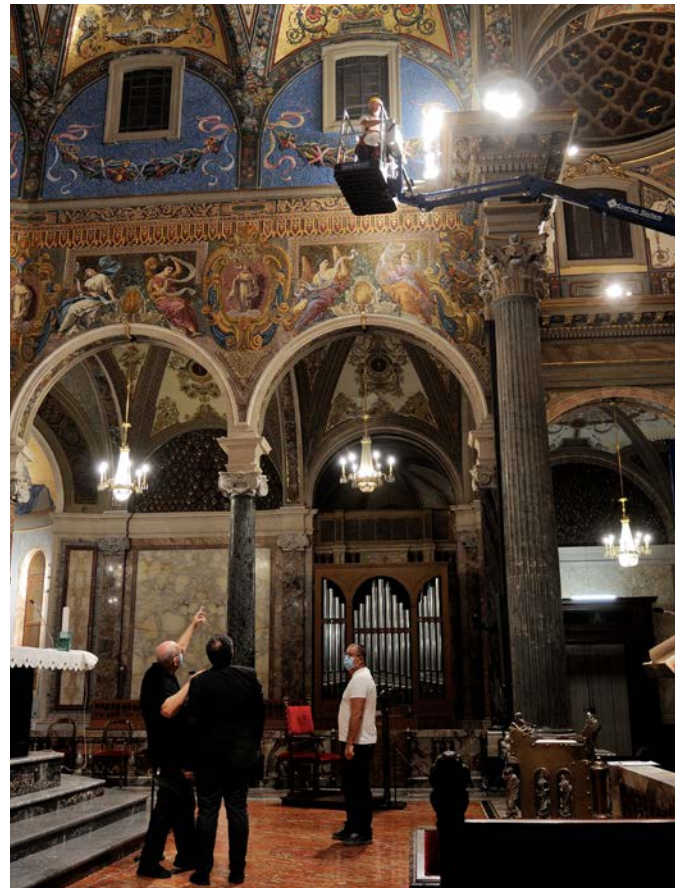
In addition, the relationship between natural and artificial light must be taken into account in each lighting project. A project of artificial lighting of a place of worship, always begins after a careful analysis of the atmospheres created during the daytime, from the natural light within the sacred architecture with an artistic identity and the specific needs of worship sensitive to the particular spiritual character of the Sanctuary.

Metalmek Lighting with its own professionals, competent consultants and support of specific software, studied for months, the correct artificial lighting for a lighting solution that respects the architectural characteristics identifying the specific needs as a place of worship and the site of wonderful works of art inside.

The collaboration with Eelectron, a company specialized in home automation, has allowed to design a lighting solution in line with the architectural, and artistic characteristics that symbolize the Sanctuary and with the needs of religious worship.



Custom lighting with gold leaf finish produced by Metalmek



The new lighting project of the Sanctuary

METALMEK LIGHTING is an Italian company that has been producing lighting fixtures for interiors for almost 50 years.

Through its own technical office it has been able to carry out a series of specific lighting calculations to recreate the spaces in 3D and to design the right light necessary for every need within the Sanctuary:

- contemplation of the wonderful and numerous works of art;
- the explosion of light for an important cult event or for an atmosphere of intimacy and deep recollection.

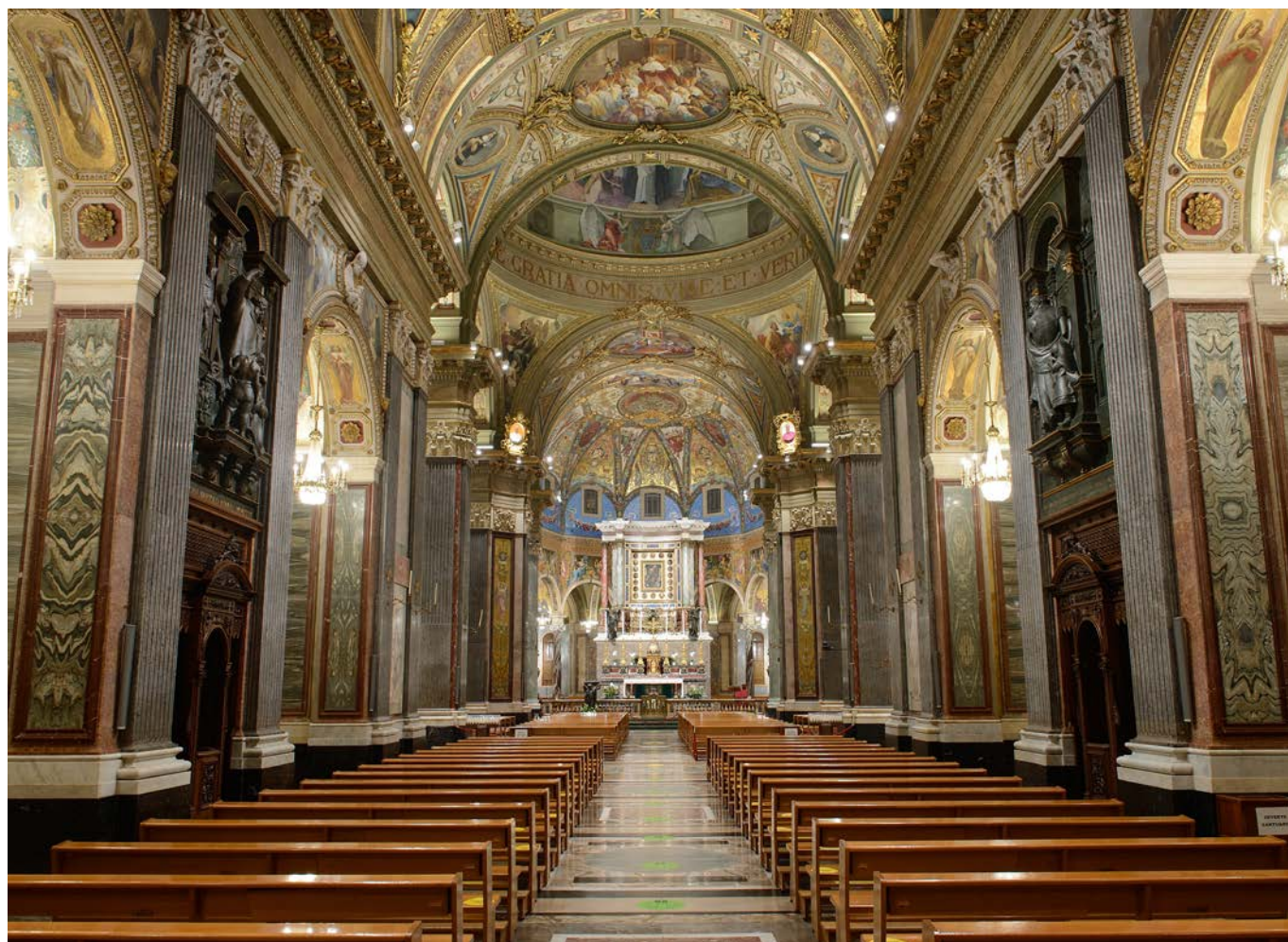
Thanks to its internal production, Metalmek Lighting has been able to customize the lighting fixtures chosen according to the lighting requirements and of installation planned within the Sanctuary.

The use of the innovative COB Led technology Citizen type BBL with a great color rendering more than 90%, has improved the enhancement of the works of art present in the Sanctuary.

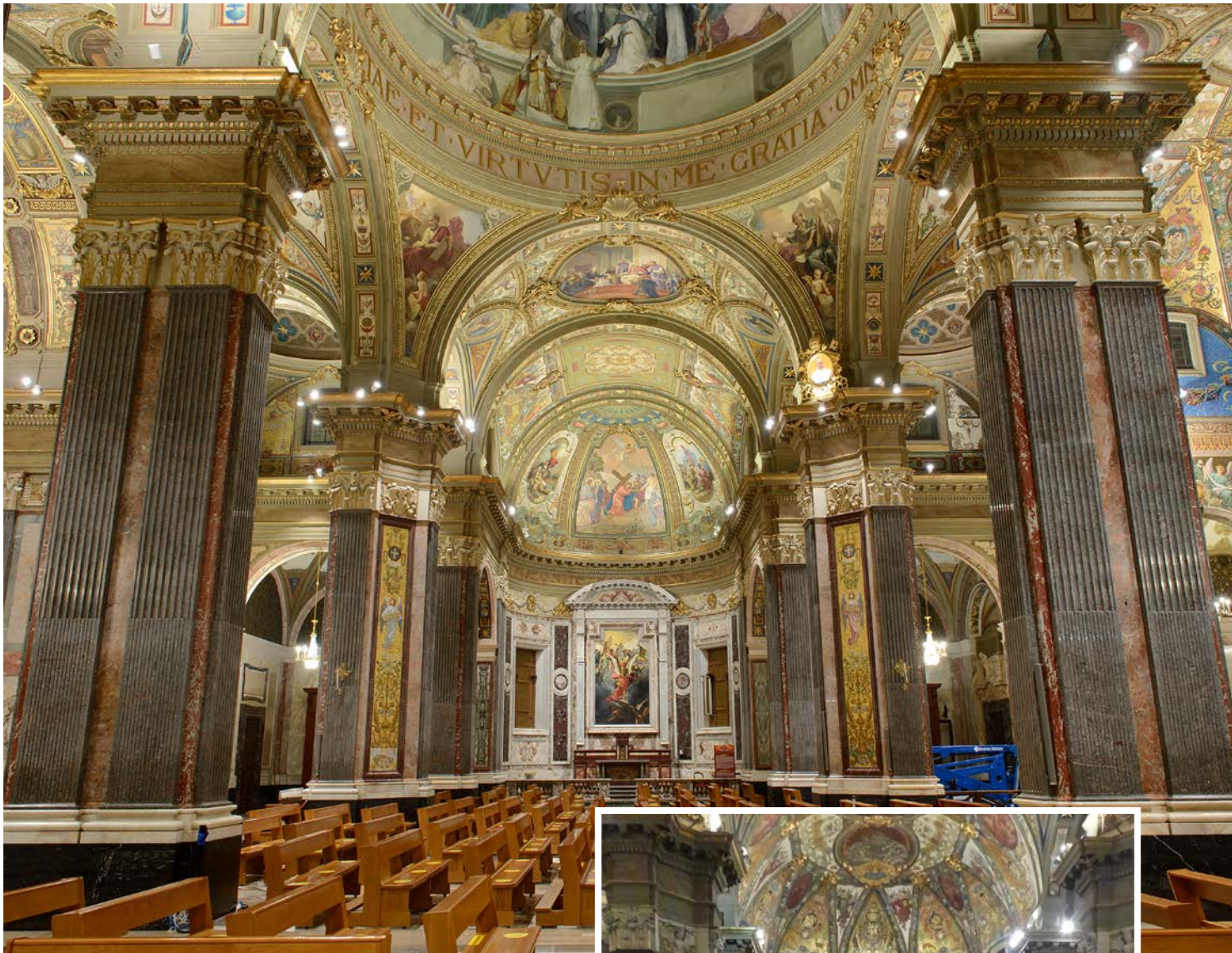
All lighting fixtures have been installed with DALI drivers that have allowed to interface with the KNX home automation system made by Eelectron.



Altar of the Virgin



Central nave



Left side aisle

History of realization of the executive project and development of the work

Once all the available data has been gathered and shared during meetings with the technical leaders of the Sanctuary, the project for the construction of the new lighting system began.

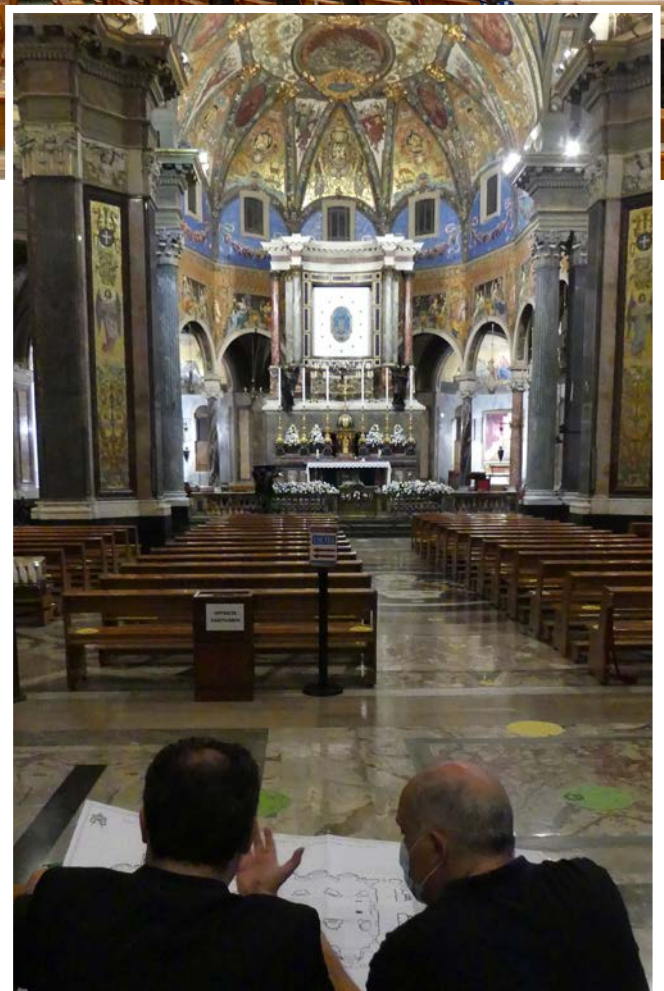
The goals on which the new plant was designed were mainly two:

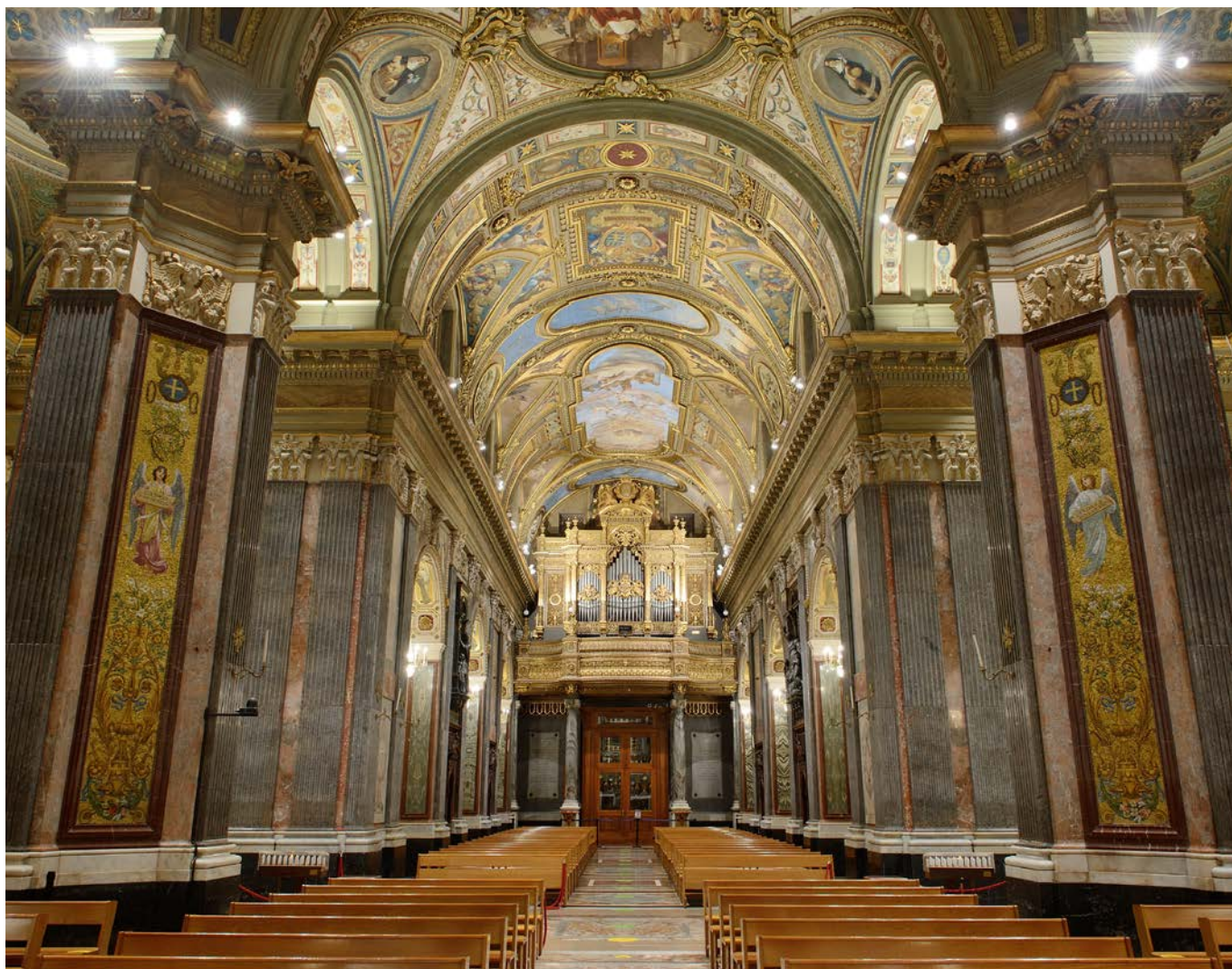
- Re-lamping of existing lighting fixtures;
- Impossibility of adding new light points.

Main objectives achieved during the project were:

- Significant energy savings;
- Use of new LED technologies at the same time as a KNX home automation system and programming of light scenarios;
- Creation of special scenarios both for a place of worship and for a museum area, considering the influence of natural light during the opening hours of the Sanctuary.

In addition, a reference point for the design was the directives of the CEI, Italian Episcopal Conference, issued for the construction of new churches and realization of lighting installation.





Counter-facade with view pipe organ located at the top of the central entrance

What we have found

Following the instrumental measurement of the present lux in various points of the Basilica, the verification presented a very poor scenario of lux available at a level absolutely insufficient to enhance the architectural beauty.

Specialized technicians have mapped the lighting fixtures existing and have detected with instrumental measurements the existing lighting technology.



The new lighting system realized

All **MetalmeK/Lival** lighting fixtures, a total of 361, have been designed and customized for the Sanctuary:

- 117 ceiling lighting fixtures with direct light;
- 235 ceiling lighting fixtures with indirect light;
- 9 custom suspended fitting with double emission and gold leaf finish;
- 13 kW of installed power;
- power/surface ratio of 5.70 W/m²;
- 30 lighting programs and ad hoc scenarios for every function foreseen in the Sanctuary.

Intelligent control of the lighting in a truly unique environment



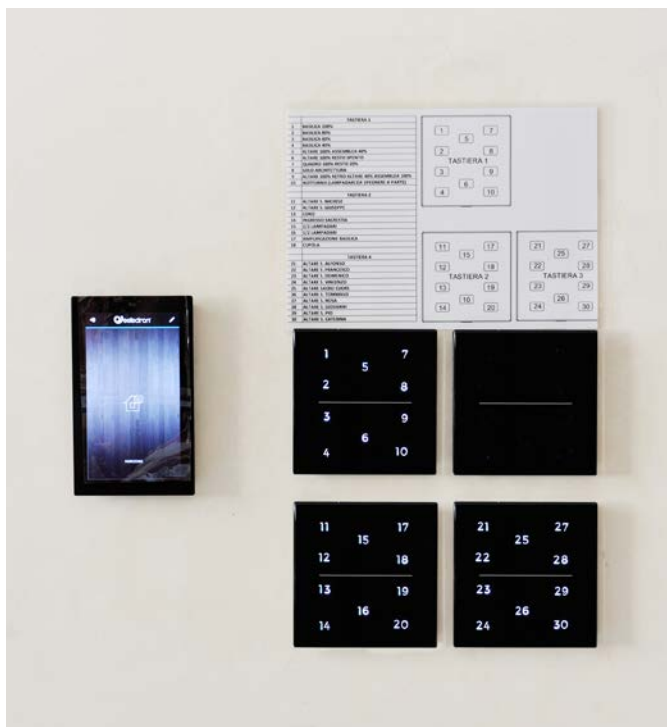
The need for the place

The new lighting project and artistic enhancement of the interior of the Sanctuary of the Blessed Virgin of Holy Rosary of Pompeii, sacred and historical place, requested the implementation of control logic and light scenarios to complete the choices of lighting fixtures.



The automation and control project

The lighting control solution provided in this project is based on KNX® and DALI® technology with programmable devices and scenarios for the management of hundreds of lighting fixtures installed, both in the museum area and in the place of worship. The design, installation and final development have also followed the directives of the CEI, the Italian Episcopal Conference, issued for the construction of new churches and realization of specific lighting systems.



The best experience for the visitor and ease of use for the operator

Thanks to intelligent lighting control, the experience of the visitor is optimized by the different atmospheres - between natural and artificial light - within the architecture thus enhancing the artistic and spiritual identity of the Sanctuary.

For the benefit of the building managers, attention has been paid to the simplicity and intuitiveness of the controls for everyday actions and for events. Keyboards, touch display panels, sensors, webserver and actuators have been installed to enable more than 30 scenarios configured and programmable according to schedule or for specific events facilitating the automation of routine tasks.

Additional benefits

The automation solution with KNX technology and new technologies contribute to the optimization of consumption energy and are easily modifiable and expandable over time.

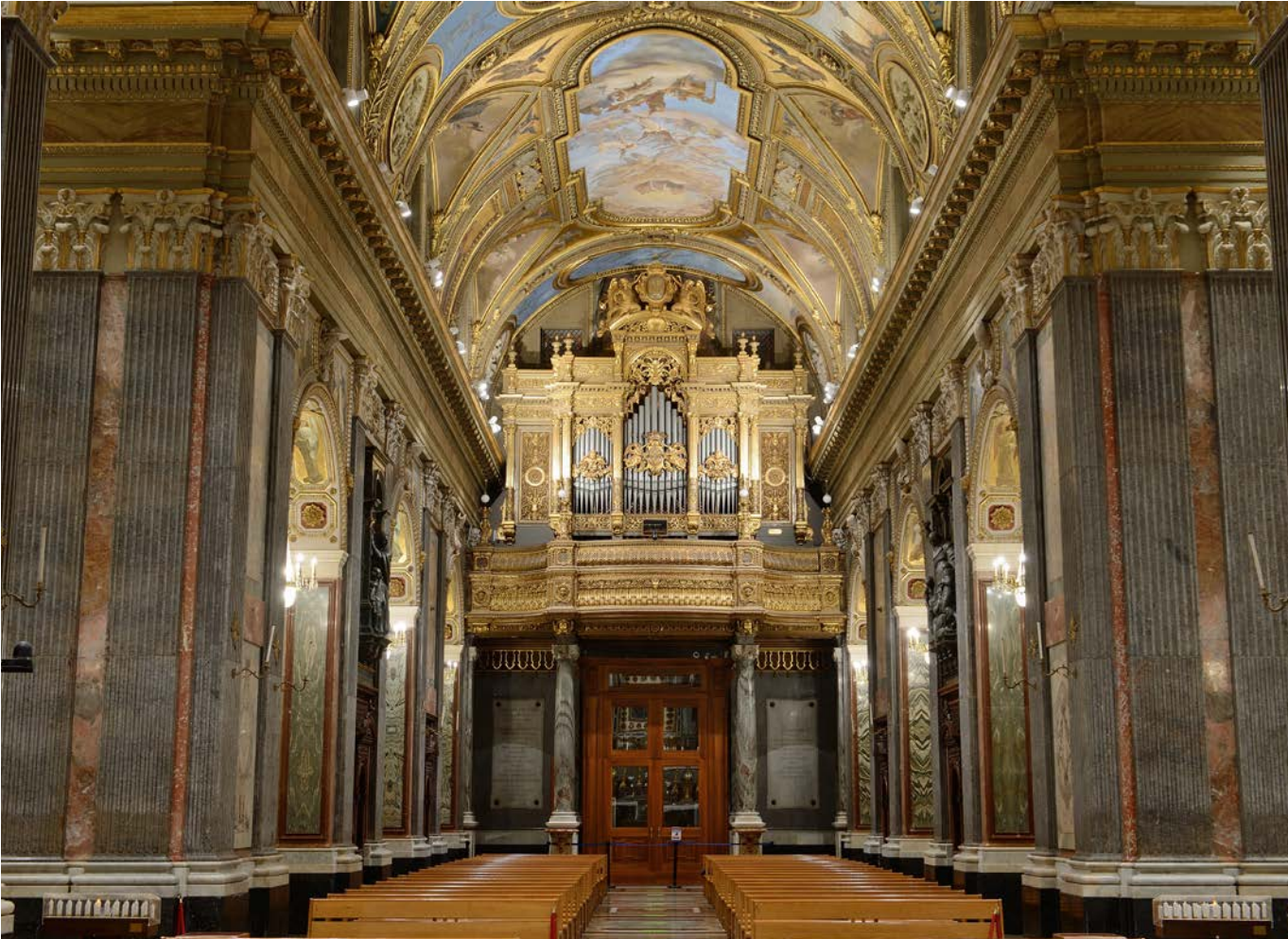
The real smart concept: people, competence and collaboration alongside technology

The realization of this important project, has been possible thanks to the collaboration and expertise of companies involved, Metalmek for lighting fixtures and Energy Sistem for advanced plant engineering of products and applications selected from the Eelectron portfolio.

Eelectron is an Italian company that manufactures and sells devices electronic hardware and software on KNX®, DALI® and Bluetooth® in over 80 countries.

Eelectron's philosophy of a complete aesthetic design and commitment to the development of highly innovative devices combines with the interoperability of KNX technology and the compliance with the strictest international quality standards.

The experience of Eelectron is aimed at the well-being of people in buildings, to those who design, install or manage environments in the most sustainable, energy efficient forms, comfortable and healthy.







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