

quaderni di assorestauro



YEAR04NR01  
MAY 2014

# IDENTITY AND CONSCIOUSNESS: FROM THE URBAN SCALE TO ARTWORKS

3<sup>RD</sup>-9<sup>TH</sup> MAY 2015



4 MAY  
TORINO



7 MAY  
RAVENNA



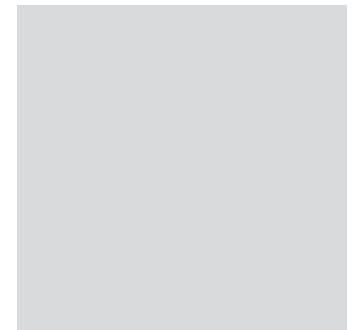
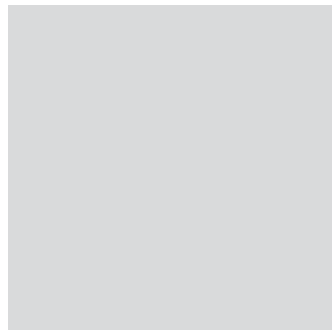
5 MAY  
EXPO  
MILANO



8 MAY  
FERRARA



6 MAY  
BERGAMO



Project financed by the Italian Institute for Foreign Commerce & Assorestauro



ITALIAN TRADE AGENCY  
ICE - Agenzia per la promozione all'estero e  
l'internazionalizzazione delle imprese italiane

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Quaderni di Assorestauro



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**ITALIAN TRADE AGENCY**

**ICE - Agenzia per la promozione all'estero e l'internazionalizzazione delle imprese italiane**

The ICE-Italian Trade Promotion Agency is the government organisation which promotes the internationalisation of the Italian companies, in line with the strategies of the Ministry for Economic Development. ICE provides information, support and advice to Italian and foreign companies.

In addition to its Rome headquarters, ICE operates worldwide from a large network of Trade Promotion Offices linked to Italian embassies and consulates and working closely with local authorities and businesses.

ICE provides a wide range of services overseas helping Italian and foreign businesses to connect with each other:

- identification of possible business partners
- bilateral trade meetings with Italian companies
- trade delegation visits to Italy
- official participation in local fairs and exhibitions
- forums and seminars with Italian experts



# asso**restauro**<sup>®</sup>

associazione italiana per il restauro architettonico, artistico, urbano  
italian association for architecture, art and urban restoration

**Assorestauro** is the first association established in Italy for materials, equipment and technology producers and service providers for the restoration and heritage conservation sector. Among the associations involved in this sector, which includes various institutional bodies that represent designers or restorers, **ASSORESTAURO** is the first to finally give voice to the industry and the sector of specialised services, promoting their interests in promotional, legal and cultural areas. **ASSORESTAURO** seeks to represent the sector, both nationally and internationally. In regard to the Italian market, an increased sensitivity towards our architectural heritage, together with the diffusion of new technologies, point to a growth in the sector in recent years, both from the cultural point of view (debates, magazines, conventions, exhibitions) and from that of technology (innovative materials, machines and equipment, software, plant design etc.). This provides the industry with a great opportunity for increasing and strengthening the occasions for dialogue, which are often lacking, with professionals, on the one hand, and with institutions (Government departments, Universities) on the other. As far as foreign markets are concerned, there is a clear perception of the need to capitalise on the great prestige that Italy enjoys abroad in matters of cultural heritage and on the remarkable investment in cultural technology that Italian companies have made in recent years, in order to translate specialist skills and know how into business opportunities abroad.

**ASSORESTAURO** therefore has the scope of coordinating, protecting and promoting the interests of its associated companies, and fostering their progress and development, endorsing their products and services and representing them in their relations with the institutions and organisations working in the field of research and training, regulations and promotion. It also acknowledges the support and patronage of the main restoration Italian Trade Show and Events, recognising, together with its associated companies, the value of a trade fair appointment that has become an international point of reference.

The company carries out the following specific activities:

- it promotes studies and research and collects news, items and statistical data useful for sector information, and carries out studies, monitoring and analysis of the situations and developments in the markets;
- it participates in the elaboration and publishing of international regulations for the qualification of associated companies, assisting them and protecting them in the certification of the quality and security systems of their products and services;
- it directly and indirectly organises training or updating courses, research and conferences for the development and dissemination of technologies and the use of their products;
- it promotes and holds conventions, synergies and agreements among associations throughout the world.





## PALAZZO MADAMA. TORINO SURVEYING METHODS AND GRAPHIC RENDERING

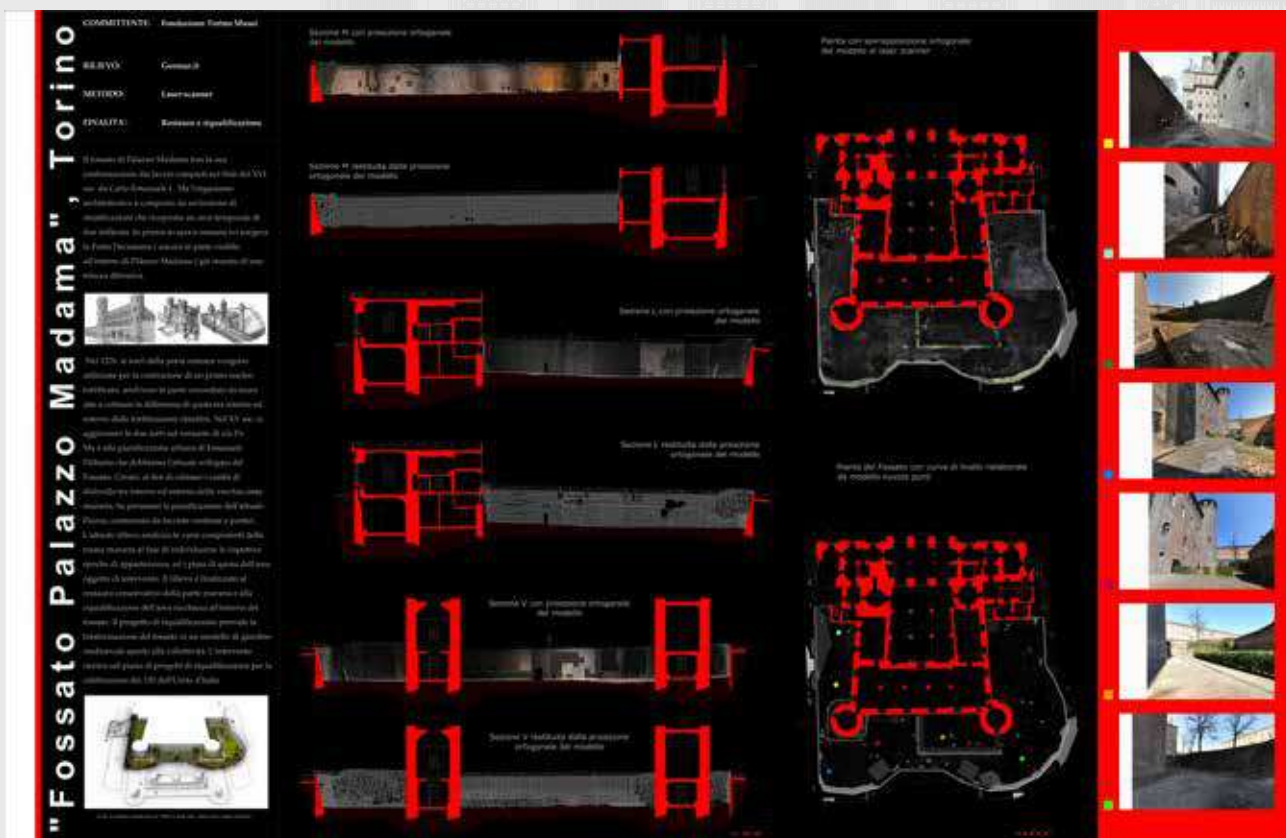
Alberto Raschieri

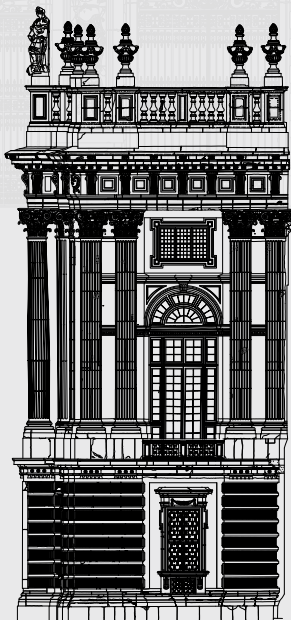
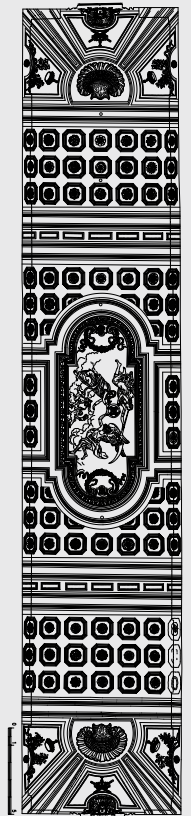
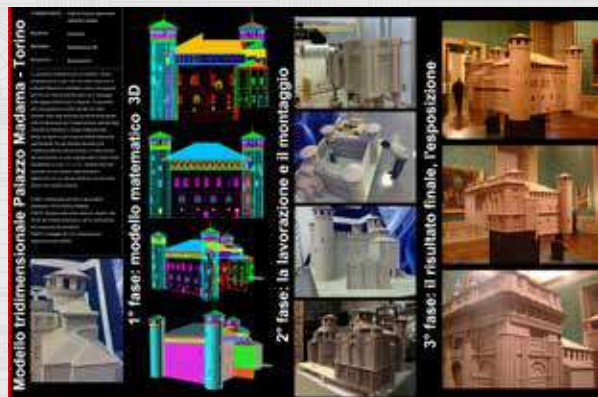
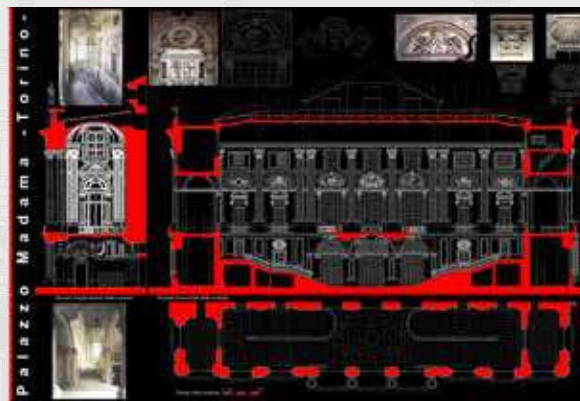
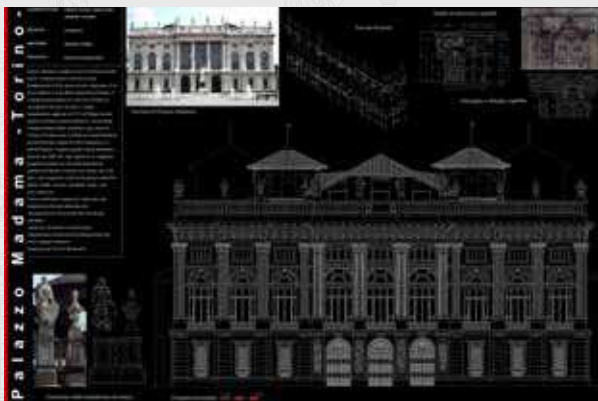


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Surveying of buildings with the laser scanner method: it proves to be particularly suitable in the case of buildings with a geometrically complex architecture and in the case where, apart from the geometry, surveying is done in order to obtain the colorimetry, the decay or the frescoes found on the revealed surfaces. The surveying consists of obtaining a high-resolution point cloud. Depending on the complexity of the object to be revealed we can choose a mesh of points beginning at 2 mm x 2 mm, for example suitable to the surveying of parts as complexly decorated as capitals, cornices, bas-reliefs etc. and then move on to a less dense mesh of a few centimeters, for example for the surveying of flat walls, floors etc. At the same time, while these points are being obtained, photographs are captured using professional high-resolution cameras.

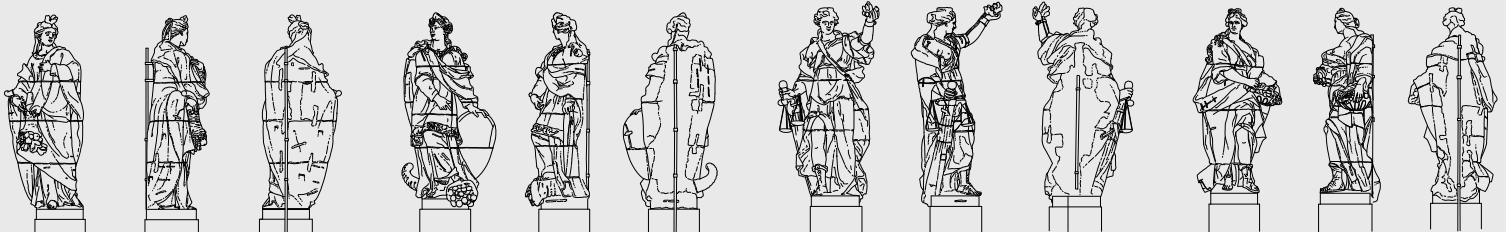
Depending on the distance from the revealed object, we use calibrated 20, 50 or 80 mm lenses. The overall point cloud is obtained by assembling the individual georeference scans through the acquisition of appropriate tags. The error due to the pairing of the clouds is contained within a few millimeters. The point cloud thus obtained contains all the information of the revealed object. By subsequent processing we can obtain the colored point clouds, the three-dimensional model with the images developed on the three-dimensional surface from which we can extract sections or diagrams.





From this model, we can obtain the orthogonal orthophotographs on any level.

2D and 3D graphic rendering. Whichever surveying method is being used for data acquisition, the graphic rendering remains a fundamental point which attracts a great deal of attention. In the two-dimensional design of diagrams, perspectives and sections of buildings of historical significance, special attention is given to the proportions of the architectural layout and to the geometry of the decorative elements and the sub-elements that make them up as capitals, shafts, moldings etc. When possible, for the purposes of a consistent rendering of the design, we compare the geometries revealed to the conventional geometries found on textbooks or historical works. Special attention is also given to the design of representational elements such as statues, bas-reliefs, festoons etc., or frescoes. The graphic rendering in these cases follows an appropriate stylistic research which is different each time, aiming at interpreting the aesthetic expression of the object to be restored in a consistent way. With the same attention to proportions and geometries, accurate three-dimensional models are rendered, focused on historical research or prototyping and scale reproduction.





## BEHIND AND BELOW - THE RESTORATION OF TRAMPLED WORKS OF ART

Alessandro Nicola



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1. Our intervention in the Palazzo Madama involved in an integral way: Sala Quattro Stagioni, Torre dei Tesori, Veranda Sud, Veranda Nord, Sala della Galleria, Gabinetto Rotondo, Gabinetto dei fiori, Sala Guidobono e Salotto Cinese. We have also restored the precious shelf of the book shop and the second floor, under the Works Management Arch. Carlo Viano and the 93 historical exhibition boxes.

2. Soprintendenza per il Patrimonio Storico Artistico ed Etnoantropologico del Piemonte and Soprintendenza per i Beni Ambientali e il Paesaggio del Piemonte

Every day, when we visit a historic building, our eye dwells on the exhibited works, paintings and sculptures of incredible beauty ... what we often do not consider and that, in many cases, the environment is crucial to enhance the artworks power.

I refer of course to frames, woodwork other artistic supports almost “invisible” compared with nobler decorations. Very often, these kind of artifacts have been designed to hide the irregularities of architectural spaces, giving more prominence to artworks and helping to create illusory spaces. As part of the restoration work<sup>1</sup>, carried out by Nicola Restauri team, on nine rooms on the Nobile floor and restoration of the top floor display made in 1934 by Vittorio Viale, under the direction of the Arch. Emanuela Lavezzo, for the City of Turin and control Dott.sa Anna Maria Bava and Arch. Paola Salerno of the two Superintendents Piedmont<sup>2</sup>, has had the opportunity to work - as well as on frescoes stucco, murals, plaster, paintings, ceiling, woodwork, furniture and display elements - even on the wooden floors, which will be the subject of this short article.

Although these floors were made with refined technique and very quality wood, they were not designed to withstand the use intensive by tourists. Sometimes, the restoration of artistic floor were performed by carpenters and not by professional restorers. Also in Palazzo Madama this work was conducted, in the past, by carpenters and this has caused irreparable damages.

The sanding of the surfaces to smooth the irregularities, which involves the thinning of the wood, created an inevitable weakening of the joints and sometimes this revealed tunnels dug internally by wood-boring insects. In the restoration of the wooden floors of the Palazzo Madama, Nicola Restauri team treated each wooden element with the greatest respect of the object in order to preserve the original element instead of replace the object.

In addition to some trauma of an accidental nature, the majority of the damages were due to the action of the worm and by not appropriate interventions performed in the past. In some rooms the floors and woodwork had already been partially dismantled many years before, without mapping the interventions and this has led to some difficulties in the process of relocation, not only because of the lack of documentation but also because of the wooden deformations which happened due to incorrect positioning of the various tiles and sometimes loss of certain elements. In other cases, the floors were still in place, covered with a very consistent dirt deposits of powder and smog, some-

One of the tiles from Sala Quattro Stagioni before restoration, view of the front and back. Are obvious damage caused by wood-boring and old speeches of “restoration”





Left: Recognition and numbering on the spot of the various elements of one of the boxes in the street prior to removal.

Right: Part of one of the boxes transferred to the carpentry department of Nicola Restauri Workshop for consolidation.



times embedded in old wax-ups and other protective products. In particular, the floor of the Sala Quattro Stagioni, had extensive alterations due not only to the drastic sanding surface but also for inserting of grafts performed with wrong shapes to fill the lost or damaged portions.

Nails and screws of various types caused twists and breaks of the wooden parts by blocking the various sectors. On the back off the tiles many reinforcements were made with plywood or various recycled wood. The restoration, which took place partly in the laboratory and in part on the site, was structured in many phases that contemplated the mapping and numbering and cataloging of each wooden part, the disassembly of the woodwork, the transport, the cleaning, restoration of the wood and the repositioning of the woodwork

The cleaning of the wood was made first with wax remover and organic solvents and subsequently finished with steam. With a long and meticulous work, the tunnels dug by wood-boring were manually emptied from the blackish wax, using a dentist probe.

The wood was treated carefully with a brush on both sides or by imbibition in more severe cases, with a product that kill and prevent worms to infest again the wood and consolidating the parts with lack of resistance.

The open joints were repositioned properly and stopped where necessary with graft reinforcement, respecting the original assemblages. The grafts positioned in the past that did not care about the design or the correct wooden essences have been eliminated and replaced.

The galleries of worms and small gaps were grouted with wood dust and polyester resin and then rebalanced in tone with the original by retouching punctual. As impregnating protective, considered even the decision not to preserve the floors with guides from trampling, was chosen a product specially designed for wooden surfaces composed by dammar resin, linseed oil, carnauba wax and propolis dissolved in limonene.

In order to avoid the blocking the natural movement of the wood due to changes in temperature and humidity, the floors have been assembled together without any nails, screws or locking elements, but with wooden elements inserted in grooves in the thickness of the tile, balancing plans custom created thicknesses and interposing, between the floorboards and floor, a non-woven fabric sheet. Some elements have been lost in the past, but we were able to faithfully copying the original, using the same wood species and the same type of joints.



## PALAZZO MADAMA. CHANDELIERS RESTORATION

An exclusive preserving action related to the historical chandeliers of Palazzo Madama in Turin, had been taken between 2005 and 2007.

In 2005, the restoration works of the chandeliers placed in the north and south porches of the building, had been started.

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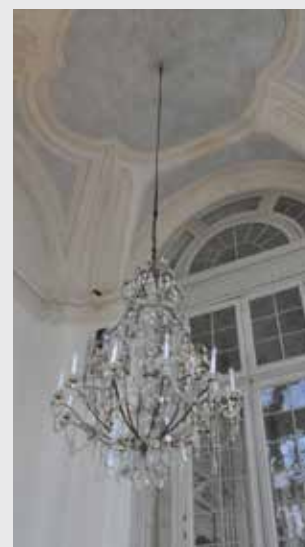
### NORTH AND SOUTH PORCHES:

The chandeliers peculiar formal features can be referred to the handicrafts typically made in Piedmont, with 12 lights and a brass silvery structure enriched by Bohemian crystals; the sizes are 230 cm tall with a diameter of 160 cm.

The handicraft structure showed a totally oxidized green coloured surface. While carefully dismantling them, several broken glass cups and other glass parts had been discovered. Most of the damages were related to an advanced level of deterioration. In agreement with the commissioners and the Superintendency's officer in charge, the missing pendants had not been replaced in both chandeliers for maintaining the authenticity of the artworks.

The metal structures had been polished with Rochelle salts and finished with mechanical treatments, micro-brushing machinery. For the final protection, it had been applied a glazing of ochre pigmented Zapon diluted in a nitrous solvent 30%.

A renewed electrical system had been installed as requested by the Restoration Manager, with a system doubling in the low perimetral area. Both handicrafts had been provided with grounding systems.





### **BOOKSHOP:**

The bookshop is enlightened by a chandelier by the “Muranesi” school with two levels of lighting, made in golden glass, datable around 1920; the size is 350 cm tall with a diameter of 240 cm.

The handicraft was purchased in 1927 for the “sala degli Stucchi” (now called Camera delle Guardie). It suggests an eighteenth century model denominated “Rezzonico” as a homage to its series ancestor. A chandelier invented and made by Giuseppe Briati (Muran 1686 – Venice 1772) for the palace owned by the family Rezzonico in Venice on the Canal Grande.

According to the Rezzonico model, the chandelier of Palazzo Madama, with its 46 lights, is structured with supporting branches without the central trunk.

The metal structure is covered by elements in blown and golden glass.

Each single piece is made of “rigadin” glass, so with longitudinal and spiral striping patterns, broken by linking puffy elements and on the top decorated with flowers and leaves.

The chandelier dismantled in 2003 has been re-built in 2007, and due to this operation, a proper event has been created and named “Cristalli di Luce”.

The first phases of this process started in the huge Sala del Senato of Palazzo Madama and they had been completed in the Bookshop.

The restoration works had been carried out by fulfilling the following phases:

- \_ Inventory and archiving of the pieces and photo taking;
- \_ Polishing and technical analysis of the conservation status;
- \_ Refurbishment of the plaster in the supporting glass cups;
- \_ Preassembly of the dorsal;
- \_ Reinforcement of the bottom supporting wooden plates with Paraloid;
- \_ Cleaning of the glass parts with gas water in 2% of benzyl chloride (surfactant and product made to prevent bacteria in the glass parts);
- \_ Remake of all the golden parts (pendant ornaments) with brass wire 8/10; wiring by law.





## CONSERVATIVE RESTORATION AND EXTRAORDINARY MAINTENANCE OF THE HISTORIC FAÇADES OF THE EX CINEMA CORSO, TURIN.

Vincenzo Spatafora  
Federica Badino

### HISTORICAL CONTEXT

At the beginning of the 19th century, with the transition from capital city to great industrial hub, Turin was busy following the increase of its population, principally due to the establishment of the major Italian automotive company, FIAT. It has been recognized to the city the ability of embracing this substantial growth by facing all the needs it raised, public services, hospitals, drainage systems but always keeping a careful eye on architectural beauty, art and the discrete splendor that has always defined Turin.

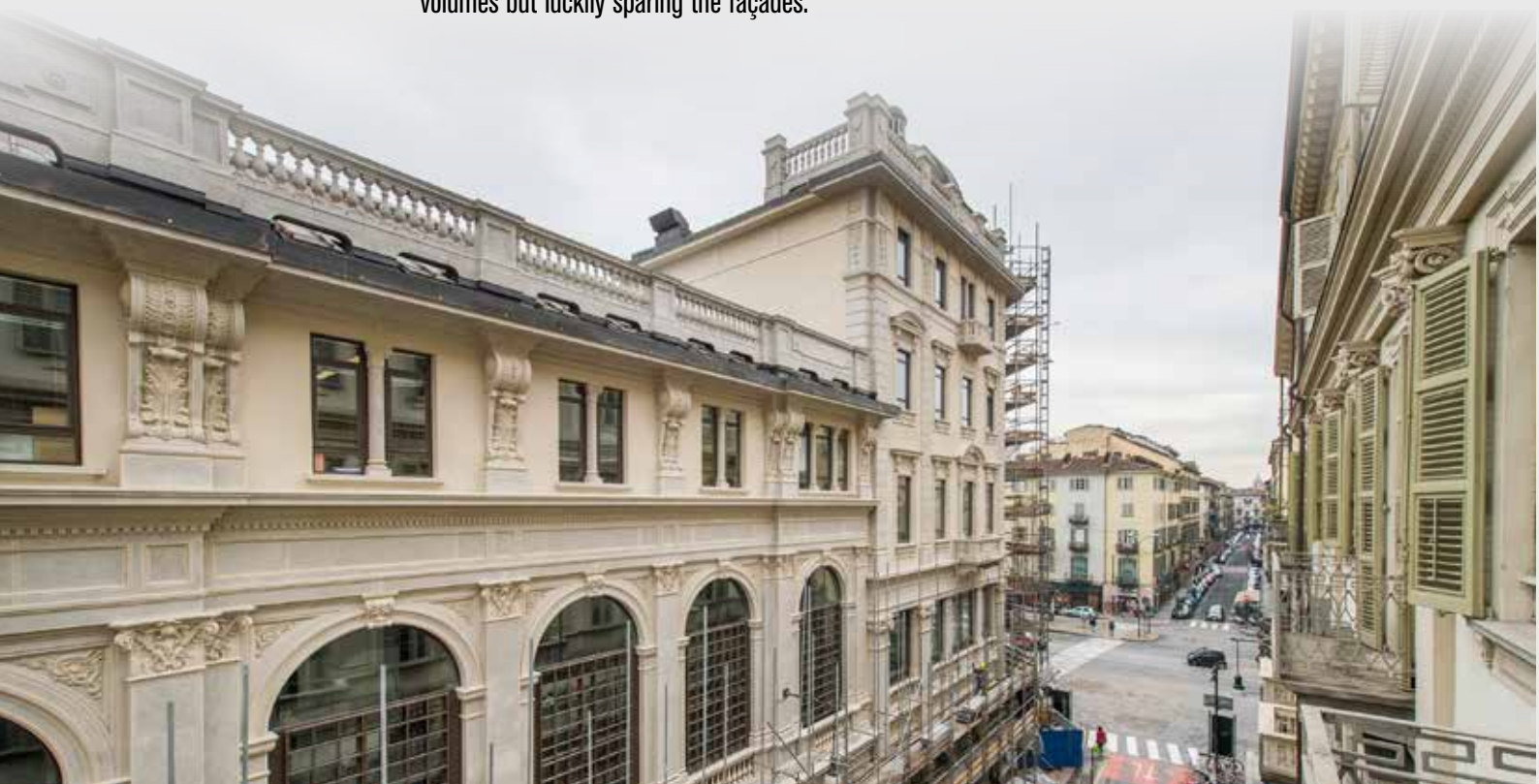
Also amusement was a factor that was held in consideration during these years busy with new fulfillments, for this reason in 1926 the realization of the Cinema Corso began. Its project was the result of the collaboration between the engineer Vittorio Bonadé Bottino and the architect Giulio Casanova; it may be defined as avant-garde from both conceptual and architectural perspectives.

The diagonal arch entry surmounted by the cupola, the sumptuous decorations of the external façade, the splendor of the internal theaters' ornaments and the eclectic drawings made of architectural and decorative scores of artificial mixture of grit stone with decorative patterns on bush-hammered backgrounds may be defined in a whole as majestic.

In 1980 a fire took away a significant piece of levity of the city destroying completely the internal volumes but luckily sparing the façades.



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## THE YARD

In September 2014 VGS Costruzioni was commissioned the restoration of the deteriorated façades of the building, the protection of which is granted by the Superintendence for Architectural Heritage of Piedmont.

Primary objective of the project has been the conservation of the heritage through operations of reconditioning, renovation and where sustainable the purge of inconsistent superfetation in order to bring back the building to its original elegance.

The first phase of careful study of the surfaces and previous interventions has been carried out through a careful diagnostic campaign and a series of stratigraphic tests that have been fundamental in order to achieve the set goals.

The management of the construction site has been organized in the following phases:

- \_ removal and cleaning of consistent and inconsistent deposits and synthetic repainting to recover the alternations of colors and modeled primitive
- \_ preventive treatment through the application of biocide against the growth of Autotroph or Heterotrophic micro-organisms
- \_ operations of soluble- salts extraction
- \_ removal of incoherent restorations
- \_ review and integration of the pitch elements, remaking waterproof sheaths
- \_ consolidation through the adhesion re-establishment of the layers and re-anchorage of the different portions and architectural elements by inserting pins
- \_ reintegration of groutings, additions, replacement of elements and reconstruction also through the aid of armature pins and silicone resin molds
- \_ aesthetic finishing through restoring painting, balancing of the visual interferences and painting of backgrounds and patterns
- \_ protection with water-repellent and breathable product
- \_ maintenance and repainting of all windows and historic gates

These days witness the last operations of this construction site that VGS managed also thanks to the collaboration with great professionals giving back the splendor it deserves to this great building, spectator during its years of glory of tears and laughter of many citizens.



**4** MAY  
**TORINO**

## SPECIAL CLEANING WORKS ON THE EX CINEMA “CORSO” BUILDING IN TURIN, USING THE MICRO-AIR-ABRASION METHOD

Caterina Giovannini



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The building, constructed in the 1920s is located on the corner of Via Carlo Alberto and Corso Vittorio Emanuele, presenting two abundantly decorated front façades and two secondary façades. The entire construction is a compact and richly decorated structure, elegant and in line with the architectural and aesthetic demands of the construction period.

In 1980, a fire damaged some of the outer parts of the building, thus the building was repainted with a synthetic paint, in order to reinvigorate the homogeneity of the surfaces.

The cleaning works performed by IBIX for the restoration of the former cinema “Corso”, were aimed at the removal of paint and dirt accumulated over the years. The intervention led to the recovery of historical coats found under the layers of paint, bringing to light interesting chromatic alternations in the various parts of the building.





The cleaning intervention was carried out using the micro-air-abrasion technique thanks to Trilogy technology provided by IBIX. This machinery is capable of projecting various types of media of different particle sizes at low pressure. Trilogy uses both gun nozzles with perpendicular angle of incidence and the Helix helicoidal vortex technology, a particular method that makes the impact pattern tangential with respect to the surface, by virtue of the rotation imparted to the media exiting from the gun. These technologies enable to selectively remove layers of paint, dirt and biological deposits ensuring the utmost respect of surfaces and noble patinas developed over time.

During the cleaning intervention on the Cinema “Corso”, IBIX® media cleaning systems of different power were used, depending on the parts treated. It was also arranged to differentiate the removal of the paint through the use of two different materials. Less delicate parts were cleaned using almandine of different grain sizes, while smaller decorated parts were cleaned using crushed nut shells, a less aggressive material.

The original synthetic paint used for repainting showed different tenacity characteristics in various parts of the building. On the upper floors for example, the coat demonstrated persistence and multi-layeredness, while on the façades, the density and the texture varied according to the work areas, also because of greater exposure to atmospheric agents. This made the execution of works faster in some places, but very problematic in others.

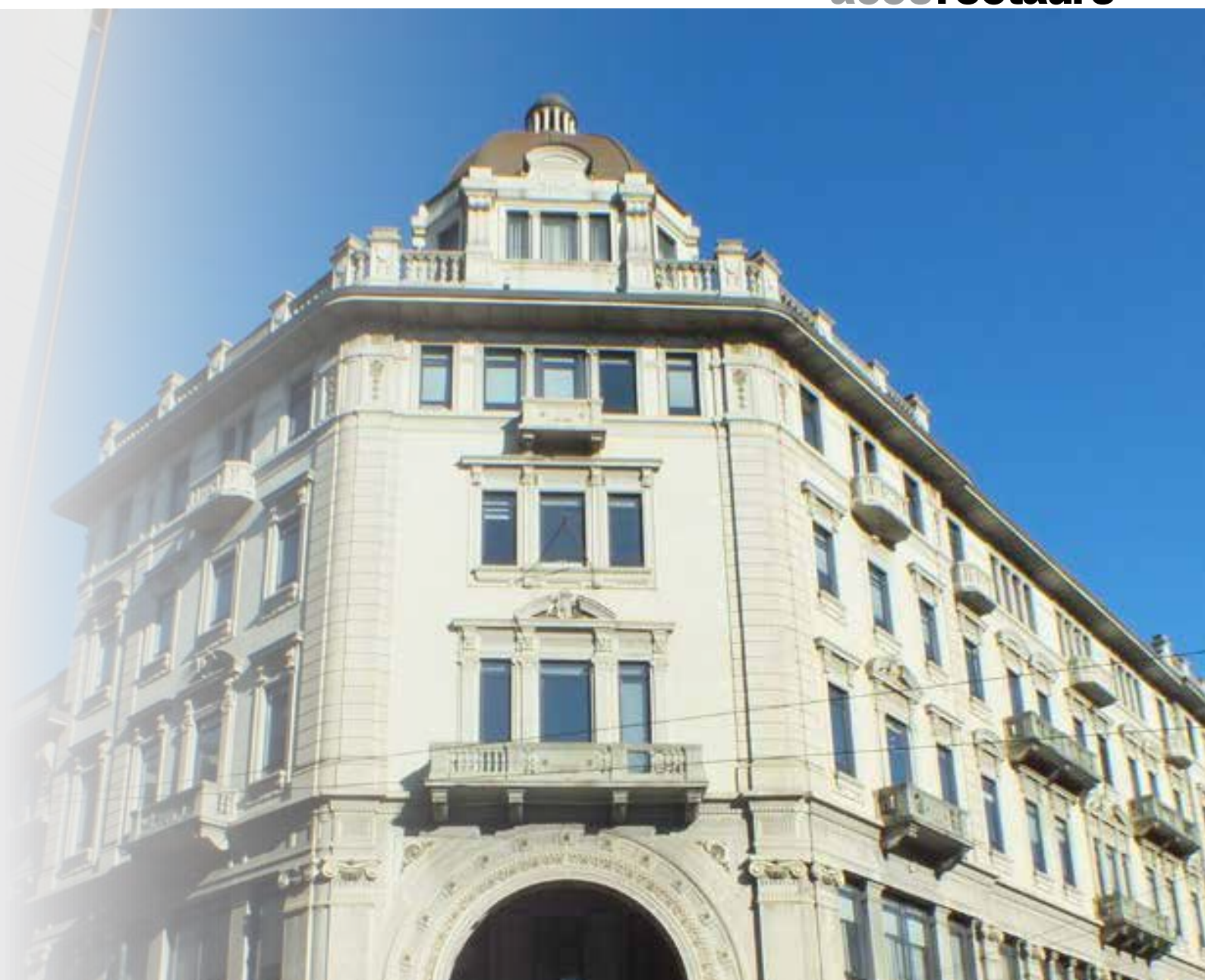
The ground floor, despite being made of concrete like the rest of the building, had marble inlays and natural stone wainscots. In this area, the cleaning process involved both the wall surfaces and the wainscots, areas that presented particular problems. This being the level of increased public use, the surface deposit was very developed and the thickness of the paint was high.

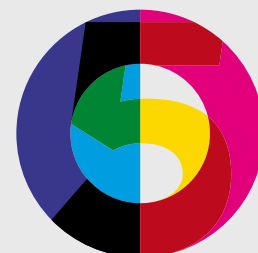
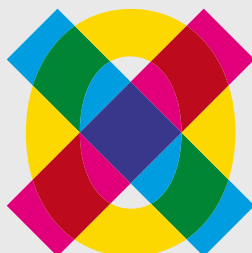
Given the tenacity of the paint, in some areas it became necessary to use a chemical paint stripper before the aeromechanical treatment, as to affect the compactness of the paint layers; the combination of the two operations has allowed a smoother execution of the works and greater protection of patinas.

Thanks to the use of the IBIX media cleaning and micro-air-abrasion technologies, it was possible to optimally preserve noble patina found under the layers of paint, thus completing, in a relatively short time, an extensive cleaning intervention made difficult by the particular tenacity of the paint that needed to be removed.









## MILANO

Fonte:  
[www.expo.org](http://www.expo.org)

**Expo Milano 2015** is the Universal Exhibition that Milan, Italy, will host from **May 1 to October 31, 2015**. Over this six-month period, Milan will become a global showcase where more than **140 participating countries** will show the best of their technology that offers a concrete answer to a vital need: being able to guarantee healthy, safe and sufficient food for everyone, while respecting the Planet and its equilibrium. In addition to the exhibitor nations, the Expo also involves international organizations, and expects to welcome **over 20 million visitors** to its 1.1 million square meters of exhibition area.

A platform for the exchange of ideas and shared solutions on the theme of food, stimulating each country's creativity and promoting innovation for a sustainable future, Expo 2015 will give everyone the opportunity to find out about, and taste, the world's best dishes, while discovering the best of the agri-food and gastronomic traditions of each of the exhibitor countries.



FEEDING THE PLANET  
ENERGY FOR LIFE



“Feeding the Planet, Energy for Life” is the core theme of Expo Milano 2015. This common thread runs through all the events organized both within and outside the official **Exhibition Site**.

Expo Milano 2015 will provide an opportunity to reflect upon, and seek solutions to, the contradictions of our world. On the one hand, there are still the hungry (approximately 870 million people were undernourished in the period 2010-2012) and, on the other, there are those who die from ailments linked to poor nutrition or too much food (approximately 2.8 million deaths from diseases related to obesity or to being overweight in the same period). In addition, about 1.3 billion tons of foods are wasted every year. For these reasons, we need to make conscious political choices, develop sustainable lifestyles, and use the best technology to create a balance between the availability and the consumption of resources.

Reflection on the Expo theme becomes a time of sharing and celebration, involving conferences, events and performances, enhanced by the presence of the **mascot Foody** and the cheery characters who accompany him. Every aspect and every moment of, as well as every participant at, Expo Milano 2015 define and move forward the chosen theme: **Feeding the Planet, Energy for Life**.

[ To learn more see [www.expo.org](http://www.expo.org) ]





## EXPO 2015 - FRENCH PAVILION. A MIX OF TRADITION AND MODERNITY



[www.cmcgruppo.com](http://www.cmcgruppo.com)

The futuristic **FRENCH PAVILION** expands over an area of 3,600 square meters and it is entirely made of laminated wood, from the French department of Jura. The transalpine pavilion is one of the three (together with Thailand's and South Korea's ones) built by C.M.C. - Cooperativa Muratori & Cementisti di Ravenna, the Italian group leader in the construction industry with a turnover of around 1.1 billion euros. The company C.M.C. - Cooperativa Muratori & Cementisti di Ravenna realised the design developed by X-TU studio with the support of ALN Atelien Architecture studio and Studio Adeline Rispal, which managed the scenic design of the Pavilion. The inspirational image is one of the symbols of the French food culture: the covered market. The Pavilion takes its inspiration from the traditional covered markets located in many French cities, which represent well the overall theme of Expo Milano 2015, with an emphasis on food self-sufficiency and the qualitative dimension of food. The other distinctive feature of the pavilion is the garden located in the external area, showcasing the French agricultural diversity, such as cereals, specialised and mixed crops, fruit trees and ornamental species. The French pavilion is built on three levels: the ground floor, the heart of the exhibition, and two upper levels hosting offices and other spaces dedicated to catering and creativity. From a design point of view, it can almost be considered as a chorographic map, an actual and upside down portion of French territory made of decomposable and reusable wood. Very innovative from an architectural point of view, it is designed to have natural ventilation to cool the rooms during the summer.

### FRENCH PAVILION





**THAILAND PAVILION**

The **THAILAND PAVILION**, covering a total space of 2,947 square meters, has the shape of the “Ngob”, the Thai rice farmers’ traditional hat that symbolises the farming knowledge and local wisdom. Agriculture, food and sustainability are the contents featured across the spaces of the pavilion, with the dual goal of both telling the importance that an increasingly sustainable agricultural economy plays in the future challenges of the country, and exhibiting the cutting-edge technologies developed for food storage.

The **SOUTH KOREAN PAVILION** has been designed and built after the architectural theme of the “Moon Jar”, the traditional ceramic vase used for storing food. During Expo Milano 2015, it will become the place of dialogue and discussion on the theme of the nutrition of the future.

**SOUTH KOREAN PAVILION**



**6** MAY  
**BERGAMO**

## RESTORATION AND TECHNOLOGIC ADAPTATION OF TEATRO SOCIALE DI BERGAMO

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dal 1920

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Foto:  
Virginio Messori ©

The Social Theatre of Bergamo town was built at the beginning of the 1804 following the design of Leopold Pollack, follower of the great architect G. Piermarini designer of the Teatro La Scala in Milan. After opening in 1808, the noble theater in Città Alta (Uptown) lived ups and downs, until all activity ceased in 1929. From that moment took turns a variety of uses of the building such as cinema or space for exhibitions and numerous projects were drawn up in order to swap to other functions (lecture halls, shopping mall etc..) calling for its complete abandon and destruction; the fact of being almost ruined was also its fortune because no work was realized for 80 years.

Before the re-opening of the building yard (2008), the architecture of the theater was in a very advanced state of degradation: the rows of boxes, were unsafe for the neglect of the time and inaccessible for any use; the area of the audience and the rooms of the theater had undergone rearrangements and did not meet any current standards.

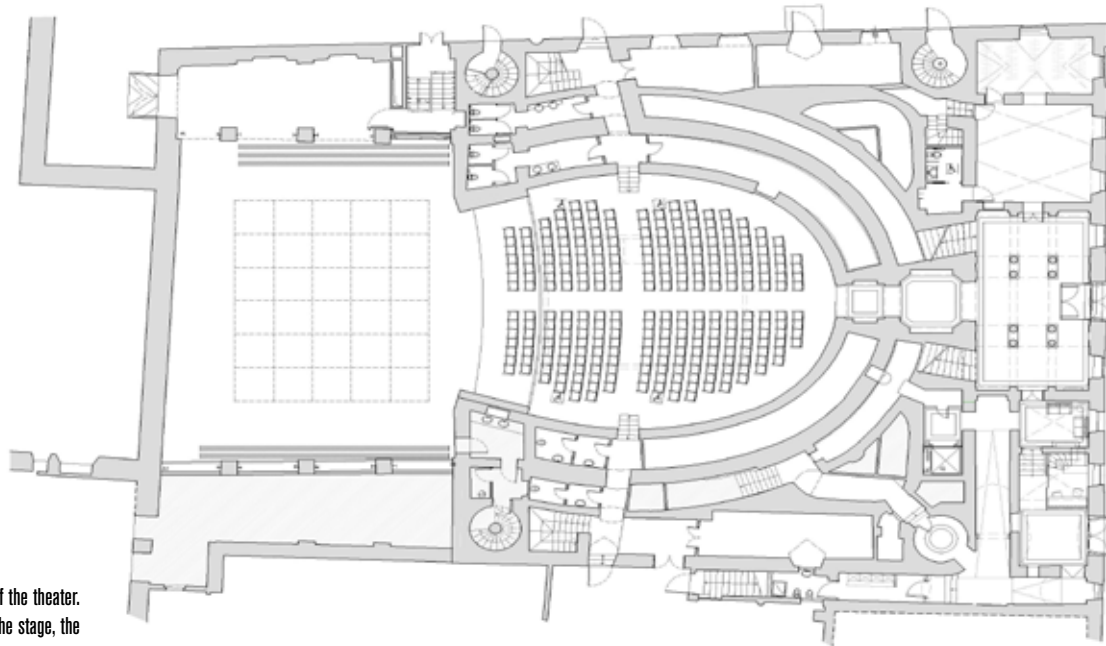
The philosophy adopted for restoration was not inspired by the school of pure conservation, nor the in-style recovery, although philological; the designers have been inspired by a sort of “Critical and Conservative Restoration”, an approach that includes measures not deliberately prevaricating or breaking compared to traditional materials found in the building, with an approach that does not want to stand out on the existing, but to restore decorum and unity only if possible, without the need to retain outright or to act with imitative integrations and additions.

The system and structural adaptation of an old nineteenth-century wooden theater involves the study of new routes for audience and spaces to hold ducts and machineries and, at the same time, keep them hidden to avoid altering the original appearance; Similarly, all the static reinforcements must ensure compliance with new regulatory requirements without overcoming the ancient wooden structures.

The design team had to deal with complex and conflicting requirements as the preservation of the

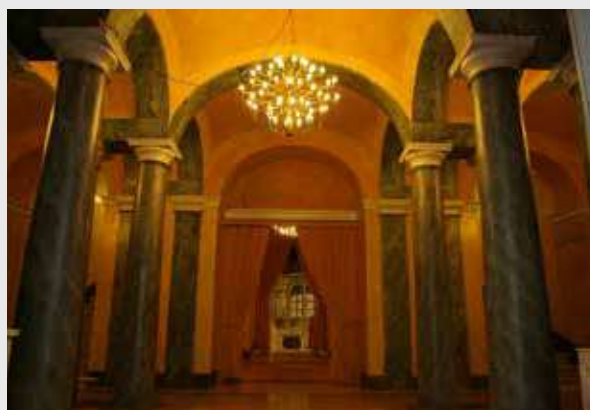


The main hall of the theater and the wooden parapeet of the boxes before the beginning of the restoration. The advanced state of degradation can easily be noticed.



The ground floor of the theater.  
From the left to the right: the stage, the  
main hall and the entrance area

historic look of the building and of its decorations, respecting the present requests for accessibility, comfort and safety. In fact, the disciplines involved in the restoration of a theater are many: to name the main ones, just think of the architectural aspects, plant, structural, conservation, scenic, art restoration, acoustic, audience comfort, safety, management of the yard in the historic center, public contracting, coordinating with local energy suppliers. Each of these disciplines has interacted during the design and execution of the work to achieve the most efficient way to adapt to regulatory requirements (fire prevention, barrier removal, etc.), the design of new stage machinery and technical areas, the creation of a new lighting system, the definition of the finishing of the floors and walls, restoration and recovery of the decorations and finally the integration of all these decisions with the need for structural reinforcement and technological systems.



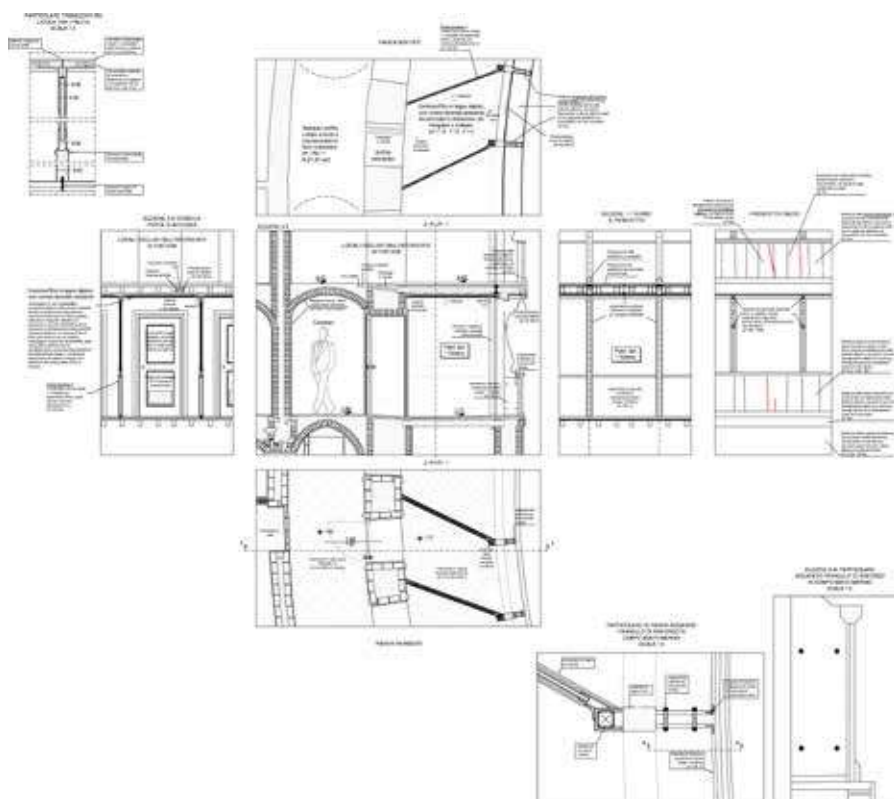
The entrance foyer of the theater before  
and after the restoration.

From the left to the right: the stage, the  
main hall and the entrance area

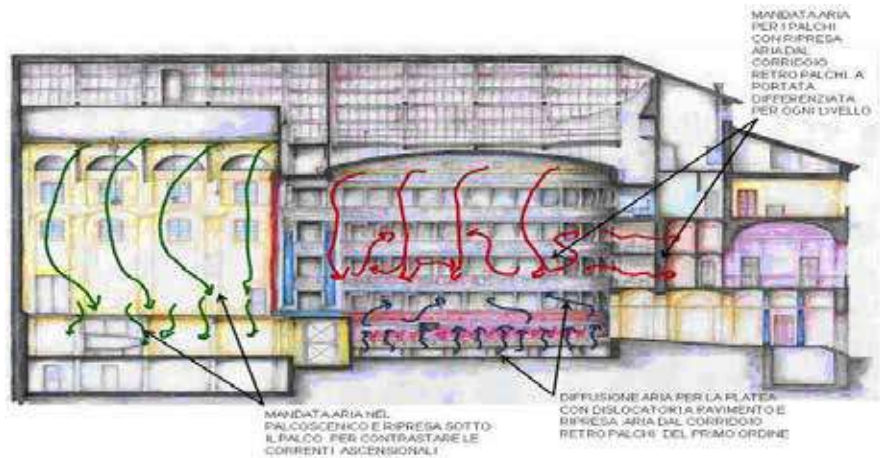
To better explain the complexity of interventions on the “machine” of the Teatro Sociale, we can schematically identify three major areas: the entrance area overlooking the main street, the stalls and rows of boxes, the stage and the stage machinery.

### THE RESTORATION OF STALLS AND ROWS OF BOXES

The reorganization of the stalls in the main hall was a key moment of the project, since it represents the operating fulcrum of the entire theater. The area of the stalls was designed as a versatile space that can accommodate the audience during the shows, and eventually – if the chairs are removed – can host temporary exhibitions. The wooden structure of the boxes, deteriorated from the prolonged disruption of the roof in the second half of the twentieth century, has been fully conserved and strengthened with a steel counter-structure which is completely invisible but can also provide static resistance in case of fire for more than 90 minutes. In this way, it was possible to combine the preservation of the structure as it was with the practicability. After a long research and a very long debate, the division of the boxes has been reported in the original condition: wooden partitions between the boxes were added to the first, second and third row, so as to create a succession of individual boxes able to host four spectators each instead of one single area in the balcony (as before the restoration). The new walls were built with wood panels with a neutral color coherent with the color and finishing of the stage and the old boxes.







A schematic drawing of the air-flows in the main hall and on the stage. The technical areas of the air-conditioning system that host the main treatment units. The corridor of the boxes used as an air duct (plenum)

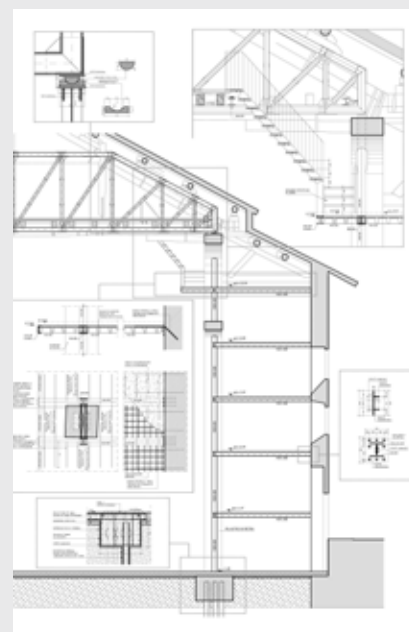
The reopening of the three levels to the public requested new toilets on each floor for the public and artists, as well as two important safety stairways to ensure the exodus of people safely in the event of fire.

The design-idea that made it possible to reuse the old theater has been to employ each perimeter corridor that connect the boxes as an air ducts for the air conditioning system (plenum). This ensures proper cooling of the audience and of the different rows of boxes, without the need for bulky and intrusive pipes that would have distorted the historical walls of the building.

The air distribution in the volume of the stage and of the fly loft is designed to counteract the typical hot rising air currents and to avoid interference with the scenes, which could cause fluctuations: in fact, the air is fed from above and took back from the floor of the stage.

Even the boxes and the stalls area are, like the stage, a difficult volume to be air conditioned: the elevated height of the stalls-room causes the thermal stratification and the limited interstory heights of the boxes make it difficult to realize a branched fluid distribution. That's why the volume has been divided into two main areas: the stalls and boxes. The latter are conditioned by the air that is placed above the gallery, and that is taken inside the boxes in a different way for each row of boxes. Instead of realizing metallic air ducts, the perimeter corridors that connect the rear stages have been exploited as return air ducts for air conditioning system (plenum). The temperature of the first level is controlled independently from that of the second and the third, which are higher and therefore subject to the effect of rising hot air, to prevent their over-heating. The audience, which is located at a lower level, is served by an air distribution system installed on the floor, thus ensuring low input speed and a widespread distribution. The separation of air stage from the main-room also allows to make "neutral" the orchestra pit, thus avoiding any air currents particularly troublesome for musicians.





On the left, the new stage and the area of the new dressing rooms.

In the center, the new wooden fly system and the steel trusses that supports it. On the right, a technical drawing of the area of the stage and the dressing rooms.

The structural consolidation and a new air conditioning system were not the only requirements for the reopening of the rows of boxes to the public; it was necessary to create a comprehensive smoke detection and fire extinguishing system with automatic water sprinklers in each box to comply with fire regulations. Thanks to these measures, the total capacity of the theater now exceeds six hundred and fifty seats, in perfect compliance with the regulations for new theater.

### THE STAGE MACHINERY

In addition to the spaces for the audience, even the technical area of the stage has been the subject of important functional and structural interventions. Here really stands out the complexity of integrating modern and functional systems within a building which wasn't designed to have space available for air-handling units, heating units, air ducts and scenic automation. A completely new stage was realized with a removable floor made of solid wood boards to ensure both excellent acoustic performance and versatility.

To guarantee the correct functioning of the "theatrical machine", a new fly system has been built above the stage and new dressing rooms were inserted in the existing space on the side of the stage. Such needs have prompted a massive intervention of structural consolidation of the trusses, which were complemented by new composite steel-trusses, to support the huge loads of the fly system and scenes (over 130,000 kg of steel added); everything has been supported by a "surgical" intervention made with steel elements, side by side to old brick pillars, based on new foundations with concrete micro-poles.

The area of the orchestra pit has been upgraded thanks to the endowment of a new electromechanical lifting platform at three levels, for maximum versatility of the scene for the different types of shows and with a seating capacity of 75 musicians.



The room in the basement that hosts the main pump of the water sprinkler system

The occurrence of a violent phenomenon as a fire requires the presence of extinguishing systems. The areas with wooden structures (boxes and roof) are protected by an automatic extinguishing system (water sprinkler) and throughout the theater are installed adequate fire, fed by the water stored in a special tank realized under the stalls (100,000 liters), again avoiding to steal precious space to the theater.

### ART RESTORATION

Finally, we focus on the restoration of decorated surfaces that deserve particular attention, since they represented a particularly complex and delicate aspect of the restoration as well as it represents what visitors mostly see and judge, taking for granted all the aspects discussed earlier. The first step approaching the works was done making a thoroughly historical research, surveys and specific diagnostic tests on the building:

- laser scanners survey
- survey of degradation and of building materials
- endoscopic investigations in the masonry
- specialized investigation on wooden structures
- surveys on concrete structures
- surveys and tests on decorations made by restorers
- laboratory investigations on decorated surfaces
- structural analysis using finite element modeling

Through these studies it was possible to reconstruct the pictorial layers that were superimposed during the different periods of life of the theater and create a reliable frame of the historical phases of intervention on decorations.

The excavation necessary to realize the water tank under the floor of the main hall.



Different types of lighting devices installed in accordance with the materials, with the colors and the function of the areas



The layers of decorations discovered under the superficial layer of paint

This knowledge served as a reference for the general definition of the approach to restoration, which has tried to summarize various needs and requirements, not always compatible with each other: to preserve and restore all the original decorations, to complete the gaps, the missing parts and those of new construction so as not to conflict with the original portions, to stop the degradation but not delete it as not to alter the old and damaged appeal which the city of Bergamo was used to, to avoid a theater with a new and “fake” look and not to erase 200 years of history made even of degradation and carelessness. The final result was to deliver a theater in order as if it had been well maintained over time, softening the effects of degradation and abandonment: “The best restoration is the one that people can’t appreciate and see.”





**6** MAY  
**BERGAMO**

## PROJECT OF RESTORING, FUND RAISING AND SCHEDULED MAINTENANCE FOR THE CHURCH OF S. AGATA NEL CARMINE - BERGAMO

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The church, with a single hall, transverse arches and a deep choir, was enriched over the time with 13 altars. Between 1719 and 1720, has been raised the height of the building and it was covered with a vaulted ceiling, new chapels were opened, including the chapel of the Madonna del Carmine (the chapel was designed by G.Battista Caniana and the altar by F.Juvarra) .In 1799 it becomes a parish church, dedicated to St. Agatha in the Carmine. Between 1902 and 1904, was carried out the last significant restoration, led by the architect. V. Muzio.

The church of Sant'Agata nel Carmine is located on the main street of the upper town of Bergamo and is the most important religious building in the historic town, after the Cathedral and the church of Santa Maria Maggiore. Our Studio has been commissioned by the parish priest to make an overall plan for the restoration, the scheduled conservation and a project of fund raising. When we were called the conditions of the church were precarious due to the strong presence of damp entering from the roof and rising from the ground. Besides, because of some adjacent excavations carried out in the past, the church suffered from some structural collapse, with the formation of cracks along the left side of the nave, the triumphal arch and the vault. The church's wall surfaces should also be restored and its technological systems needed to be upgraded.

In dealing with this complex project we availed of the contribution of a team of experts: a specialists in the geometric survey (with laser scanner architectural methodology), an historian - archivist, a structural engineer, restorers and communication experts. The instrumental survey was accompanied by a campaign of monitoring of the deformation of structures, of their degradation and of cracks, which is essential to check the structural problems of the building. The survey on knowledge





of the history of the building was carried out with bibliographical and archival research, in order to find all the elements of knowledge of the origins and transformations of the architecture. We performed the survey of materials, based on a campaign of stratigraphy carried out by the restorer, by means of which we have “mapped” and studied the materials of construction and finishing of the old building and all the pathologies of degradation, in order to define the methods of intervention.

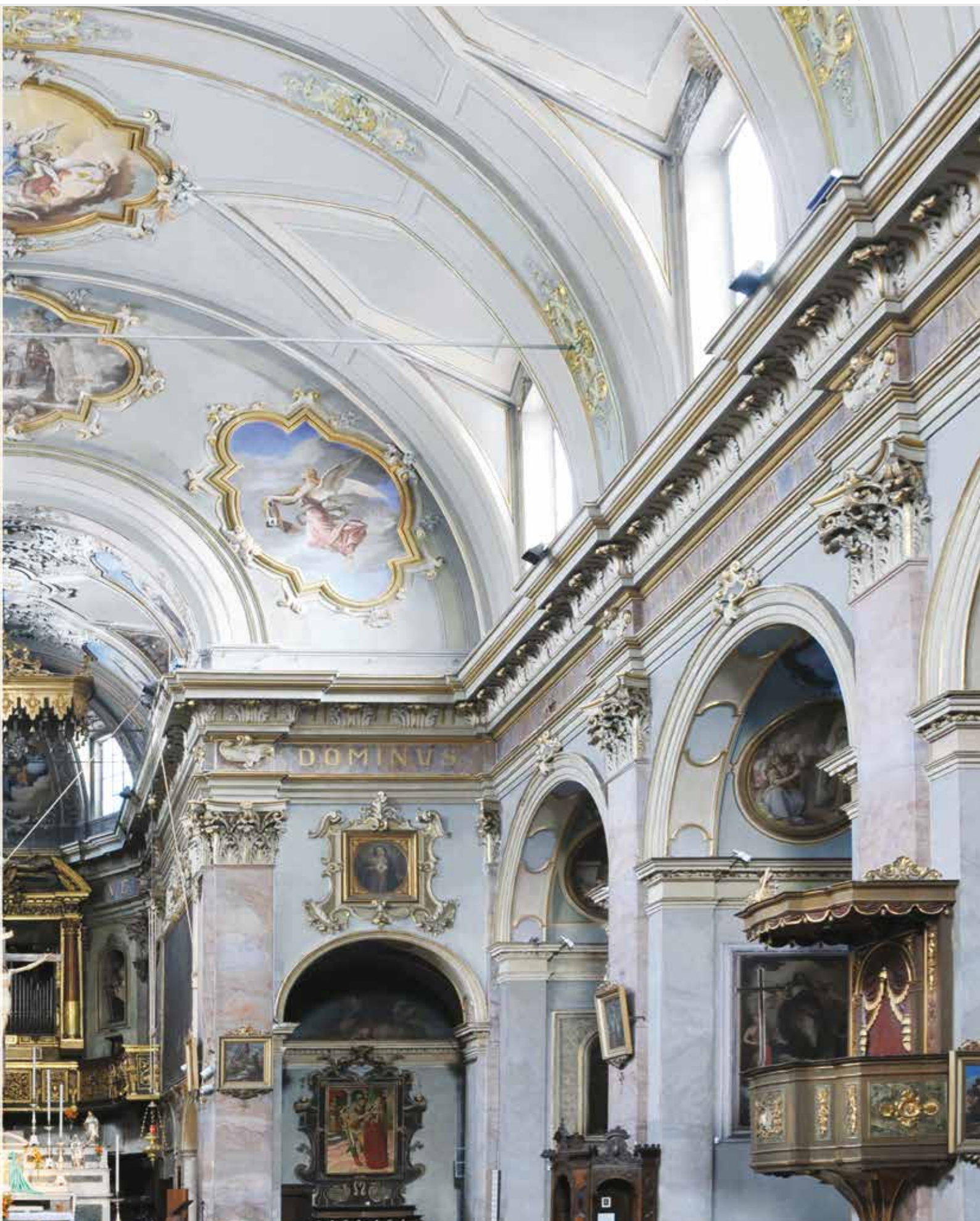
Besides we carry out the restoration project (divided into six lots), we drawn up a program of scheduled maintenance and a fund-raising project. A team of people involved in the community has collaborated at the project for the fund raising: the parish priest, the representatives of the Pastoral Council for Economic Affairs and some volunteers from the parish. The project for the fund raising and for the scheduled maintenance are closely related to the restoration project: they are strategic to trigger a process by which the parish priest is able to find the resources to maintain the parish property and to take prompt action, through constant monitoring, when problems are still easily solvable. The Restoration Project, Fund Raising and Scheduled Maintenance for the church of S.Agata in Carmine, was honored at the ITALIAN HERITAGE AWARD® - International Prize for the Promotion of Cultural Heritage - in the section “Award for Knowledge, Protection and Management of Architectural Heritage”.

Thanks to the funds collected by the Fund Raising project was until now possible to work with three phases of intervention that have allowed us to make the building safe to use and laid the groundwork for future actions.

The first phase of work involved the structural consolidation of the triumphal arch, the left side of the nave and bell tower (with the insertion of threaded rods), the safety of the apse stucco, which risked to fall off, the safety measures of the electrical system and the removal of architectural barriers, thanks to a lifting platform. The second phase of work involved the restoration of the roof, the consolidation of the vault with carbon fibres and the restoration of a sample chapel, in which have been brought back the light colours dating to the eighteenth century. The restoration of a chapel sample was finalized in order to develop the restoration of all the internal decorations. The third phase of work involved the restoration of the side facades (we decided to retain the historicized image of the church, by maintaining the texture of walls in sight), the main facade (for which were featured the original colours) and the bell tower. The renovation of the exterior of the building has been completed.









## FONDAZIONE FLAMINIA, A FOUNDATION FOR THE DEVELOPMENT OF THE TERRITORY

Antonio Penso



[www.fondazioneflaminia.it](http://www.fondazioneflaminia.it)

The Fondazione Flaminia was set up in 1989 by the will of private and public Institutions to support the decentralization process of Alma Mater Studiorum – the University of Bologna in Ravenna Campus and in the Romagna region. Together with the direct support of the teaching and research activities of the University courses, Flaminia contributes to the offer and qualification of services and facilities for students, promotes the collaboration between the University and enterprises of the territory, contributes to the organization of cultural events and post-graduate courses. In particular, Flaminia facilitates the dialogue between university students and professors and the territory, which is able to absorb new-graduated professionals educated and trained in order to be immediately useful in the word of work. From this point of view, it is clear for Flaminia, understand the importance of this Workshop for Ravenna, its enterprises and its university. For ages, the Fondazione has been working with the University Department of Engineering and Architecture, with specific reference to the International Curriculum in Historic buildings rehabilitation, and the Scuola Superiore di Studi sulla Città e il Territorio of the University of Bologna. Thanks to these local partners, it's possible in Ravenna implement research activities and feasibility studies and designs of ancient or vernacular places and buildings.

Furthermore, Ravenna can be the ideal of best practice about management and valorization of historical buildings heritage of city center. To answer to the local need to give new spaces and for the new university campus, different local parties and authorities worked to find, make available and restore of magnificent historical buildings that today host classes, laboratories, offices, libraries and archives of the University. 6 buildings have been rehabilitate thanks to territory's key actors as the City Hall and the Province of Ravenna, the Fondazione Cassa di Risparmio di Ravenna and the Fondazione Flaminia. The Palazzo Santa Croce, the Ex-Seminario Arcivescovile and the Palazzo Corradini are examples of how today, these buildings are not only restored construction but new cultural think thanks for young and talent students, researchers and professors.

Welcome to Ravenna

Palazzo Corradini

Palazzo Corradini

Ex-Seminario Arcivescovile





Ex-Seminario Arcivescovile

Palazzo Santa Croce

Palazzo Santa Croce





## ON THE WAY TO FACILITY MANAGEMENT IN CULTURAL HERITAGE

Paola Cicognani  
Francesco Peron



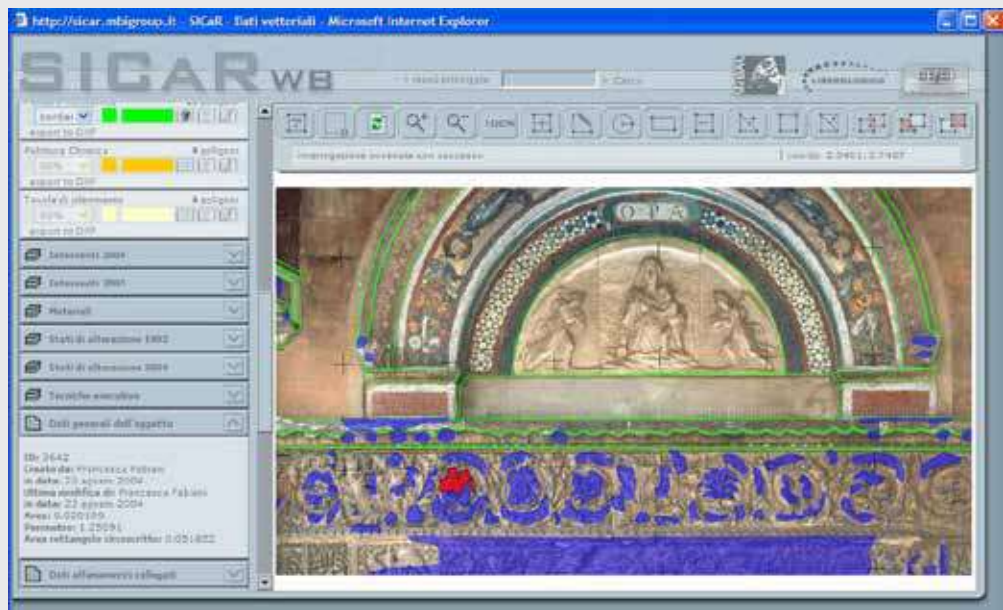
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The consortium Ediltecnica Global Service is a modern cultural and operating laboratory highly specialized. Ediltecnica has over seven decades of experience in the enhancement of the Building Heritage, particularly if historically esteemed, through the maintenance, restoration and creation of value, with all the technical and technological skills to act in terms of preservation and conservation of buildings, respecting and enhancing their history and identity. Ediltecnica has expertise in engineering and restoration to traditional workmanship and materials, however, the company does not think that the restoration can be reduced only to materials chemistry, but that artistic human ingenuity is still at the base.

In restoration of an historic building, the central role is the time of knowledge, that is not only the initial, but it should be repeated in the course of the work. It needs an attitude of systematic, also to set up and manage the next Conservation Plan Schedule.

In Ediltecnica's vision analysis and restoration are both key and complementary moments to carry out effectiveness and respect of history. Knowing the events that have affected over time the manufacture on which you operate and the characteristics of the materials and techniques used, through careful research, makes the intervention more precise. For this reasons Ediltecnica choses to create a software-based organization in order to be able to manage these two phases directly on the inside and with their own resources. An integrated view of aspects, often separated from each other, with the support of a structured organization that invests in professionalism, in research, technology more sophisticated and advanced diagnostic analysis, in control of security and the environment. When the action relates to the historical and architectural heritage is important to prevent damage and prevent the radicalization of pathological situations: a structured practice of inspections, diagnostic and maintenance would contain the cost of the restoration, in order to limit the invasiveness and to extend the time interval that elapses between an operation and another. Above all, however, a precise care of historic buildings would avoid the risk of losing a unique and irreproducible heritage.





Associated with this, there is the need to collect through an organized way all the information resulting from the activities and the preventive maintenance, as well as the restoration already made. Ediltecnica carries out a constant monitoring of the condition of the asset, and the gradual layering of data, describing the time course of the phenomena. This constitutes a necessary step to properly assess the severity of deterioration, providing for the onset and course, and to set up and manage the following Conservation Plan Schedule.

The software that Ediltecnica adopted is SICaR. It was developed inside the OPTOCANTIERI project (2003-2004) as a tool to plan and manage restoration work, mapping and geo-referencing data over an exact and measurable model of the artwork. SICaR is an internet-based system, which can be used both to consult and insert data, without installing any software. It can interoperate with any data and information available on the web (ICCD catalogues, Risk Map of Cultural Heritage, pre-existent documentary archives, etc.); it accepts standard architectonic drawings (dxf); it allows to map areas and connect them to forms describing scientific analyses, typologies of deterioration and related repairs activities; it estimates surfaces and costs. SICaR is in the process adopted by the Italian Ministry of Cultural Heritage (MiBAC). A revised edition of the system is being readied by the authors together with the Istituto Centrale del Restauro, in order to offer users a standardized lexicon and a unified structure of restoration data. New functions for the monitoring of the restored artwork is currently under development.

This software allows the computerized management (design and implementation) of the Conservation Plan. This document is necessary in case of execution of restoration of listed buildings in public ownership. It is an effective tool for managing the flow of information and activities even in the case of goods covered by private property. The use of an archiving software lets you record any intervention and variation in time to the project executive, while you collect data and documents from the



Superintendence for Archaeological Heritage, from the Project Manager, from the workforce and from all professionals working on the project. The documentation of the final design will be comprehensive and updated to ensure effective implementation of the construction.

The set of technologies implemented includes the use of laser scanners, digital photogrammetry, digital technology BIM.

In particular in Italy, recently, after the agreement between the State and the Regions, signed in 2001, were created many regional GIS for cultural heritage, to gather information on the state of the buildings, both for the management of processes and activities restoration. The most interesting and current initiatives have been implemented with the aim of finding a common precept that reveals the ability of the system to meet the different goals, which are: first, to create a meaningful content that is as broad as possible, in line with adequate standards (not only conform to the standards of the Italian “Central Institute for Cataloguing and Documentation” - ICCD, but based on the need to obtain the restoration and conservation of the art). On the other side, the GIS for the built heritage, were made with the aim of developing a tool fully implemented and interoperable to support conservation activities, which can be integrated with the tools deployed in planning procedures everyday. At the national level the Ministry of Culture and Environment, is developing and increasing the



national catalog of GIS architectural heritage, called “Information System General Catalog (SIGEC)”, and is promoting among professionals the use of GIS tools, to collect data on conservation activities.

Ediltecnica is implementing and experimenting the use of these managing instruments in the pilot site of Palazzo Guiccioli in Ravenna, in collaboration with the Faculty of Engineering of the University of Ravenna. Ediltecnica knows that there is the need to develop the existing document management software of the restoration sites, the complete data acquisition from the preliminary analysis and diagnostic to the site preparation, this in order to use the database management software conservation planning after the intervention.

Ediltecnica notes the necessary production of “as-it-is”, for what concerns the conservation actions in sites, that do not provide the installation of plants (such as boundary walls or archaeological sites) and “as-built” for restoration of buildings with plants, to emphasize the different approach in buildings with external systems to view or internal. The creation of a library as-it-is and as-built means the production of a photographic collection, in support of the final design, which allows detailed viewing in the first case the result produced by the intervention of conservation in order to draw in years, just updating the camera, the degradation of the object of intervention, in the second case to preserve the memory of the arrangement of plants in each compartment of the architectural structure.

The production of an as-built documentation consists of a set of technical-descriptive and photographic, describing the work as it was actually built. This allows the computerized management of the Conservation Plan. The documentation can be collected mainly through two instruments. In both cases, this timely acquisition of the material has to be made during the execution phase, while the processing of point clouds or the modeling of three-dimensional models can be made at the time of the actual need of the material or the preparation of the Conservation Plan. This practice consists in ‘storage postponing the return to the time when a compartment is affected by important problems found or need for changes, the relative cost of post-production will be negligible compared to the wealth of information obtained.

For the production of as-built, the survey on the building is achieved by using: the 3D laser scanning, giving the possibility to realize a relief not deeply accurate, but ensuring the production of an accurate 3D model; photogrammetry, which allows the integration of photos that allow the creation of 3D models through the use of a modeling software.

The acquired information, that will compose the as-built, consist of reports, surveys, drawings, reports on the building and on the conditions of the site, photos or videos. All materials collected becomes a searchable database useable to create the Conservation Plan Schedule. To process the Conservation Plan Schedule, using as a reference the models borrowed from the content of the Maintenance Plan, we want to get the association of the maintenance activities to the elements of the assets. In this way you can automatically obtain the program of maintenance and/or conservation to be made in a given time interval. The set of maintenance scheduled will then be displayed in

a Gantt, which, in turn will allow the engineers in charge of organizing all these activities.

One of the ways to signal the need for maintenance operations is to submit a specific request to the office in charge of maintenance. A quick and effective way that we use to forward the request is represented by a call center through which a subject, enabled or not (depending on the policies adopted by the company responsible for maintenance), manages to convey the request directly to the technicians directly concerned, obtaining in exchange traceability and visibility of the advancement of advanced reporting. This module could be integrated into the software management of information flows.

Clearly, in this Front End mode, there is a corresponding mirror of Back End activities, which cares to manage the reception, sorting and filing of requests received from users, allowing technicians in charge of distributing all those activities that lead to the maintenance operations. These Requests received can transform into provisions of Inspection, Work Orders to be assigned to internal teams or external companies selected for this purpose, ensuring a constant and automatic communication to the actor in the original report that in this way will be able to see that the action has effective progress and conclusion.





The principle of “integration” has finally consecrated the Facility Management as the most valuable support to the company management, through which the company copes with the services it needs, to get the best from a company itself: it represents a decisive step towards a future increasingly focused on efficiency and definition of goals and tools tailored to the real needs of the user. Ediltecnica works according to the model of the Facility Management and approaches the market with a strong expertise that allows it to deal with very complex contracts in various sectors. The system provides control of the quality and quantity of services provided and allows in-depth knowledge of the state of conservation and consistency of real property and plant borne by the supplier and which are paid services: a real master data sheet that becomes a value itself for the customer. Ediltecnica’s goal is to satisfy not only the regulatory requirements, the need for control and integration of information between the different operators, responding to the urge of activities that governs the complex process of implementation and management of public and private works. The solution, developed in the sphere of web technologies and interoperability, thanks to the use of web services, proposes new operational scenarios for which information and knowledge are no longer related to the internal’s company, but are available for users and collaborators, creating a solution for the internal and external interactions, and not only a place of exploitation of information.





## DIGITAL MODELS FOR DOCUMENTATION, VALORISATION AND RESTORATION: THE CASE STUDY OF DECORATIVE ELEMENTS BELONGING TO PALAZZO GUICCIOLI'S FACADE (FORMER PALAZZO OSIO), IN RAVENNA

Luca Cipriani  
Filippo Fantini  
Silvia Solazzi

### INTRODUCTION

Guiccioli Palace is a building in the Historic Centre of Ravenna. From the XVII century onwards, Guiccioli palaces hosted three important families - Osio, Guiccioli and Rasponi- as well as famous people like Luigi Carlo Farini and Lord Byron.

The palace was closely related to some of Ravenna historical events, but now it is in very poor conservation status. For those reasons a restoration project was promoted by the owner - Fondazione Cassa di Risparmio di Ravenna - in order to transform it into a museum.

Several surveys have been carried out on some interiors and on decorative elements of the façade in Via Cavour at the beginning of the restoration works. The main purposes of these surveys were to prepare accurate documentation for future interventions and to use innovative methodologies for interpretation and visualization of the building based on the use of 3D models developed by the research group.

Surveying activities were carried out by CT Lab - Laboratorio Città e Territorio of Scuola Superiore di Studi sulla Città e il Territorio dell'Alma Mater Studiorum - Università di Bologna, under the scientific coordination of Prof. Luca Cipriani, in collaboration with Società Cooperativa Ediltecnica Global Service (EGS) which had already performed the diagnostic phase and is now carrying out restoration works.

This paper is focused on some surveying and modelling activities to the restoration of facades, with particular reference to the cornice of the building's main facade where several architectural decorations of great interest are present, including traces of Fleur-de-lis, alternated to lozenges and heraldic symbols of the Osio family.



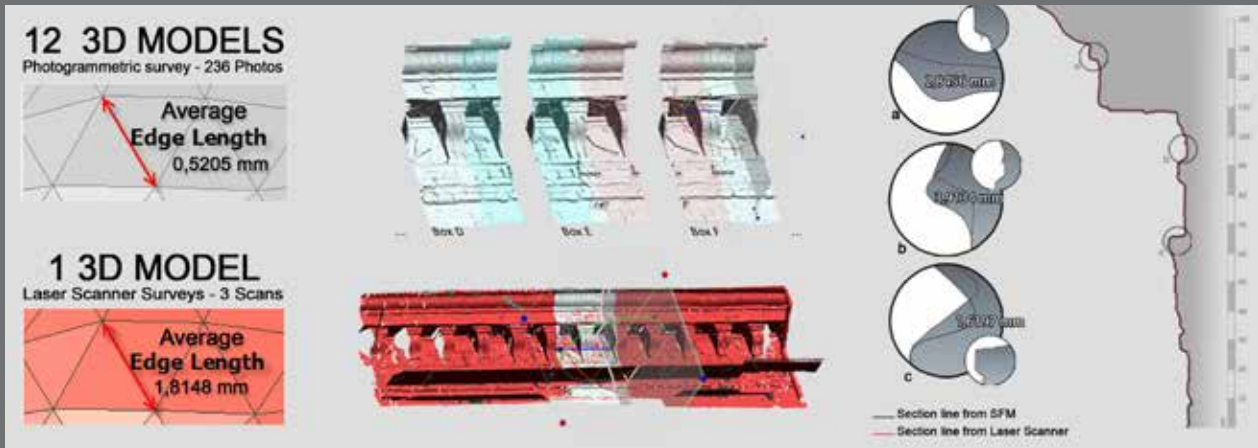
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Orthographic view  
of the textured 3D model  
of the cornice





Comparison between 3D models obtained through image-based modelling and 3D laser scanner

## THE CORNICE

The study was inspired by research activities for a student's thesis. This study has already created several digital models, starting from different ranging devices, whose aim is the achievement of a set of technical outputs ranging from the reliable visualization of colours, high geometrical accuracy of the shape, as well as effective photorealism under different lighting conditions.

Surveying activities were planned in order to test and integrate different ranging technologies: digital photogrammetry based on SfM (Structure from Motion) algorithms, 3D laser scanner for a general reference system, also useful for providing scale and orientation to digital models.

Almost 6 meters of the cornice was surveyed, being the portion selected for having the best preserved traces of decorative elements. The campaign was carried out using a digital camera Nikon D5100, with manual acquisition mode and .RAW file format (.NEF). For the acquisition of six meters of cornice 236 frames (each one of 16 megapixels) were necessary. On the Cornice 9 RAD Coded target have been applied. These ringed black and white elements are automatically detected by the SfM application and used as control points during the scaling and orientation process. Meanwhile sample shots, included an X-Rite Color Checker panel formed by 24 squares of different colours, were used for chromatic/radiometric calibration.

In order to obtain the 3D shape representing the cornice, the application Agisoft PhotoScan was used. For a proper use of this software a pre-processing of the images was necessary for the colorimetric calibration through white-balance tool of Adobe Camera Raw. Alpha channels were stored inside all the images to avoid 3D reconstruction of unnecessary areas close to the cornice (pipes, scaffoldings, etc.).

The following phases follow a pipeline almost automatic and standardized, allowing the creation of a textured mesh model: image loading, marker automatic detection, introduction of markers' coordinates, frames alignment (scene reconstruction), optimization (compensation of non-linear distortion of the SfM model due to internal parameters of the camera), dense cloud construction, mesh creation, texturing.

For the cornice, it was necessary to follow intermediate steps not present in the standard workflow. Other applications were needed in order to have:

- more detailed and reliable models aimed at documentation characterized by high geometric resolution and healed by topological and geometric defects;
- higher resolution of texture applied to highly detailed meshes with improved features addressed to optimization of pixel-polygons relation (no waste of pixel and improved interaction of users concerning bitmap editing applications).
- more reliable and wider scope of apparent colour texture thanks to a shadow removal technique able to convert the bitmap into a diffuse colour texture (better integration with render engines avoiding the so called "double shadow effect").

### 1. GEOMETRIC RESOLUTION OF MODELS

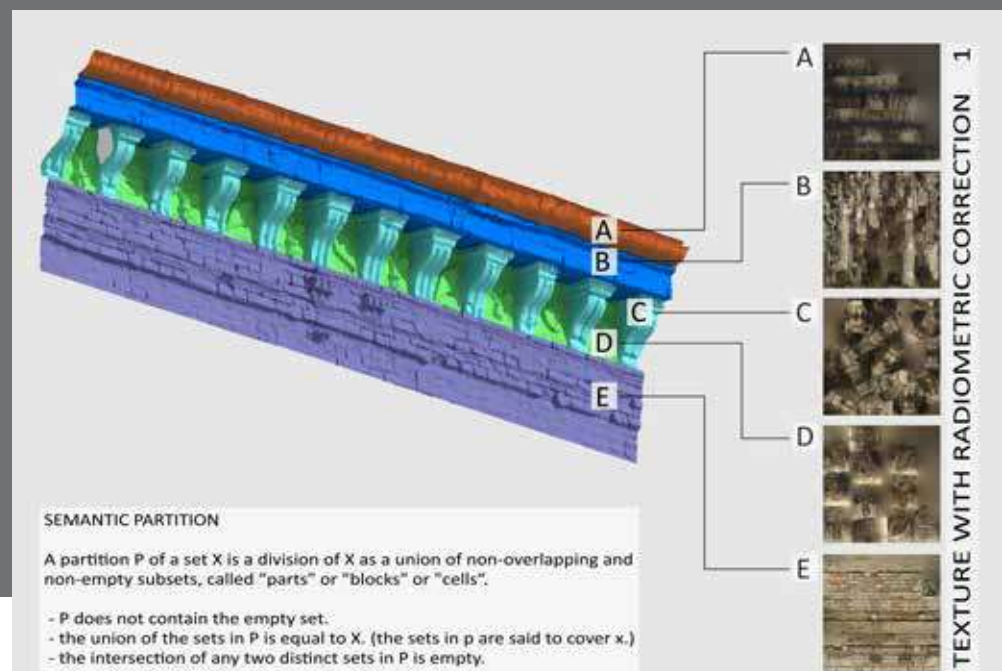
The photographic campaign of close-distance shots made possible the achievement of a dense point cloud made of approximately 67 million of points, split in twelve parts for keeping all the possible detail during the meshing phase.

In this way it was possible to obtain separate overlapping meshes, characterized by higher geometric resolution in comparison to a single mesh (with an edge average length of 0,5 mm), from which it was possible to extract detailed sections of the model. It was also performed a 3D laser scanner survey using phase shift device characterized by less geometric resolution but very useful for scaing and orientation of the photogrammetric model.

### 2. COLOUR APPLIED TO THE MODEL

In order to obtain a single model with photo-realistic textures applied, each one of the twelve parts has been subjected to an integration process. The integration was carried out through the use of a

The cornice undergone to a semantic partition and the apparent colour texture corresponding to each sub-set of the original model from automatic photogrammetry



reverse modeling application, which lead to a single more “portable” and lighter model (less dense but more regular triangle mesh) on which it was possible to apply the texture.

The operation that allows the creation and the application of texture onto the model is called parameterization. Within Agisoft PhotoScan this is an automated procedure; for this reason it does not allow a true interaction with the user, leading - in the majority of situations - to poor (u,v) layouts (uncontrolled number of islands, waste of pixels, etc.). Another relevant aspect for the final quality of the texture is the amount of pixels per polygon: a balance between them is advisable in the case of 3D models for the documentation of an object as well as avoiding stretched polygons in the (u,v) parameter space. In addition, a proper texture is achieved when a final editing in Adobe Photoshop, or similar applications is allowed. In the case of a too high number of islands, this last phase is not possible.

In the case of Palazzo Guiccioli’s cornice we opted for splitting the model into 5 different meshes – using semantics –; each one of them has a specific texture applied on it. In order to get the better result an obtain the more adequate balance between triangle dimensions and pixels was necessary to adopt a semi-automatic approach: it consists of a first parametrization of partitioned sets in Agisoft Photoscan and a second parameterization stage inside a 3D modelling application - state of the art in the UV mapping field -: the Foundry Modo 801. Three textures came out with a good parameterization automatically, for the other two UV mapping tools included in Modo 801 were adopted successfully due to the deeper interaction in the creation of the 2D version of the 3D shape. The only disadvantage is the too high geometric resolution of these last two models that make manual parameterization an annoying process since entertainment applications are not designed for models of such density (millions of polygons).

In this way were obtained 5 texture of good quality storing information defined as “apparent colour”, since they represent the combination of all physical effects concerning the interaction between light and matter on that specific element during the photographic campaign.



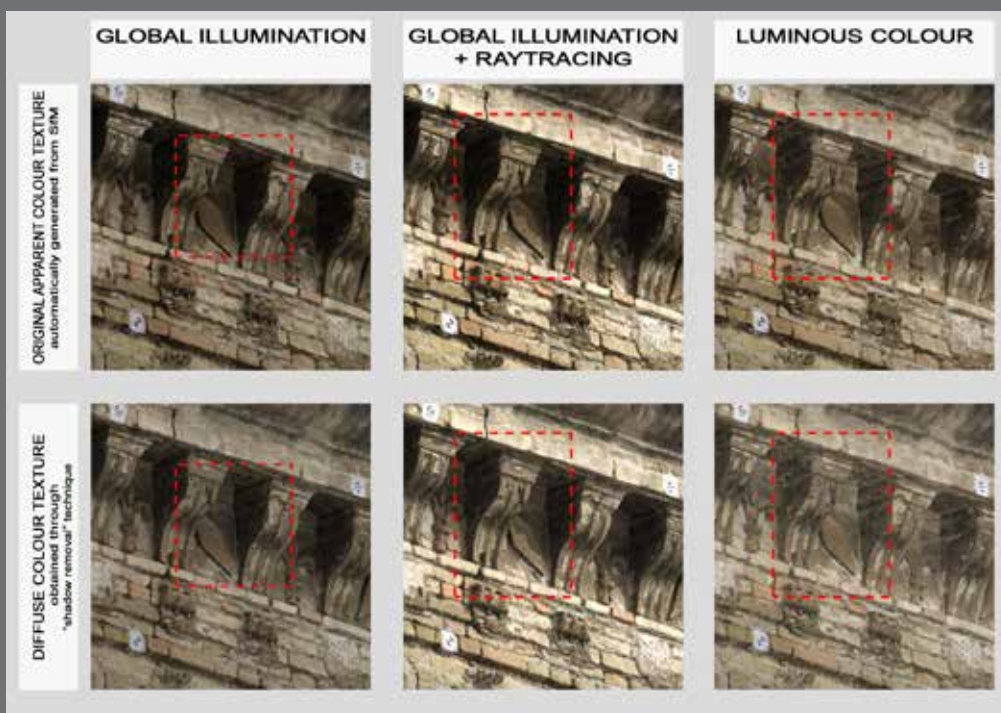
Colour checker positioned in different areas of the cornice in order to provide proper calibration of areas characterized by different illumination.

The creation of views of the textured model, in particular ortho-photos, is made possible by the SfM application adopted in this study, although an external render engine could provide a more accurate representation.

In fact, render engines are equipped with several illumination source – physically accurate - and for this reason can help the simulation of different lighting conditions at different hours, allowing the achievement of a better control of the design process. Using this workflow several problems emerge, due, in particular, to the nature and characteristics of apparent colour texture; since it already includes the result of a complex, but specific interaction of light with the material (approximated to a Lambertian surface), once rendered under different illumination some paradoxical effects appear. In particular, the phenomenon called “double shadow” affects the quality of digital models from SfM applications once rendered using standard algorithms (ray-tracing and global illumination, etc.): in simple words we get a multiplied intensity of shadows in particular in those areas characterized by carvings or more difficult penetration of light (occlusion phenomena).

Ultimately, the multiplicative effect of shadows onto too dark areas leads to a loss of colour information.

Comparison between apparent colour and diffuse colour texture under different lighting conditions



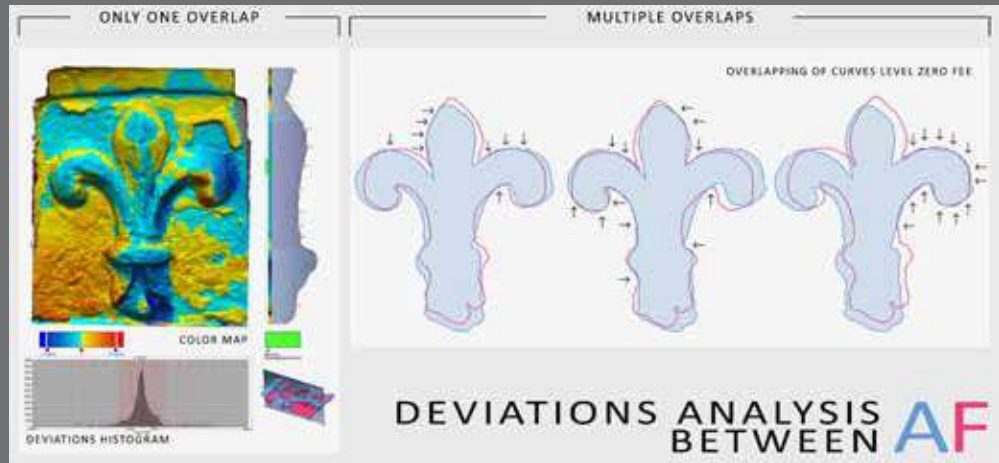
### 3. TEXTURE ENHANCEMENT: SHADOW REMOVAL WORKFLOW

In order to eliminate too dark areas from rendered images, a shadow removal technique was applied to the 5 models and textures forming the cornice. The procedure is based on the blending of two different apparent colour textures – each one obtained through a different colour calibration inside

Orthographic projections of the five 3D models of Fleur-de-lis analysed



Deviations analysis between elements A and F



Camera Raw -. The workflow starts with the photographic campaign phase: the colour checker is placed upon different areas of the cornice, one brighter, darker the other, in order to provide the lighting range between external surfaces and more occluded ones. Since every shot includes both the areas corresponding to each one of the two calibrations, a double calibration is carried out, each one leading to different radiometric corrections for the same set of photos.

In order to mix the two textures, each one applied in compliance to the same (u,v) reference system, a third texture is needed. The blending between the two textures is made possible through the use of a transparency channel - a greyscale bitmap - obtained through a process called baking (or render-to-texture). The special kind of baking, used in this specific case, is a rendering process whose aim is to allow the storage of indirect illumination onto the (u,v) reference system. The illumination parameters describing the amount of light that interacted with the object during the photographic campaign can be achieved by geo-referencing the model and providing the same illumination (adopting physical sky or light probe solutions). Since “baked” indirect illumination is a grey scale image it can be used as a mask able to allow the passage of pixels corresponding to the better colour calibration. The two images, once merged in a single image represent a better approximation of a diffuse colour texture – not affected by specific lighting conditions -.

### CORNICE DECORATION

In parallel, decorative elements such as Fleur-de-lis applied to the cornice undergone to a deep geometric-formal study. These elements, obviously repetitive, are currently characterized by differ-



Orthographic view  
of the textured 3D model  
of Fleur-de-lis

ent deterioration levels: among them there are better preserved ones, as well as particular elements that present abundant missing parts, lost during the centuries. In fact, among twenty-three Fleur-de-lis originally located among corbels, today only nine are still remaining.

In order to investigate the construction technology with which these Fleur-de-lis have been made in the past, a comparison among of digital models of the five metopes was carried out. Even though a simple visual inspection, also considering a heterogeneous deterioration, some of these flowers appear similar in shape, while others appear to be generated by different curves independently from the deterioration level.

It is difficult to state if these decorations were made directly on the site on the basis of a simple visual comparison: were they moulded or formed by the artist on the site? Using the digital model the comparison process gets more quantitative, measurable, since reverse modelling applications are designed to quantify the degree of similarity between 3D models (coming from CAD applications or from sensors). The measuring of the deviation between a sample, more preserved Fleur-de-lis and other flowers can be carried out easily and automatically. The possibility to guess the construction technology used, it is useful to argue restoration solutions in the perspective of a more accurate and proper intervention/ integration of the missing elements.

In order to make these comparisons, within a reverse modelling software, portions of a highly detailed mesh were isolated, then the alignment of five mesh was performed. The algorithms on which the alignment process in these applications was designed is the assembling of range maps of the same object captured by different points of view. In this case this command was run with a different focus: comparing different objects characterized by different preservation state that at the same time present with geometrical similarities.

Then it was possible to measure the deviation between couples of meshes, always taking as a reference the best preserved Fleur-de-lis. Reverse modelling applications are provided with a large set of tools aimed at measurement, but not all of them can be considered useful in the frame of this research. Between them the more appropriate are:

- Visualization of deviation through a colour maps applied to the mesh and related statistical histograms
- Deviation analysis between specific sections
- Deviation among contour lines

Each Fleur-de-lis has a slightly different shape, and from the comparison it appears possible that for creating more copies the flower shape had been used a common template.

With an outline of this type, we guess a more abundant quantity of material could be initially applied, and at a later stage, through manual modelling and carving it was partially removed in order to achieve a more refined shape (before the solidification of the material).

This template was then enough flexible and could be used in different ways, also when an “oc-



Perspective view  
of the textured 3D model  
of the cornice



casional inaccuracy” was present, i.e. when a slight variation of the metope’s size appeared in the real construction (in fact there are variations in width up to 5 cm). For these reasons Fleur-de-lis take different shapes inside a defined range, but nonetheless some parts of the shape remain very similar along specific features.

## CONCLUSIONS

Through a “customization” from the standard workflow concerning image pre-processing, we obtained an improved digital model with a more reliable and general texture applied. For the achievement of an improved model - virtually usable in every lighting condition - a combination of different applications played a crucial role. In particular is useful to underline how Structure From Motion applications in synergy with reverse modelling and entertainment software could provide better results.

As general statement it must be underlined that it was necessary to run these applications on professional workstations and another crucial aspect of the explained pipeline consists in several import and export phases using several file formats. Even if the methodology explained in this paper is more time-consuming in comparison to the standard and almost automatic pipeline the whole process leads to more accurate and reliable results.

The study carried out on geometry of the decorative Fleur-de-lis, was made possible thanks to highly detailed models that led to a plausible constructive hypothesis used for decorative elements. In addition, a further processing stage could lead to the production of 3D printable moulding of the flower. This mould will allow the creation of a prototype through 3D printing technique to be used for reconstructing missing elements.

In fact an intervention hypothesis, taken into account by the EGS company, provides for replenishment of these elements which, in any case, must be easily recognizable with respect to the original ones. The information gathered during in this case study, are useful to argue how to complete missing decorative elements, in order to restore the façade to its former majesty.

7 MAY  
RAVENNA

## SCANNING OF THE DESIGN ELEMENTS OF THE EAVES OF PALAZZO GUICCIOLI IN RAVENNA

Stefano Settimo



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### INTRODUCTION

On the eaves of Palazzo Guiccioli, in Ravenna, in spite of the advanced degradation, certain design elements are still present. In order to supply the restorers with a geometric stand, with which rebuild the missing elements, a 3d laser scanning of the best preserved elements has been made.

The shapes which have been first detected by the scanner, through 3d printing, are, then, prototyped in plaster. In fact, the prototype represents an almost exact copy of the scanned element, thanks to the scanner's high precision.



### SCANNING PHASE

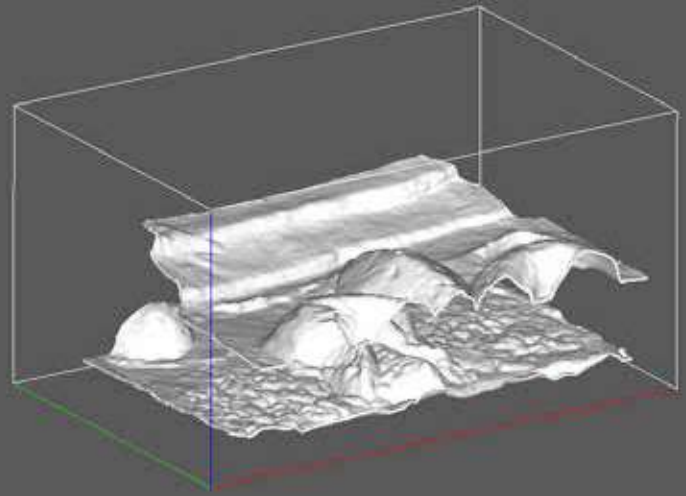
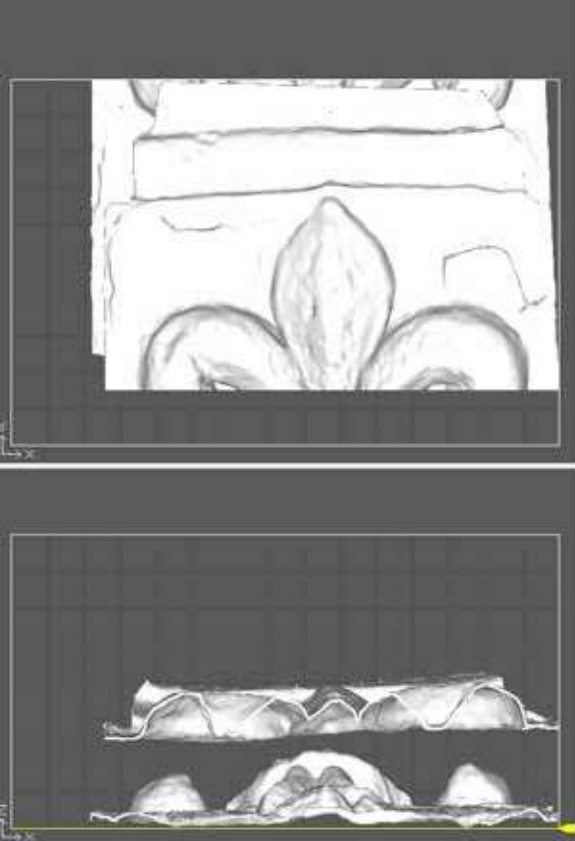
The scanner model used is ARTEC EVA, chosen for its precision, but also because it can be easily carried and used on a scaffolding where the lack of space for movement causes great problems.

Moreover, a structured-light scanner of this type is also very fast in acquiring and allows a scanning accuracy of up to 0,1mm with a maximum error of 0.03% at a distance of one meter.

The scanning requires about 15 minutes for each separate side.

Each side is made of about 500 scanning frames which, then, are "melted" using a unique mathematics which, after that, is corrected in order to eliminate scanning shadows and eventual errors.





PHASES AND TIMELINES	
SCAN	2 h
DATA PROCESSING	15 h
SINGLE SIDE PRINT	5 h
RESIN POLYMERIZATION	8 h

### PRINTING PHASE

The chosen printing machine is a Zcorp Z650 loaded with plaster, a material which can be very easily handled by the restorers.

The printer allows creating prototypes with a size of 25x38cm and an accuracy of 0.089 mm.

The mesh surface returned by the scanning, after optimization, has been divided in two sides to which a thickness has been given in order to allow the printing.

The creation process is finished in a little more than 5 hours.

Then, the two sides are treated with two component epoxy resin in order to definitely solidify the surfaces.

After the polymerization of the resin has finished, the two sides are glued together and are ready to be delivered to the restorers for the additional processing.



**8** MAY  
**FERRARA**



**RESTAURO**

6 - 9 MAGGIO 2015  
FERRARA FIERE  
XXII EDIZIONE



**ICE/ASSORESTAURO | 09.45-10.30**

Welcome to the ICE / ASSORESTAURO Stand

Presentation of International Projects

**SEMINAR SALA BELRIGUARDO PAD.4 | 10.30-13.30**

CHAIRMAN Andrea Griletto  
Technical Director - Assorestauro

10.30-11.20

## **PART I: INTERNATIONALIZATION POLITICS AND PROJECTS - 2014-2016**

**\_NEW PERSPECTIVES FOR THE INTERNATIONALIZATION**



**\_THE POLICIES OF EMILIA-ROMAGNA REGION FOR THE INTERNATIONALIZATION OF THE "BUILDING & RESTORATION" CLUSTER**

**\_PUBLIC-PRIVATE COOPERATION**

**\_MED-ART PROMOTIONAL PROJECT START-UP**

Ines Aronadio  
Director of Ufficio Beni di Consumo -ICE - Roma

Paola De Faveri  
Responsible Restoration Sector - ICE Rome

Ruben Sacerdoti  
Responsible for SPRINT area  
Emilia Romagna Region

Alessandro Zanini  
President of Assorestauro

Stella Occhialini  
Senior Project Manager  
Roncucci & Partners Group

11.20-12.10

## **PART II: TURKEY PRESENTATION OF MED ART FOLLOW-UP PROJECTS: THE RESTORATION OF THE SHEIKH SULEYMAN MESJID**

**\_THE IMPLEMENTATION PROJECT**

**\_ON SITE RESTORATION WORKS**



Esin Serttaş  
Senior Architect - Prime Ministry T.R.  
General Directorate of Foundations (VGM)

Nicola Berlucchi  
Studio Berlucchi

Zeynep Kerem Öztürk  
Technical Director - Reskon Mimarlik

12.20-13.15

## **PART III: RUSSIA THE RUSSIAN-ITALIAN SCHOOL OF RESTORATION**



**\_PRESENTATION OF THE ELECTRONIC VERSION OF THE PROCEEDINGS OF THE RUSSIAN ITALIAN SCHOOL**

Serghey Kulikov  
Chief Architect - CNRPM

Donatella Fiorani  
Full Professor - "La Sapienza" University, Rome

Ennio Bazzoni  
Direttore editoriale Nardini Editore

# PAD 4 STAND C15-16



**B2B MEETING | 16.00 - 18.00**

B2B meetings - Assorestauro Stand  
**PAD 4 STAND C15-16**

13.15-13.30



## PART IV: BULGARIA

**DEVELOPMENT OF COOPERATION BETWEEN ITALY AND BULGARIA**

Stefan Belishki  
**National Academy of Art Sofia**  
**President ICOMOS Bulgaria**

**CONFERENCE | 15.00-16.00**

ROOM C - 1<sup>ST</sup> FLOOR - BETWEEN PAD 5/6

15.00-15.30



**LA REVITALIZACIÓN INTEGRAL EN LA HABANA VIEJA POR LA OFICINA DEL HISTORIADOR DE LA CIUDAD DE LA HABANA**

Perla Rosales  
**Deputy Director - Oficina del Historiador**

15.30-16.00

**RESEARCH AND RESTORATION OF SANTA SOFIA MOSAICS WITH THE METHOD OF ENDOSCOPY**

Nelia Kukovalska  
**General Director of Santa Sofia**  
**National Reservation**  
**(UNESCO World Heritage)**



# INTERNATIONAL PROJECTS

## IN PROGRESS...



**MED-ART**  
transnational cooperation for culture preservation

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# UNDER CONSTRUCTION...

PROMOTIONAL PROJECTS 2015/2017



SOUTH AMERICA



CUBA



BULGARIA

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quaderni di assorestauro



YEAR04NR01



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XILUX SRL



A

La Xilux, nata a Bari, Italia, nel 2008, progetta e realizza serramenti, portoni e porte in legno, combinando l'antica sapienza artigianale con la moderna efficienza industriale. Flessibilità dell'organizzazione, qualità dei materiali e rispetto per l'ambiente sono i punti fermi dell'operato di Xilux, per garantire la massima soddisfazione ai clienti e proporre come un partner affidabile nel mercato italiano ed estero. L'azienda ha sviluppato esperienze e competenze specifiche nella realizzazione di serramenti nell'ambito di progetti di restauro e recupero funzionale di fabbricati di pregio, spesso interessati da vincoli storici, architettonici e paesaggistici. Lavori così complessi sono gestiti da un team composto da architetti, ingegneri ed esperti, in grado di progettare infatti sistemi coerenti con il valore storico delle costruzioni.

Xilux, which has been established in Bari, Italy, since 2008, designs and manufactures a wide range of wooden indoor and outdoor fixtures, resulting from the perfect combination between the well-established technical expertise of our artisan carpenters and the most modern automation industry. Flexibility, accurate choice of materials and environmental friendliness are some of Xilux pillars allowing us to meet the needs of the most discerning customers as well as to represent a reliable commercial partner both for Italian and foreign markets. The company has developed an outstanding know-how in the field of restoration of internal and external wooden fixtures, in projects of restoration of buildings of historical and cultural interest, subject to the Department of Cultural Heritage and Environmental Protection. For such challenging projects, Xilux collaborates with architectural firms, skilled engineers and specialists in designing windows consistent with the specific historic value of each and every building.

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VGS COSTRUZIONI SRL



E

La VGS Costruzioni fonda le sue radici in oltre 40 anni di esperienza nell'ambito delle costruzioni, manutenzioni, ristrutturazioni di immobili a destinazione residenziale, terziaria ed industriale. Negli ultimi anni l'azienda si è concentrata sulla realizzazione di interventi di restauro, riqualificazione, recupero e valorizzazione di immobili di particolare pregio, acquisendo una comprovata esperienza in tale ambito. Lo spirito imprenditoriale, unito all'alta professionalità del suo staff e del suo collaboratore, ha permesso all'azienda di strutturare costantemente l'evoluzione di nuove tecniche, tecnologie e materiali applicati al settore. VGS Costruzioni è inoltre strutturata per partecipare ad appalti pubblici, disponendo di attestazione SOA e di un sistema qualità certificato. Si propone come partner affidabile, finanziariamente stabile, desideroso di ottenere la migliore qualità conseguibile.

V.G.S. Costruzioni lays its foundations in more than 40 years of experience in the construction, maintenance, renovation of residential structures, service industry buildings and industrial constructions. In recent years, the company has particularly stood out for its work of restoration, redevelopment, reclamation and enhancement of particularly valuable properties acquiring great experience in this field. The entrepreneurial spirit, together with the high level of professionalism of the staff and collaborators enabled the company to constantly exploit the evolution of new techniques, technologies and material applied to this sector. VGS Costruzioni is structured and organized to take on public contracts, and is in possession of SOA certification and a certified quality system. The company proposes itself as reliable and financially stable partner who is always dedicated to obtaining the best possible quality.

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UNIVERSITÀ DI ROMA LA SAPIENZA  
FACOLTÀ DI ARCHITETTURA "VALLE GIULIA"

# LA SAPIENZA UNIVERSITÀ DI ROMA

0

Università - attività di ricerca nel campo del restauro.  
University - research in the restoration sector.

2

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UNICALCE SPA



A

CERTIFICAZIONI: UNI EN ISO 9001:2008 - EMAS

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**Tryeco**  
integrated services

**TRYECO 2.0 SRL**

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The firm develops several kinds of activities thanks to a team whose members have different skills mainly in the field of the take-over and compact (solid) or virtual display of an object, an environment (context) or a concept. The company focuses its work and provides its services on rapid prototyping, a new technology which requires specific equipment, purchased by the firm and still barely used in the country. Prototyping allows many activities such as: execution of architectural models; cooperation with museums and "sovereigns" (regional boards for the preservation of cultural heritage) for the execution of copies of sculptural works of art where prototyping is supported by laser scanning and digital modelling; execution of design or customized objects, in any shape or dimension to obtain a tridimensional model. Tryeco also focuses its attention and work on the field of multimedia communication, carrying out videos and animations often with tridimensional processing of the contents. This kind of service is mainly requested by public authorities or firms sponsoring exhibitions in trade fairs or advertising projects. A specific and technical knowledge and high hardware and software competence allow hybridization of products and processes so has to obtain the best result, with no a waste of time and a better control on the internal activities.

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**TURANI**  
COSTRUZIONI EDILI

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Faciamo il "meister" di impresa di costruzioni dal 1954. Attraverso la continuità generazionale abbiamo potenziato le attitudini dell'organizzazione e del coordinamento di cantiere e consolidato l'alta qualità delle nostre prestazioni. La presenza continua ed appassionata dei soci, l'attenzione particolare che dedichiamo alla formazione ed aggiornamento delle maestranze, il controllo puntuale ed integrato del processo lavorativo sono garanzia di serietà ed affidabilità. La nostra impresa è specializzata in interventi di ristrutturazione, risanamento e restauro del patrimonio edilizio; in questo settore le nostre capacità professionali si manifestano in modo singolare, raggiungono elevati livelli qualitativi nell'ottica di un corretto rapporto qualità-prezzo.

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**UMIBLOK SRL**

Via Fumazzo, 85 - 48022 Lugo (RA)  
Tel. +39 0545 22163 - Fax +39 0545 909056  
umiblok@libero.it - www.umiblok.it

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L'azienda nasce nel 1977 con il nome "SANA CASA", l'attività principale era il recupero delle murature contro l'umidità capillare ascendente. Nel 1987 deposita il proprio sistema e marchio "UMIBLOK" ed inizia la produzione di attrezzature specifiche per l'edilizia. L'azienda si estende, partecipa a fiere specializzate nel settore, è conosciuta sia in campo nazionale che estero, esegue lavori di massima importanza su monumenti e presenta svariati brevetti. Dal 1998 la ditta "SANA CASA" viene conferita nella "UMIBLOK S.r.l.", la quale continua la stessa attività e brevetta un nuovo taglia-muro il quale oltre a creare una barriera impermeabile alla base della muratura contro l'umidità di risalita, riesce ad assorbire le vibrazioni provenienti dal sottosuolo.

Since 1977, work to repair and conserve masonry damaged by moisture.

**ANNO DI FONDAZIONE: 1977**  
**CERTIFICAZIONI: Di prodotto**  
**FILIALI: Cisterna di Latina (LT)**

E

ANNO DI FONDAZIONE: 2011 (2003)

Studio AERREKAPPA S.R.L. progetta, dirige e realizza lavori di restauro di edifici storici e di ristrutturazione di immobili privati e pubblici, con materiali e tecniche innovative quali: intonaci e pavimenti biocompatibili, impianti termici a parete e a pavimento, illuminazione tramite LED, sistemi domotici, pannelli solari, sistemi di climatizzazione ad evaporatori passivi e camini solari. Sensibile alle problematiche del risparmio energetico e di una architettura ecosostenibile, opera a Lecce dal 2011 come naturale evoluzione dello Studio Associato fondato nel 2003 da Cristina Caiulo, architetto, e Stefano Pallara, ingegnere.

Studio AERREKAPPA S.R.L. was founded in 2011 by Cristina Caiulo, architect and Stefano Pallara, engineer. Its field is the restoration of historical heritage and the renovation of private and public property, paying attention to the problems of energy saving with innovative technical plants, especially of lighting system, domotic technique, solar panels, air conditioning systems and evaporators passive solar chimneys.

info@studioaerrekappa.com  
www.studioaerrekappa.com

Sede operativa: via Vittorio dei Prioli 31 - 73100 Lecce  
Tel. +39 0832 307085 - Fax +39 0832 307085

STUDIO AERREKAPPA SRL



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ANNO DI FONDAZIONE: 1987  
CERTIFICAZIONI: ISO 9001:2008 - O602 II CLASS, OS02-A I CLASS, OS06 II CLASS

Syremont spa nasce nel 1987 dal Gruppo Montedison da cui eredita una specifica competenza sui fluoruri. Dopo 26 anni al servizio della ricerca, diagnostica, restauro dei beni culturali in tutto il mondo, oggi Syremont è in grado di offrire una più ampia gamma di servizi integrati focalizzati sulla gestione degli assets culturali: i nostri servizi sono principalmente basati su ricerca scientifica e tecnologia a supporto di prodotti per il restauro (Linee Akogard® Edigard®); progetti e interventi di restauro e conservazione; manutenzione di materiali organici (sistema VELDORX®); progettazione e ingegnerizzazione tecnologica e impiantistica finalizzata alla manutenzione di asset culturali e/o creazione di asset paesaggistici per la fruizione e divulgazione: musei, mostre, eventi suoni e luci, visite guidate spettacolarizzate, parchi tematici, media production, comunicazione e marketing. Ciclo produttivo. Analisi fattibilità modelli di gestione - progettazione - opere - gestione.

26 years devoted to research, diagnostics and to the restoration of cultural heritage sites all over the world. Syremont is today a company specialized in a wide range of integrated services mainly focused on the management of cultural assets. Our full integrated working program is based on: a scientific and technological research centered on restoration and conservation products and services (Akogard® Edigard® lines); the planning of restoration and preservation and interventions; disinfection of organic materials (V-ELDORX system); services related to the designing, planning, engineering and realisation of cultural and environmental assets, intended for public fruition and divagation, such as museums, exhibits, sound and light events, spectacularised guided tours, theme parks, me- dia production, communication and marketing. Production cycle. Management models analysis - design - intervention - management.



Largo Antonio Sarti 4 - 00196 Roma  
Tel: 06 3220880 - Fax: 06 3220881  
info@syremont.it - www.syremont.it

SYREMONT SPA

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La società TECNARIA produce connettori per solai misti legno-calcestruzzo, acciaio-calcestruzzo e calcestruzzo-calcestruzzo. Le strutture collaboranti trovano sempre più frequente impiego sia per il rinforzo di solai esistenti che per la realizzazione di nuovi solai con caratteristiche migliori. I connettori sono stati testati secondo le più recenti normative europee. Offriamo anche un ampio servizio di assistenza per il progettista.

TECNARIA produces connectors for composite floors made of timber and concrete, steel and concrete and concrete and concrete. Composite structures are increasingly used to strengthen existing floors as well to build new floors with enhanced characteristics. The connectors have been tested according to the most recent European regulations. We also offer technical assistance to the designer.

Viale Pecori Girardi 55  
36061 Bassano del Grappa (VI)  
Tel: 0424 502029 - Fax: 0424 502386  
info@tenaria.com - www.tenaria.com

TECNARIA SPA

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ANNO DI FONDAZIONE: 1982

CERTIFICAZIONI: ISO 9001 e ISO 14001 in fase di ottenimento

FILIALI: Madrid - Spagna

TEcnored opera dal 1982 in Italia e Spagna con la produzione di tecnologie avanzate nel settore della deumidificazione, consolidamento e manutenzione di edifici monumentali e civili.

Working in Italy and Spain since 1982 with advanced technology in the sector of humidifying, consolidation and maintaining monumental and civic buildings.



Via S. Michele Montoro 3/A - 37141 Verona  
Tel. +39 045 8921020 - Tel. +39 045 8921020  
info@tecnored.it - www.tecnored.eu

TECNORED SRL

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**MARCO PAOLO SERVALLI**  
**STUDIO DI ARCHITETTURA**

Via Cadorna 4 - 24128 Bergamo  
Tel. +39 035 400156  
mpservalli@gmail.com - www.servallihisironi.it

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E

**SOING**  
**STRUTTURE & AMBIENTE**

Via Nicolodi 48 - 57121 Livorno  
Tel. +39 0586 426710 - Fax + 39 0586 443552  
soing@soing.eu - www.soing.eu

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**SO IN.G. STRUTTURE E AMBIENTE SRL**

E

**SPC s.r.l.**

**STUDIO PROGETTAZIONE**  
**E CONTROLLI**

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Via Marco Polo 37 - 00154 Roma

**SPC SRL**

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**START SOLUTIONS AND TECHNOLOGIES**  
**STUDIO ASSOCIATO BENEDETTI E GRILETTO**

Via Lama 2 - 25133 BRESCIA  
Via Ugo Betti 22, 20151 MILANO  
Tel. +39 030 8080242 - Fax +39 030 8080242  
info@start-conservazione.it  
www.start-conservazione.it

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**ANNO DI FONDAZIONE: 1998**  
Marco Paolo Servalli ARCHITETTURA, specializzato nel restauro di edifici storici e di culto e nella valorizzazione di immobili di pregio, sia pubblici che privati. Ogni progetto è eseguito con la massima professionalità al fine di restituire i manufatti antichi all'uso contemporaneo salvaguardandone gli elementi originali. Il metodo di lavoro mira a qualità a al rispetto dei tempi, e lo studio si avvale di collaboratori esperti e affidabili. Progettazione architettonica e direzione lavori, sia in Italia che all'estero. Altre aree di competenza: progettazione del paesaggio, riqualificazione aree urbane, progetti per il Fund Raising.  
Marco Paolo Servalli ARCHITETTURA, specialized in the restoration of historic and religious buildings and the enhancement of prestigious properties, both public and private. Each project is executed with the utmost professionalism in order to restore the historic building to contemporary use while preserving original characteristics. Our working method is focused on quality and on timeliness, and the firm avails itself of expert and reliable collaborative design and construction supervision, and fund raising projects.  
both in Italy and abroad. Other areas of expertise include: landscape design, urban regeneration, and fund raising projects.

**CERTIFICAZIONI: ISO 9001 - ISO 14001**  
È una società di servizi innovativi organizzata secondo due divisioni operative, corrispondenti alle principali aree di intervento:  
- Divisione Geotecnica Applicata la cui attività è incentrata nella progettazione ed erogazione di servizi di diagnostica e monitoraggio, eseguiti con tecniche geotecniche non invasive, applicate a: Beni Culturali, architettonici e archeologici; Strutture edili e civili; Geologia e Opere in Sottosuolo; Ricerca e Mappatura di Sottoservizi e Reti tecnologiche; Ambiente: caratterizzazione di vaste zone potenzialmente inquinate; Agricoltura e Viticoltura di Precisione; Montoraggi speciali eseguiti senza uso di cablaggi, su Strutture, Edifici, Ponti, Viadotti e Stralli.  
- Divisione Tecnico Ambientale la cui attività è incentrata nella progettazione ed erogazione di servizi applicati alla caratterizzazione ambientale ed alla bonifica di siti contaminati.  
Il principale Core business è svolto dalla Divisione Geotecnica Applicata, la cui area di intervento è su tutto il territorio italiano e su numerosi paesi esteri. Dal 2005 SO IN.G è certificata secondo la norma ISO 9001\_2008 e dal 2011 ha implementato il suo sistema di gestione della Qualità in un Sistema di Gestione Integrato Qualità e Ambiente, raggiungendo anche la certificazione secondo la norma ISO 14001\_2004. Dal 2006 SO IN.G è iscritta all'Albo Nazionale Gestori Ambientali, nella Sezione regionale della Toscana. Categoria 9 Bonifica del Siti - classe D. Nel 2007 ha vinto il Primo Premio della C.C.I.A.A di Livorno per il concorso "Impresa Innovativa".

La SPC s.r.l. ha sviluppato nel corso degli ultimi 25 anni una esperienza unica ed un know-how interno specifico raggiunto nella conservazione delle strutture e delle architetture del patrimonio culturale mondiale. Soci e rappresentanti legali sono: Ing. G. Croci, Ing. A. Bozzetti, Ing. F. Croci, Ing. A. Herzalla e Ing. C. Russo. Le attività principali includono: l'analisi ed il rinforzo strutturale di edifici esistenti, la progettazione di strutture moderne ad elevata complessità utilizzando tecniche e materiali all'avanguardia, il restauro ed il consolidamento di monumenti, indagini e diagnostica di strutture e materiali in sito, project management di progetti di ingegneria civile ed architettura.  
The SPC s.r.l. has been developing a unique experience and a proprietary know-how for the past 25 years reaching the excellence in the structural engineering with worldwide recognised expertise in preservation of cultural heritage structures and architectures. Partners and Legal Representatives are Ing.G.Croci, Ing.A. Bozzetti, Ing.F.Croci, Arch.A.Herzalla and Ing.C.Russo. Principal activities include: analysis and strengthening design of existing buildings; design of new modern complex structures using advanced techniques and materials; consolidation and restoration of monuments; investigations and diagnostic on structures and materials, including on-site and laboratory tests; project management of civil engineering and architectural projects.

**ANNO DI FONDAZIONE: 2009**  
Lo studio START fornisce servizi e consulenza nel campo della conservazione dei Beni Culturali, utilizzando metodologie innovative e tecniche analitiche avanzate per la Conservazione, Conservazione e Valorizzazione, ottimizzando la gestione del Bene e minimizzando tempi e costi dell'iter progettuale.  
START provides services and consultancy in the field of cultural asset conservation, using innovative methods and advanced test techniques to obtain knowledge, conserve and valorize, optimizing the assets management and minimizing project times and costs.

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**PIACENTI SPA**

Via Manzoni 36 - 73020 Cursi (Le)  
Tel. +39 0836 483285 - Fax +39 0836 429926  
info@pietraleccese.com - www.pietraleccese.com

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**CERTIFICAZIONI:** Certificazione DNV per il sistema di gestione di qualità aziendale ISO 9001-2008

**ANNO DI FONDAZIONE:** 1994

Pimar S.r.l. nasce nel 1994 come naturale continuazione dell'attività della famiglia Marrocco nel settore della pietra leccese, che affonda le radici nel secolo scorso. Il know-how aziendale maturato è assai elevato e si tramanda da 150 anni. Gli attuali vertici aziendali, i fratelli Giuseppe, Giorgia e Daniele Marrocco, insieme al padre Salvatore, attuale presidente, hanno sviluppato ed innovato l'azienda, sempre all'insegna della ricerca, sperimentazione, progettazione e comunicazione, dedicano risorse economiche e personali per valorizzare quella che si può proprio definire una "pietra di famiglia", affinché possa continuare a soddisfare al meglio ogni esigenza architettonica ed essere impiegata in sempre più numerosi e nuovi contesti.

Pimar S.r.l. was born in 1994 as a natural continuation of the Marrocco family's activity in the field of the natural stone from Lecce, which has its roots in the past century. The company gained know-how (sweat high and has been handed down for 150 years). The present company leaders, the brothers Giuseppe, Giorgia and Daniele Marrocco, together with their father Salvatore, who is the current president, have developed and evolved the company, always characterized by research, experimentation, planning and communication. They allocated financial and personal resources in order to give value to what can be really defined a "family stone" so that it can go on doing the best to meet any architectural requirements and to be employed in more and more different new contexts.

**CERTIFICAZIONI:** Eccellenza artigiana Regione Piemonte

**ANNO DI FONDAZIONE:** 2000

La nostra azienda è specializzata nel restauro di metalli, vetro e lampadari storici. Si eseguono lavorazioni su lampadari di qualsiasi genere, dimensione e stile, e soprattutto quelli tipici della tradizione storica italiana come ad esempio i lampadari veneziani di Murano e i lampadari in cristallo Maria Teresa o Impero. Il cliente, pubblico o privato, può contare sul nostro supporto per il restauro conservativo e museale, il tutto eseguito con alti standard di qualità artigianale. Azienda accreditata presso le Sovrintendenze

Our company is specialized in the restoration of metal, glass and historic chandeliers. We carry out work on lamps of any kind, size and style, and especially those typical Italian history such as Murano and Venetian chandeliers crystal chandeliers Maria Theresa or Empire. The client, public or private, can count on our support for the restoration and museum, all executed with high standards of quality craftsmanship. Company accredited by the Sovrintendenze



**REALE RESTAURI DI FORCONI CRISTINA**

Via Ormea 67/B - 10121 Torino  
Tel. +39 011 6694675 - Fax +39 011 6694675  
reale restauri@iscall.it - www.reale restauri.com

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**CERTIFICAZIONI:** SOA cat - OS2 III class. - OS2 III class. ISO 9001 - Sicert SGS

**ANNO DI FONDAZIONE:** 1999

Restauro di intonaci polimerici e di decorazioni-materiali lapidei-consolidamenti strutture murarie e opere ligneo-deumidificazione e impermeabilizzazione di strutture murarie.

Restoration of polyhrome plasters and decorations-stones-consolidation of wall and wood structures-repairs,dehumidification and waterproofing walls.



**RESTAURI SRL**

Via di Prè 10/3A - 16126 Genova  
Tel +39 010 2462978 - Fax +39 010 2462978  
restauri@panel.it - www.restaurisrl.eu

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**ANNO DI FONDAZIONE:** 1982

**CERTIFICAZIONI:** Ambiental: ANAB / ICEA - Natureplus

**FILIALI:**Parines (BZ), Prevalle (BS), Comabbio (BA), Villanova (CN), Fontanafredda (PN)

Risanamento, restauro con un'attenzione costante per la bioedilizia, pitture, investimenti e sistemi di isolamento termico per esterni. Calcestruzzi, massetti e fondi di posa.

Repairs and restoration (with constant attention to bio-building, paints, coverings and thermal insulation systems for exteriors. Concrete, footing and foundations.



**RÖFIX SPA**

Via Venosta 70 - 39020 Parines (BZ)  
Tel. +39 0473 966100 - Fax +39 0473 966150  
office.partschins@roefix.com - www.roefix.com

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**NOVARI A. R.E.S.T.A.U.R.I. S.R.L.**  
Restauro Opere d'Arte



La N.O.V.A.R.I.A. R.E.S.T.A.U.R.I. Srl è una società specializzata nel restauro, recupero e conservazione di Beni Culturali, quali opere d'arte mobili e beni immobili sottoposti a tutela. Dal 1972 si occupa di progettazione, indagini diagnostiche, ricerche, pronto intervento, messa in sicurezza, recupero e restauro di affreschi e dipinti su muro, stucchi, dipinti su tela e tavola, elementi lapidei e monumenti all'aperto, bronzi, tessuti, sculture lignee dorate e policrome. Al necessario operato smontaggio e trasferimento di Monumenti; Trasferimenti di gipsoteca e di pinacoteche e assistenza nei restauri dei loro contenitori (musei). Servizi di consulenza e perizie nell'ambito dei Beni Culturali.

La N.O.V.A.R.I.A. R.E.S.T.A.U.R.I. Srl mette a disposizione esperienza, competenza e serietà in ogni delicata fase del restauro, garantendo un alto standard qualitativo e un continuo monitoraggio dei lavori eseguiti. È in grado di intervenire, autogestendosi, in situazioni di emergenza conservativa, anche a seguito di calamità.

**ANNO DI FONDAZIONE: 1972**

**NOVARI A. R.E.S.T.A.U.R.I. SRL**  
Via Marco Polo 19 - 28100 Novara  
Tel. +39 0321 691474 - Fax +39 0321 688698  
novaria\_r@starnova.it

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**NICOLA RESTAURI S.r.l.**



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**CERTIFICAZIONI: ISO 9001 - SOA**

Nicola Restauri Srl è una realtà d'eccellenza nel campo del restauro, riconosciuta a livello internazionale, al servizio di Soprintendenze, Enti, Musei, Università e collezionisti. Oltre sessant'anni di esperienza nel recupero, conservazione e restauro di opere antiche e moderne, su tela, legno, carta, pergamena, pietra, reperti archeologici, affreschi e stucchi in chiese e palazzi. Nel laboratorio operativo di Aramegno (AT) di oltre 3000 mq si eseguono anche indagini strumentali non invasive.

Nicola Restauri Srl is an international recognized company in the field of restoration, serving Public, Private and Ecclesiastical organizations, Museums, Universities and collectors. Over sixty years of experience in the recovery, preservation and restoration of ancient and modern works on canvas, wood, paper, stone, archaeological finds, frescoes and stucco in churches and palaces. In the laboratory of Aramegno (AT) of more than 3000sqm are also carried non-invasive imaging techniques

**NICOLA RESTAURI SRL**

Via S. Giulia 65 - 10124 Torino  
Tel. +39 0141 909125 - Fax +39 0141 909170  
info@nicolarestauri.com  
www.nicolarestauri.com

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**PGL DI DOT.T.SSA NADIA PASTORE**

Via Per Locco 2 - 28898 Stresa (VB)  
Tel. +39 347 2985008 - Fax +39 0323 33247  
nadiapastore@virgilio.it

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**PIACENTI SPA**

Via Marradi 38 - 59100 Prato  
Tel. +39 0574 470464 - Fax +39 0574 471021  
piacenti@restauratori.com - www.restauratori.com

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**CERTIFICAZIONI: ISO 9001:2008, CERTIFICAZIONE SOA: 0602-CLASSE III-BIS, 0502A-CLASSE V**  
**ANNO DI FONDAZIONE: 1875**

La Piacenti spa svolge attività di progettazione, conservazione, restauro di beni di interesse storico-artistico e monumentale, disponendo di personale altamente specializzato nel trattamento di manufatti lignei policromi, di dipinti su tela e tavola, di stucchi e pitture murali, di reperti archeologici, materiali ceramici, metallici e lapidei. All'interno dell'impresa, che si avvale di attrezzature tecnologiche e di ampi laboratori, ogni competenza settoriale lavora in sinergia con le altre e viene coordinata dall'ufficio tecnico e diagnostico. L'azienda possiede i requisiti professionali, economici ed organizzativi che le permettono, autonomamente, l'esecuzione di grandi lavori pubblici e privati. Opera in Italia, Cina, Turchia, Moldavia e Russia.

The Piacenti S.p.a. carries out planning and execution activity in the field of cultural heritage restoration and conservation by its high specialized and qualified employees on wooden and polychrome objects, paintings on wood and canvas, stuccoes, wall paintings, artifacts, ceramic metallic and stone materials. Inside the headquarters, geared by technical equipment and wide workshops, every sectorial competence collaborative requirements which allow, autonomously, to carry out big public and private contracts for restoration and conservation works. It works in Italy, China, Moldova, Russia.

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**MARMIROLO SRL**  
Via Strada Vecchia 88/1 - 42011 Bagnolo in Piano (RE)  
Tel. +39 0522 954342 - Fax +39 0522 954102  
info@marmirolo.com - www.marmirolo.com

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**MELLONCELLI SRL**  
Via Argirero 174 - 46028 Sermide (MN)  
Tel. +39 0386 96004 - Fax +39 0386 960335  
info@melloncelli.it - www.melloncelli.it

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**METADISTRETTO VENETO DEI BENI CULTURALI**  
Via della Libertà 12 - VEGA PARK  
30175 Marghera (VE)  
Tel. +39 041 5093046 - Fax +39 041 5093086  
distretto@vegapark.ve.it - www.distretto@vegapark.ve.it

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## MONTINA

**MONTINA DI RINO MONTINA**  
**RESTAURO E CONSERVAZIONE**

Via Monte Cimone 11/11 - 33100 Udine  
Tel. +39 3282152292  
rinomontina@libero.it

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### CERTIFICAZIONI: ISO 9001:2008

La MARMIROLO S.r.l., svolge da 40 anni restauro conservativo e strutturale di beni artistici: Dipinti murali; Paramenti in marmo, stucco e laterizi; Intonaci antichi; Manufatti lignei dipinti e dorati e certificata SOA cat. 0S2-A class. IV BIS e Cat. 0G2 class. III BIS e UNI EN ISO 9001:2008 Collabora con uno staff altamente specializzato, con strutture d'eccezione nei settori della diagnostica, con uno studio di ingegneria con particolare esperienza nel campo del restauro strutturale.

The MARMIROLO Srl, performs for 40 years and structural conservative restoration of artistic goods: Painted murals; Paraments marble, putty and brick; Old plaster; Painted and golden wooden artefacts. Collaborates with a highly specialized staff, with structures of excellence in the areas of diagnostics, with an engineering study with particular experience in the field of structural restoration.

Melloncelli srl, azienda nata 170 anni fa nella progettazione su misura di soluzioni tecnologicamente avanzate, dopo la meccanica di precisione applicata agli orologi dei campanili e l'automazione delle campane, da anni percorrendo l'evoluzione del settore elettronico propone le proprie realizzazioni nel campo dell'amplificazione, riproduzione del suono e videosorveglianza. Oggi grazie allo sviluppo della tecnologia illuminotecnica si pone con le proprie progettazioni ed installazioni come un artefice nel controllo della luce, il risparmio energetico mediante i propri corpi illuminanti a led ed il rispetto dell'ambiente. Proprio per difendere l'ambiente ed in particolare il patrimonio artistico caratterizzato prevalentemente dal comparto ecclesiastico al quale Melloncelli si rivolge da anni, ha introdotto nel mercato la propria tecnologia per la risoluzione definitiva del problema dovuto all'umidità di risalita.

Melloncelli srl is a company founded 170 years ago. The core business was the custom design advanced solutions for the precision mechanics applied to clocks bell and automation of bells. Today along the evolution of the electronic and electrotechnical industry, Melloncelli srl presents its achievements in the field of amplification, sound playback and video surveillance. Thanks to the development of lighting technology arises with their own designs and installations as an architect in the control of light, energy saving through its LED lighting and the environment. Just to defend the environment and in particular the artistic characterized mainly by the church to which Melloncelli caters for years, has introduced to the market its technology for the ultimate resolution of the problem due to moisture lifts.

Il Metadistretto Veneto dei Beni Culturali è sorto in base alle Leggi Regionali 8/2003 e 5/2006 con lo scopo di promuovere e coordinare progetti a livello nazionale ed internazionale, favorendo la collaborazione fra le aziende e le istituzioni che operano nel settore. Fanno parte del Metadistretto 24 istituzioni e oltre 300 aziende impegnate in tutti i settori legati ai beni culturali: restauro beni mobili e immobili, allestimenti museali, produzione di materiali per il restauro, laboratori di analisi e diagnostica, valorizzazione dei beni culturali, sistemi informatici, editoria.

The Venetian Cluster of Cultural Heritage was born on the basis of the Regional Laws 8/2003 and 5/2006 to promote and coordinate the projects at national and international level encouraging the collaboration between companies and institutions operating in the sector. 24 Venetian's highest Offices and over 300 companies are part of the Cluster, involved in all sectors linked to the cultural heritage: restoration of movable and immovable assets, museum arrangements, production of materials for restoration, analysis and diagnostics laboratories, valorisation of the cultural heritage, informatics systems, publishing.

### ANNO DI FONDAZIONE: 2000

Recupero e trattamento conservativo di pavimenti in cotto, di superfici lapidee e lignee. Eco-sabbatura. Repairs and conservative treatments on brick pavements, stone and wood surfaces. Ecological sandblasting.

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**LEGNODOC SRL**

Via Borgo Valsugana 11 - 59100 Prato (PO)  
Tel. +39 0574 36953 - Fax +39 0574 40467  
info@legnodoc.com - www.legnodoc.com

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**LEONARDO SRL  
ANALISI E RESTAURO**

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40122 Bologna  
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info@studioleonardo.it  
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**LEONARDO SOLUTIONS SRL**

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20025 Legnano (MI)  
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**MAPEI SPA**

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Tel. +39 02 37673.1 - Fax +39 02 37673214  
mapel@mapel.it - www.mapel.com

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**ANNO DI FONDAZIONE: 1997**  
**CERTIFICAZIONI: UNI EN ISO 9001 : 2008**

Formitura di servizi di ispezione per fini diagnostici su strutture lignee in opere antiche e recenti; servizi di classificazione per legname a uso strutturale; assistenza e consulenza per interventi specialistici su strutture lignee; formazione e divulgazione tecnico-scientifica nel settore dell'impiego strutturale del legno. Supplier of diagnostic inspection services for old and recent in-situ timber structures; grading of structural timber; assistance and consultancy for consolidation works on timber structures; training and technical-scientific information in structural use of timber.

**ANNO DI FONDAZIONE: 2000**  
**CERTIFICAZIONI: OS2 Classifica III, OS2 Classifica I, Sistema Qualità Aziendale UNI EN ISO 9001:2008**

Leonardo S.r.l. interviene sui beni culturali dalla diagnosi al restauro. Possiede le certificazioni SOA categoria OS2 III e OS2 I, oltre al Sistema di Certificazione della Qualità (UNI EN iso 9001:2008). Opera sia nella fase progettuale, effettuando analisi dei materiali e dello stato di conservazione, che nella fase esecutiva, realizzando restauri di beni mobili e immobili, documentazione interventi, monitoraggio operazioni effettuate.

Leonardo S.r.l. operates on cultural heritage from diagnostics to restoration. Leonardo is certified in SOA for categories OS2 III and OS2 I and in Quality Certification System (UNI EN ISO 9001:2008). It both works on planning, conducting analysis on materials and on state of conservation, and on practice, restoring paintings, frescoes, statues and historical buildings, documenting operations, monitoring restorations.

**ANNO DI FONDAZIONE: 2005**

Azienda specializzata nel trattamento dell'umidità muraria da risalita capillare tramite l'innovativa tecnologia elettro-fisica attiva, Leonardo Solutions è detentricce della tecnologia utilizzata, a marchio Domodry®, protetta da brevetto (Brev. UIBM n° 0001391107, Dep. EPQ n° 9167412; US Patent Application n° 13/029,053). A differenza di altri sistemi, che tentano di contrastare la risalita capillare "sbarrandone" il flusso o "respingendolo" verso il terreno di provenienza, Domodry® è in grado di prevenire sul nascere il fenomeno stesso della capillarità, agendo direttamente sulle cause che ne sono all'origine. Anche per questo motivo, l'efficacia della tecnologia Domodry® non è minima-mente eguagliabile da nessuno dei sistemi, tradizionali e non, ad oggi disponibili sul mercato. L'attività operante sia in campo edile che nei Beni Culturali, garantisce un approccio integrato al problema tramite un'attività riassumibile in tre fasi: diagnostica preventiva, progettazione e applicazione del sistema Domodry®, monitoraggio del processo di asciugatura del muro fino a completamento dello stesso. Il controllo della fase di deumidificazione viene effettuato mediante mapature termografiche IR e/o misure ponderali, oltre ad eventuali attività di monitoraggio microclimatico. Gli stessi servizi e/o forniture di sistema per il monitoraggio microclimatico sono erogati e forniti anche per applicazioni diverse, come il controllo climatico in musei ed ambienti conservativi in genere. Specialist in diagnosis, planning and application of technologies to the preservation and building restoration. The company has developed the innovative "Domodry" wall moisture control and moisture removal system, based on the "Electrophysics active dehumidification principle". It is a non-invasive, reversible and biocompatible new generation technology, effective to any kind of building affected with rising damp.

**ANNO DI FONDAZIONE: 1937**

**CERTIFICAZIONI: ISO 9001, ISO 14001, OHSAS 18001**

**FILIALI:** Sede del Gruppo: Milano, 68 consociate in 44 paesi; 59 stabilimenti in 28 paesi.

Il gruppo Mapei, composto da 68 aziende consociate con 59 stabilimenti operanti nei cinque continenti, è oggi il maggior produttore mondiale di adesivi e prodotti complementari per la posa di pavimenti e rivestimenti di ogni tipo e specialista in altri prodotti chimici come impermeabilizzanti, malte speciali e additivi per calcestruzzo, prodotti per il recupero degli edifici storici, finiture murali speciali. Mapei Group, 68 subsidiaries with 59 plants in the five continents, is today the world leader in the production of adhesives and complementary products for the installation of all types of floor and wall coverings. The company is also specialized in other chemical products for building, from waterproofers to special mortars and admixtures for concrete, products for the restoration of ancient buildings and special wall decorative and protective coating.



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INGEGNERIA AMBIENTALE, ARCHEOLOGIA E RESTAURO  
Via Euglielmo Sanfelice 8 - 80134 Napoli  
Tel. +39 081 790178 - Fax +39 081 5423175  
ufficiogare@landesrl.it - www.landel.it



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**CERTIFICAZIONI:** UNI EN ISO 9001:2008- ISO 14001/UNI EN ISO 14001:2004- OHSAS 18001:2007- CERTIFICATO EMAS

Il restauro è un settore di attività d'eccellenza in cui Lande si distingue per lo sviluppo di tecniche e soluzioni atte mente innovative per il recupero di prestigiosi complessi storici, la valorizzazione, la conservazione e l'impostazione e museologica dei siti recuperati. La ricerca del miglior bilanciamento possibile fra storia, cultura, valorizzazione e fruibilità è condotta attraverso un costante lavoro di ricerca e di sintesi fra esperienza e sperimentazione. Così la destinazione d'uso compatibile degli edifici storici, l'utilizzo di materiali e tecnologie originali, il ripristino o conservazione del comportamento statico originario, la compatibilità dei materiali, il dimensionamento minimo degli interventi non costituiscono solo concetti e parametri tecnici del lavoro di restauro, ma la struttura che sostiene, da forma e sprona all'innovazione nella progettazione e nell'esecuzione di ciascun intervento.

Over the years Lande has distinguished itself par excellence in the development of innovative techniques and solutions aimed at the recovery, preservation and museological layout of prestigious historical complexes. The search for the best possible balance between history, culture, valuation and usability is conducted through constant research and a blend of experience and experimentation. Thus, the congruent allocation of historical buildings, the use of original and compatible materials and technologies, the reinstatement or preservation of the original quality, the minimum size of operations are not only concepts and technical parameters of the restoration, but also the structure supporting, motivating and giving shape to innovation in the planning and execution of each operation.

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KIMIA SPA  
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**CERTIFICAZIONI:** UNI EN ISO 9001 : 2008

La lunga esperienza alle spalle e la continua ricerca e miglioramento rendono Kimia SpA un leader riconosciuto nella produzione e commercializzazione di materiali ad alta tecnologia per il restauro e recupero ed il consolidamento strutturale (inizialmente in carbonio e vetro, ora anche in acciaio con matrici inorganiche), applicati con risultati di durabilità eccellenti, ma non solo... Kimia è anche maître preconfertionate ad alta durabilità, calce idrauliche naturali, soluzioni per impermeabilizzazioni, pavimentazioni, trattamenti protettivi e di pulizia, isolamento e deumidificazione: una gamma di soluzioni per il restauro e recupero completa, dalle elevatissime prestazioni e sempre conforme alle più recenti normative.

Great experience leading company operating in the production and trading of hi-tech materials for building recovery and restoration like: high durability prepackaged mortars, natural hydraulic limes, steel composite and FRP systems for the reinforcement of existing structures, solutions for waterproofing and floorings, protective & cleaning treatments, insulation and dehumidifications, complying to the latest building regulations.

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info@keim.it - www.keim.it



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KEIMFARBEN COLORI MINERALI SRL

**CERTIFICAZIONI:** ISO 9001 + 14001

**ANNO DI FONDAZIONE:** 1988

KEIM, ecologico, economico, minerale. Produzione e vendita di pitture minerali ai silicati puri e prodotti complementari minerali. Pitture per facciate, pitture e Velature per calcestruzzo, pitture per interni, prodotti dotati per il restauro ed il trattamento delle pietre, intonaci e rasanti minerali. Componenti NATURALI dei colori minerali KEIM sono la base della loro ineguagliabile qualità. Le caratteristiche principali dei sistemi a base di silicati sono: una vasta gamma di tinte, stabilità alla luce, longevità insuperata, riduzione dei costi e del costo di manutenzione, rispettano la salute e l'ambiente.

Production and sale of pure silicate mineral paint and complementary mineral products.

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Via Antonio Stoppari 15 - 00197 Roma  
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www.italianacostruzionspa.it



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**CERTIFICAZIONI:** UNI EN ISO 9001:2008 / UNI EN ISO 14001:2004 / BS OHSAS 18001:2007

**ANNO DI FONDAZIONE:** 1975

Fondata nel 1975 da Claudio Navarra e guidata oggi dai figli Attilio e Luca, ha dato continuità ad una "lotta centenaria" tradizione imprenditoriale della famiglia Navarra nel settore delle costruzioni: l'attività edilizia della famiglia ha avuto inizio nel 1880 con la realizzazione di importanti opere pubbliche. La sede principale è a Roma dove vengono accentrati i servizi tecnico-amministrativi ed una sede operativa a Milano dove vengono coordinate le attività produttive localizzate nel Nord Italia. Nel corso degli anni, alla Italiana Costruzioni sono state affiancate Aziende, sempre facenti capo alla famiglia Navarra, specializzate in specifici settori. In particolare, nel corso dell'ultimo quinquennio, la costante crescita espressa da un notevole incremento del proprio fatturato, l'esperienza professionale acquisita anche attraverso investimenti in termini di risorse umane hanno consentito all'azienda il raggiungimento di alti standard qualitativi.

Founded in 1975 by Claudio Navarra and currently led by his sons, Attilio and Luca, has carried on the centuries-old tradition of the Navarra family in the construction industry, dating from 1880. Headquartered in Rome, where the company's technical and administrative departments are located, while its Milan office coordinates construction activities in northern Italy. Operations fields: private clients: construction hotels, shopping centres; public works: residential, industrial, university construction, projects for the military and branches of law enforcement; the restoration of churches, buildings of noteworthy historical and artistic interest subject: infrastructure, roads, urban development; residential for the real-estate sector. Over the last five years, the steady growth expressed by a significant increase in its revenue, the professional experience gained through considerable investment in terms of human resources have enabled the company to achieve high quality standards.

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**GEOMAR.IT SNC**  
**DI RASCHIERI A, MELLANO M, E BOETTI M.**

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 Tel. +39 0174 45920 - Fax +39 0174 45920  
 amministrazione@geomar.it - www.geomar.it

**ANNO DI FONDAZIONE: 2001**

Rilievi architettonici, laser scanner, elaborati grafici e fotografici. La società geomar.it nasce nel 2001, dall'iniziativa di tre professionisti da anni impegnati nel settore dell'applicazione di nuove tecnologie e metodologie informatiche nel campo dell'architettura e della topografia. La società eredita l'esperienza acquisita dai suoi ideatori nel corso dell'attività professionale.

Architectural surveys, laser scanner, graphic and photographic process.

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**FILIALI: IBIX Norway, IBIX USA**

**CERTIFICAZIONI: Codice AMSE e UE PED 97/23/CE**

**ANNO DI FONDAZIONE: 2000**

IBIX® è leader tecnologico per la pittura a bassa pressione mediante micro-aero-abrasione. È specializzata nella realizzazione di sistemi di pittura a bassa pressione con tecnologia a vortex elicoidale HELIX® a secco e a umido. La tecnologia IBIX®, sviluppata in collaborazione con specialisti del restauro, utilizza specifici merli selezionati per le pitture artistiche. IBIX Mobile Lab® ST01 è un completo e versatile laboratorio portatile che consente di eseguire indagini diagnostiche sui materiali dell'edilizia storica in maniera semplice ed intuitiva, rendendo accessibili a tutti coloro che operano nel campo della conservazione del Beni Culturali le tecniche di base per la caratterizzazione dei materiali lapidei naturali e artificiali e dei relativi fenomeni di degrado. Le metodologie analitiche impiegate sono conformi alla normativa italiana (UNI-Beni Culturali) ed europea (EN-Conservation of Cultural Property).

IBIX® is a leader in developing technology and materials for low-pressure micro-aero-abrasive cleaning and designs and manufactures HELIX® low pressure dry or wet vortex cleaning systems. IBIX Mobile Lab® ST01 is a comprehensive & versatile portable laboratory to analyse and diagnose historic building materials in an easy and clear manner. The methods of analysis used comply with both Italian and European regulations by UNI-Beni Culturali (Cultural Heritage) and EN-Conservation of Cultural Property respectively.

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**IMPRESA GARIBALDI SRL**

Piazza Mercantile 30 - 70122 Bari  
 Tel. +39 080 5237428 - Fax +39 080 5234756  
 info@impresagaribaldi.it - www.impresagaribaldi.it

The Garibaldi, is a construction company registered in Bari (the oldest one of the town), which operates mainly in the restoration field on behalf of third parties, maintenance and new building constructions all over the national sphere. The restoration, regards the architectural and artistic operating to the monumental assets of interest. Our restoration customers, belongs almost exclusively to the public sphere, especially the Ministry of the Cultural Heritage.

**CERTIFICAZIONI: UNI EN ISO 9001:2008**

La società è un'impresa edile con sede in Bari (la più antica della città), che opera prevalentemente per conto terzi nel campo del restauro, delle manutenzioni e delle nuove costruzioni in un ambito nazionale. Il restauro riguarda beni esclusivamente pubblica in particolare Ministero dei Beni Culturali.

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**IMPRESA VIOI SRL**

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 impresavioi@impresavioi.it - www.impresavioi.it

Impresa Vioi è da anni fortemente attiva nel settore del restauro conservativo. Il nostro lavoro è eseguito in collaborazione e sotto la supervisione delle Sovrintendenze. La nostra esperienza, la struttura organizzata e le nostre attrezzature ci consentono di fornire alle imprese pubbliche e private un servizio completo dalla consulenza tecnica all'esecuzione di lavori su tutto il territorio nazionale. Eseguiamo molteplici tipologie di lavoro dalla realizzazione di grandi superfici monumentali e civili, quali facciate, ponti, pavimenti, soffitti fino ad arrivare a quelli più complessi come il restauro di fregi, statue fontane, piazze, colonnati, chiese, centri storici, castelli e monasteri. Disponiamo di attrezzature che ci consentono di risolvere qualsiasi problematica grazie all'utilizzo delle più innovative tecnologie per la pittura, la conservazione ed il risanamento ecologico.

The Company Vioi has long been very active in the field of conservative restoration. Our work is performed in collaboration and under the supervision of the Superintendence. Our experience, the organizational structure and our equipment allows us to provide the public and private companies a complete service from technical advice to the execution of works on the whole national territory. We realized many types of work from the construction of large areas such as civil and monumental surface like facades, bridges, floors, ceilings, cellings, castles and monasteries. We have equipment that enable us to solve any problem through the use of innovative technologies for cleaning, conservation and ecological restoration.

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A SOCIO AGGREGATO | STANDARD MEMBER

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SOCIO EFFETTIVO | FULL MEMBER

O

SOCIO ONORARIO | HONORARY MEMBER

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info@geogra.it - www.geogra.it  
Tel. +39 0386 62628 - Fax +39 0386 960248  
Via Indipendenza 106 - 46028 Semide (MN)

**GEORÀ SRL**

ANNO DI FONDAZIONE: 1994  
CERTIFICAZIONI: SOA - cat OS 20 classe II

Laser Scanning 3D (Architettura, Infrastruttura, Industrial), Archeometria, Stereofotogrammetria Fotogrammetria Ortofoto, Topografia e GPS, Batimetria, Rilievi di interni, Elaborazioni grafiche e fotografiche.

3D Laser Scanning (Architettura, Infrastruttura, Industrial), Archeometria, Stereofotogrammetria, Topografia and GPS, Bathymetry, Traditional Surveys, Graphic and Photographic information processing.



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Via Tosarelli 3 - 40128 Bologna

**FORUM ITALIANO CALCE**

ANNO DI FONDAZIONE: 2007

Il Forum Italiano Calce è un'Associazione no profit, che promuove lo sviluppo di esperienze e di conoscenza dell'impiego della calce nel costruito e nel restauro attraverso: scambi, convegni e diffusione di notizie e informazioni sul mondo della calce; organizzazione di congressi, seminari, incontri e corsi; promozione della ricerca scientifica/pratica su calce, malte e pitture a base di calce sostegno allo sviluppo di tecniche appropriate a livello industriale e artigianale per la produzione di calce aerea e/o idraulica naturale.

The Italian Lime Forum promotes the development of experience and knowledge of the use of lime in building and restoration, through: exchanging, comparing and spreading news and information about the world of lime; organizing congresses, seminars, meetings and courses; promoting the scientific research and the practical use of lime, mortars or lime paints; supporting the development of appropriate techniques, at industrial and artisanal level, for the production of air and natural hydraulic limes.



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info@fibre.net.info  
Tel. +39 0432 600918 - Fax +39 0432 526199  
Via Zanussi 311 - 33100 Udine

**FIBRE NET SRL**

ANNO DI FONDAZIONE: 2001  
CERTIFICAZIONI: ISO 9001 : 2008

Progettazione/costruzione di sistemi di rinforzo in F.R.P. (Fiber Reinforced Polymer) ad elevata resistenza meccanica e chimica, basso peso e spessore, per recupero e consolidamento di strutture.

Design and manufacturing of low weight and thickness FRP (Fiber Reinforced Polymer) systems with high mechanical and chemical resistance, suitable for structural reinforcement of existing buildings.



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conservazione@elen.it - www.elengroup.com  
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**EL.EN. ELECTRONIC ENGINEERING SPA**

ANNO DI FONDAZIONE: 1981  
CERTIFICAZIONI: ISO 9001

Il Gruppo ELen, fondato nel 1981, è stato il primo in Italia ad aver sviluppato, nella prima metà degli anni '90, sistemi laser per le applicazioni nella conservazione dei Beni Culturali. Dal 2005 l'attività di ELen, si è integrata con l'esperienza maturata da Quanta System S.p.A., azienda del gruppo tra le prime e più importanti nella realizzazione di sistemi laser scientifici. In questo modo il Gruppo fornisce attualmente la più ampia gamma disponibile di sistemi laser per i Beni Culturali, tecnologicamente d'avanguardia e costantemente validati dal mondo della conservazione. La soc. ELen, ha messo a punto alcuni dispositivi e sistemi optoelettronici ed elettronici per la diagnostica e il monitoraggio. Sistemi di diagnostica laser LIBS (Laser Induced Breakdown Spectroscopy) per indagini composizionali su metalli e autenticazione di opere d'arte e FLiDAR (Fluorescence Light Detection And Ranging) per il monitoraggio in remoto di monumenti e diagnostica composizionale della carta. LActis, società del Gruppo ELen, ha messo a punto e detiene il brevetto della Black Box per l'arte, dispositivo per il monitoraggio delle opere d'arte. I campi di applicazione della strumentazione laser sono la pulitura di manufatti artistici, monumenti e edifici storici; potendo operare su supporti lapidei, stucchi, superfici affrescate, metalli di cui in particolare bronzo e bronzo dorato, argenti e oreficerie, manufatti in legno anche dipinti. I sistemi laser del Gruppo ELen, sono presenti in numerosi laboratori europei e nel mondo e sono stati utilizzati o vengono adesso impiegati nei più importanti cantieri di restauro. La Società, ELen, ha sponsorizzato i restauri del bassorilievo del SS. Sepolcro a Gerusalemme, David del Verrocchio e David di Donatello al Museo Nazionale del Bargello.



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**DELETTERA EDITORE**



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**ANNO DI FONDAZIONE: 1981**  
**CERTIFICAZIONI: UNI EN ISO 9001 - UNI EN ISO 14001 - OHSAS**

Cooperativa Archeologia nasce a Firenze nel 1981 per operare nell'ambito della ricerca, della conservazione e della valorizzazione dei beni culturali. È attiva, per mezzo di sedi distaccate, su tutto il territorio nazionale e in alcuni paesi esteri. Cooperativa Archeologia dà priorità alla qualità dell'intervento e all'unicità e importanza sociale dei beni su cui agisce. Le attività vengono eseguite con un organico di oltre 200 operatori specializzati nel proprio settore di intervento e affiancati da consulenti scelti fra ricercatori altamente qualificati.

Cooperativa Archeologia was funded in Florence (Italy) in 1981 to work in research, conservation and enhancement of Cultural Heritage. It operates through branch offices, all over the country and in some foreign states. Cooperativa Archeologia focuses his attention to the quality of the intervention and the uniqueness and social importance of the goods on which it acts. The activities are carried out with a staff of over 200 professionals specialized in their field of intervention and supported by consultants selected from among highly qualified researchers.

**ANNO DI FONDAZIONE: 1990**

Casa Editrice specializzata nel settore dei periodici per l'architettura, l'ingegneria edile, i beni culturali: "Recupero e Conservazione" [la rivista italiana leader di settore], "City Project" [la prima free press di architettura in Europa], "City Energia" [la prima free press sul risparmio energetico e le energie rinnovabili], "Edilizia" [la rivista italiana per l'ingegneria strutturale].

Publishing house specializing in architecture, building engineering and cultural assets publications: "Recupero e Conservazione" (Italy's leading magazine in the sector), "City Project" (Europe's first free press for architecture), "City Energy" (the first free press on energy saving and renewable energy), "Edilizia" (Italy's structural engineering magazine).

**ANNO DI FONDAZIONE: 1998**  
**CERTIFICAZIONI: Procedura in corso per ISO e OGS**

Consolidamento strutturale edifici con sistemi innovativi e tecnologie all'avanguardia. Perforazioni lunghe speciali. Installazione di ancoraggi e incatenamenti per rinforzo di murature. Miglioramento e adeguamento in funzione antisismica di edifici. Posa FRP. Demolizioni controllate con utensili diamantati, perforazioni speciali e taglio cemento armato. Risparmio delle murature unide con barriere e chimica per l'edilizia. Micro sabbatura ecologica per pulizia di marmi, graniti, materiali lapidei, murature faccia a vista, legno, ferro. Installatore certificato Bossong per sistemi di ancoraggio iniettati in murature storiche.

Structural strengthening buildings with innovative systems and well-advanced technology. Long special drilling. Installation of anchors and heavy duty anchors for masonry reinforcement. Seismic retrofitting of buildings and structural improvement and adaptation. Installation of FRP. Controlled demolitions with diamonds tools; special drilling and reinforced concrete cutting. Renovation of damp walls with barriers and construction chemicals. Micro blasting ecological cleaning of marble, granite, stone, masonry face brick, wood, iron. Bossong certified installer for anchoring systems injected into historic masonry.

**ANNO DI FONDAZIONE: 1987**  
**CERTIFICAZIONI: in corso - Qualità ISO 9001**

La Conservazione e la Valorizzazione del Patrimonio Edilizio, in particolare se di valore storico, mediante la Manutenzione e la Restaurazione in una prospettiva di Sostenibilità Ambientale ed Energetica. La manutenzione di un edificio - mantenere efficienza e funzionalità - il recupero e il restauro, sono specializzazioni che non lasciano spazio all'improvvisazione e alla frammentazione ma richiedono ricerca, competenza ed esperienza per conservare il patrimonio storico e architettonico del nostro territorio nel rispetto dell'ambiente e di un'elevata qualità della vita. Il consorzio Ediltecnica nasce nel 1987 con una struttura che punta sull'integrazione verticale di tutte le necessarie professionalità e competenze proprie del settore edile creando sinergie tra imprese specializzate nei diversi e completi settori di intervento in un processo che va dalla progettazione alla consegna, chiavi in mano. Il cliente ottiene così tutti i benefici della specializzazione e al tempo stesso i vantaggi di collaborare con un unico referente dagli elevati parametri qualitativi in un'evidente economia di processo che segna lo stile di tutta l'azienda. Edil Tecnica adempie alle prescrizioni e segue continui piani di miglioramento in materia di qualità e sicurezza.

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La Ciancillo Marmi è un'azienda storica campana che vanta più di cento anni di attività nella lavorazione del marmo e delle pietre naturali. Gli attuali titolari, Paola e Massimo Ciancillo, hanno ereditato l'antico "mestiere" dalle mani dei loro bisnonni, raffinato scultore della fine dell'Ottocento. Le due generazioni che si sono succedute hanno trasformato radicalmente la vecchia "bottega artigiana" creando un'industria e un fiorente commercio prima in tutta l'Italia meridionale e poi in tutto il mondo. La Ciancillo marmi è in grado di offrire, con il supporto dei suoi architetti, anche un servizio di consulenza completo sulle principali tecniche di montaggio, manutenzione e utilizzo e trattamento dei materiali, nonché sullo sviluppo di fattibilità per progetti particolarmente complessi, affiancando il cliente in tutte le fasi: dalla consulenza sui materiali all'assistenza in cantiere.

Ciancillo Marmi belongs to an association of historical firms boasting an over 100 years old tradition in the field of natural stone working, handed down from generation up to the third generation of Ciancillo's family. The actual holders, Paola and Massimo Ciancillo, have inherited the ancient one "work" from the skilled hands of their great-grandfather, refined sculptor of the end of the eight hundred. The two generations that have succeeded have transferred radically the old one "artisan shop" creating all over the world before an industry and a flourishing commerce in the whole southern Italy and then all over the world. The Ciancillo marmarbes it is able to offer with the support of his architects also a complete consulting service on the principal techniques of assembly, maintenance and use and treatment of the materials. And also for development of plans particularly complex, placing side by side the client in all the phases: from the consultation on the materials to the assistance in the yard.

ANNO DI FONDAZIONE: 1980

Istituto di Ricerca, specializzato nell'attività di caratterizzazione di matite, ceramiche, lapidi e mosaici antichi e identificazione del processo di degrado (archeometria e diagnostica). Sviluppo matite da restauro. Geopolimeri per il restauro. Normazione italiana ed europea. Formazione.

Research institute specializing in characterizing mortars, ceramics, stones and ancient mosaics and identifying deterioration processes (archeometry and diagnostics). Development of restoration mortars. Geopolymers for restoring. National and European standard activity. Training.

**CNR - ISTITUTO DI SCIENZA E TECNOLOGIA DEI MATERIALI CERAMICI (ISTEC)**

Via Granarolo, 64 - 48018 Faenza (RA)  
 Tel. +39 0546 699771 - 699773  
 Fax +39 0546 699719  
 istec@istec.cnr.it  
 www.istec.cnr.it

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ANNO DI FONDAZIONE: 2011

La prima associazione delle imprese private gestori dei servizi museali. Fondata nel 2001, Confultura è l'unica organizzazione in Italia rappresentativa delle imprese private che gestiscono i servizi per la valorizzazione e promozione dei Beni Culturali. La missione che ispira l'azione dell'Associazione è la convinzione che i beni culturali siano fattori di sviluppo e di progresso per l'intera società e che si debbano promuovere in maniera sostenibile per una sempre migliore e migliore fruizione con l'incantrazione di forme ottimali di gestione dei servizi culturali e turistici. Confultura, sulla base di quanto scritto nel suo Statuto, si pone al centro del dibattito culturale in atto per l'affermazione del sostanziale valore aggiunto che il privato può dare alla valorizzazione del nostro patrimonio storico e artistico con l'obiettivo di raggiungere forme più mature di collaborazione fra le istituzioni pubbliche e il settore privato specializzato. A questo fine Confultura rappresenta le esigenze e le proposte delle "imprese della cultura" nei confronti delle principali istituzioni politiche ed amministrative, incluse le Soprintendenze, le Direzioni Regionali, il Ministero per i Beni e le Attività culturali, il Parlamento, il Governo e le forze sociali che operano nello stesso ambito dell'Associazione.



**CONFILTURA**

Via di Pietra 70 - 00186 Roma  
 Tel. +39 331 9767296  
 info@confultura.it - www.confultura.it

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ANNO DI FONDAZIONE: 1980

**CERTIFICAZIONI:** Varie certificazioni tecniche rivolte al prodotto

"CIR - CHIMICA ITALIANA RESTAURI è un apprezzato e conosciuto produttore di formulati chimici ad alto contenuto tecnologico (prodotti nano-tecnologici, foto-catalitici, bio-degradabili, ecc.), studiati per le applicazioni nei settori del RESTAURO MONUMENTALE e dell'EDILIZIA CIVILE. L'offerta dell'azienda prevede, inoltre, una completa linea ANTIGRAFFITI ed una per il trattamento delle PAVIMENTAZIONI. CIR offre alla sua clientela un valido supporto di consulenza, formazione ed assistenza tecnica."

"CIR - CHIMICA ITALIANA RESTAURI è a well-known and popular manufacturer of high-tech chemical products (nano-technological, photo-catalytic, bio-degradable products, etc.), designed for the application in the sectors of RESTORATION OF MONUMENTS and CIVIL CONSTRUCTION. The offering of the company also provides a complete ANTI-GRAFFITI product line and a specific FLOORING product line. CIR offers to its customers a valuable support of consulting, training and technical assistance."



**COSTANTER SPA**

Via Isacco Newton 11 - 52100 Arezzo  
 Tel. +39 0575 1881015 - Fax +39 0575 984858  
 info@circhimica.it  
 www.circhimica.it

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BUILDING IMPROVING S.R.L.



BUILDING IMPROVING SRL

1 Via MM Boiardo 33 - 20127 Milano  
 3 Tel. +39 02 26111920 - Fax +39 02 26891321  
 info@buildingimproving.com  
 www.buildingimproving.com

Building Improving srl è una impresa di ingegneria specializzata che opera nel campo dell'edilizia e delle infrastrutture da oltre 20 anni. La Società è molto attiva nel sempre crescente mercato dei ripristini strutturali ed adeguamenti simili ha maturato - grazie alla profonda esperienza sul campo ed a sinergie con i principali produttori del settore - una profonda conoscenza di tutte le tecnologie presenti sul mercato (frp, isolatori sismici, dissipatori isteretici e fluidodinamici, etc.) Building Improving offre alla propria clientela la diagnosi del problema strutturale, interventi di rinforzo di qualsiasi natura successivamente all'intervento di rinforzo, con la valutazione delle nuove caratteristiche globali e dei vantaggi derivanti dall'intervento in termini di duttilità e resistenza. Building Improving è al servizio di studi di progettazione e di imprese di costruzione alle quali fornisce assistenza di alto livello al fine di garantire soluzioni tecniche sempre all'avanguardia. Building Improving srl è un'ingegneria specializzata in costruzione work and infrastructure for over 20 years. The company is very active in the growing market for structural repairs and adjustments seismic, it has matured - thanks to its deep experience in the field and synergies with leading manufacturers in the industry - a thorough understanding of all the technologies available on the market (FRP, seismic isolators, etc.) Building Improving srl offers its customers a diagnosis to identify the structural problem or reinforcement of any kind, the design of the reinforcement system used according to current technical standards, determining the state of the structure after the intervention of reinforcement, with the evaluation of new global features and benefits of the intervention in terms of ductility and strength. Building Improving is at the service of design firms and construction companies to which it provides world-class support to ensure cutting-edge technical solutions

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1962 50 2012

BOSSONG SPA

2 Via E. Fermi 51, 24050 Grassano (BG)  
 5 Tel. +39 035 3846011 - Fax +39 035 3846012  
 consolidamento@bossong.com  
 info@bossong.com - www.bossong.com

ANNO DI FONDAZIONE: 1962  
 CERTIFICAZIONI: ISO 9001 : 2008  
 CE-ETA 11/0396 CE-ETA 09/0140 CE-ETA 09/0246 CE-ETA 11/0344  
 CE-ETA 11/0345 CE-ETA 08/0208 CE-ETA 11/0377  
 FILIALI: Roma  
 Dal 1962 progettazione, produzione, commercializzazione di sistemi di fissaggio e sistemi di consolidamento per l'edilizia per applicazioni ancoranti meccanici e chimici abitualmente utilizzati in edilizia si affiancano tecnologie per il rinforzo di strutture in muratura specifiche per interventi su manufatti di particolare interesse storico-architettonico.  
 Since 1962 design, manufacturing and selling of fixing and strengthening systems for building industry for simple fixing applications to complex strengthening intervention. A range of traditional mechanical and chemical anchors is integrated with technologies specially designed for masonry structures and in particular for historical buildings

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BOVIAR SH

1 Via Rho 56 - 20020 Lainate (MI)  
 4 Tel. +39 02 93799240 - Fax +39 02 93301029  
 info@boviar.com - www.boviar.com

ANNO DI FONDAZIONE: 1969  
 CERTIFICAZIONI: ISO 9001 : 2008 QUALITY MANAGEMENT SYSTEM  
 FILIALI: Napoli  
 Fornitura, assistenza, noleggio di strumentazione geotecnica e geotecnica-apparecchiature per controlli non distruttivi del costruito-diagnostica del calcestruzzo, delle murature e del legno.  
 Supply, assistance, rental of geo-technical and geophysical instrumentation for non-invasive checks on constructions, diagnosing concrete, masonry and wood.

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BRESCIANI SH

2 Via Breda 142 - 20126 Milano  
 4 Tel. +39 02 27002121 - Fax +39 02 2576184  
 info@brescianisrl.it  
 www.brescianisrl.it

ANNO DI FONDAZIONE: 1988  
 CERTIFICAZIONI: UNI EN ISO 9001 : 2008  
 Commercio e produzione di materiali ed attrezzature per il restauro, la conservazione, la diagnostica, gli arredi museali. Progettazione e realizzazione di laboratori ed attrezzature per l'analisi e per il restauro del patrimonio culturale. Società certificata UNI EN ISO 9001:2000  
 Trade and production of material and equipments for restoration, conservation, diagnostics, furniture museum. Design and construction of laboratories and equipment for analysis and restoration of cultural heritage. The Company is certified UNI EN ISO 9001:2000

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**ANNO DI FONDAZIONE:** 1990  
ATE è nata nel Dicembre 1990 sulla spinta di diversi operatori nel campo dell'edilizia, è stata rifondata nel 2000 e nuovamente nel 2010. L'Associazione si propone di sviluppare e approfondire il patrimonio culturale in ambito tecnologico tramite uno scambio di esperienze e notizie operative.



**ATE - ASSOCIAZIONE TECNOLOGI PER L'EDILIZIA**

Viale Giustiniano 10 - 20129 Milano  
Tel: 02 29419444 - fax: 02 29520508  
ateservizi@tiscali.it - www.ateservizi.it

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**B5 Srl**

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Tel. +39 081 5519274 - Fax +39 081 5518338  
info@b5sr.it - www.b5sr.it

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**ANNO DI FONDAZIONE:** 2005  
**CERTIFICAZIONI:** UNI EN ISO 9001:2008 - Erogazione di servizi di ricerca storica, consulenza, studi di fattibilità, progettazione e direzione lavori di opere di architettura e ingegneria civile

La società B5 Srl indirizza e promuove l'esperienza e la specializzazione in progettazione architettonica e strutturale, consolidamento e restauro degli edifici, direzione lavori in Italia e in Europa, di uno studio professionale di tradizione più che trentennale, con le competenze in materia di innovazione tecnologica e metodologica di giovani professionisti affermati (arch. Francesca Brancaccio, Ing. Ugo Brancaccio), attraverso i contributi e le specificità dei singoli soci. La B5 Srl opera nell'ambito di un Sistema di Qualità, adottando al suo interno e nei rapporti con i Clienti criteri espressi dalle Norme UNI EN ISO 9001:2000. B5 Srl engineering achieved a great experience and know-how in architectural and urban planning, in restoration of civil and monumental buildings, supervision of working in Italy and abroad, which comes from a successful long-term tradition, thanks to forty-year professional tradition with the innovative contributions and abilities of Francesca Brancaccio, Ph.D. and MA in architecture and Ugo Brancaccio, engineer, both specialized in the restoration of monuments. B5 Srl engineering operates in a Quality System, adopting in the relationship with customers, the criteria expressed by the regulations UNI EN ISO 9001:2000.

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**BERLUCCHI Srl**

Via Soncin Rotto 4 - 25122 Brescia  
Tel: 030 291583 - fax: 030 45248  
nicolaberlucchi@studioberlucchi.it  
www.studioberlucchi.it

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**ANNO DI FONDAZIONE:** 1981  
La Società Berlucchi srl venne costituita nel dicembre 1981 dai Fratelli Francesco e Roberto Berlucchi proseguendo l'attività professionale del padre Ing. Antonio. Oggi, la Società si occupa di Progettazione e Restauro e si suddivide in 2 settori distinti. Ling. Roberto Berlucchi è responsabile del settore Progettazione, mentre il figlio, Ing. Nicola Berlucchi coordina il settore Restauro. Lo Studio Tecnico della Società Berlucchi può contare su un organico composto, oltre che dai due soci, da un gruppo di nove collaboratori tra ingegneri, architetti e geometri.

The company Berlucchi srl was established in December 1981 by the brothers Francesco and Roberto Berlucchi, carrying on the professional activity of their father Eng. Antonio. Today, the company works on new buildings and on restorations and is divided in two sections: Eng. Roberto Berlucchi is responsible of the Designing division, meanwhile his son, Eng. Nicola Berlucchi is responsible of the Restoration division. The designing team is composed by two senior partner engineer and nine employees (engineers, architects and technicians).

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**BETAGAMMA Srl**

Via Santa Rosa, 25 - 01100 Viterbo (VT)  
Tel. +39 0761 344697 - Cell. +39 340 1646917  
info@betagamma.it - www.betagamma.it  
info@ibeniculturali.it - www.ibeniculturali.it

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**ANNO DI FONDAZIONE:** 1988  
Opera in diversi settori dei Beni Culturali e del restauro. Editoria specialistica. Periodici: dal 1993 "Beni Culturali, tutela, valorizzazione, attività culturali, architettura contemporanea e bioarchitettura" (il 1° del settore riconosciuto dal MiBAC, Collane: Testimonianze di restauri, Archivi Italiani ecc. Cantieri di restauro: progettazione, direzione lavori, sicurezza nei cantieri. Formazione: post-universitaria sul restauro. Organizzazione di Corsi, mostre, convegni, inventariazione e informatizzazione di reperti archeologici e di depositi museali. Servizi e consulenze: progetti per la valorizzazione dei Beni Culturali per enti pubblici e privati.

Services in the cultural assets and restoration sector: skilled training with post-graduate seminars; design work supervision; knowledge and valorisation; services and consultancy; inventory-taking and computer-filling for archaeological finds; organization of exhibits and conferences; trade publications concerned with cultural assets and modern architecture.

# archeoRes

archeologia e restauro



ANNO DI FONDAZIONE: 1995

CERTIFICAZIONI: SOA: 0601-classe I, 0602-classe V, OS02-classe II, OS25-classe IV

L'idea imprenditoriale dell'archeoRes prevede la fusione delle logiche imprenditoriali con la passione per il restauro e la conservazione del patrimonio architettonico, artistico e archeologico, utilizzando le competenze e le conoscenze dei soci fondatori. La società opera su tutto il territorio nazionale nei settori specialistici del restauro monumentale, della ristrutturazione e del consolidamento di edifici storici, del restauro artistico e nel settore archeologico come consulente di tutti i servizi di indagine conoscitiva. La società possiede un know how di assoluto valore, con competenze riconosciute dei propri tecnici esperti nelle specifiche discipline che consentono di poter fornire un prodotto finale di altissima qualità.

The archaeoRes business idea foresees the merger of entrepreneurial logic with a passion for restoration and conservation of historical buildings, artistic and archaeological heritage, using the skills and the knowledge of the founding partners. The company operates on throughout the country in the following specialist areas: renovation and consolidation of historical buildings, art restoration and in archaeological sector including all services of fact-finding and investigation. The company has a "know-how" of absolute value, with recognized expertise of its own technicians, experienced in their specific disciplines that allow to provide up a high quality final product.

La società Archimeter è impegnata nel settore dei rilievi di alta precisione. Specializzata in Laser Scanner 3D in diversi campi quali: archeologia, architettura, ingegneria, geologia. Si eseguono inoltre: Rilievi GPS, Foto-grammetria, Rendering di interni ed esterni, Termografia, Ricostruzioni 3D per l'archeologia, Virtual Tour. Una squadra di professionisti si rapporta di volta in volta con le diverse problematiche degli elementi architettonici, strutturali e storici oggetto di indagine, studiando il progetto di rilievo più adeguato per offrire il risultato migliore con la garanzia di serietà e professionalità.

Archimeter is a society committed in the field of high precision surveys. We are specialized in Laser Scanner 3D in different fields as: archeology, architecture, engineering, geology. We realize: GPS Surveys, photo-grammetry, rendering of internal and external, thermography, 3D reconstruction for archeology, virtual tour. A team of professionals deals with the issues of the architectural, structural and historical elements under investigation, drawing the most appropriate survey project to offer the best result, ensuring seriousness and professionalism.

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Tel +39 0863 447710 - Fax +39 0863 415643  
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www.archeoRes.it

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Via Ballila 192 - 76012 Canosa di Puglia (BT)  
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info@archimeter.it  
www.archimeter.it



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Via Cristoni 58 - 40033 Casalecchio di Reno (BO)  
Tel. +39 051 6133190 - Fax +39 051 6112231  
ardeaprogetti@betontex.it  
www.betontex.it



ANNO DI FONDAZIONE: 2011

Design, Production, Development and Trading of composites materials systems (FRP) for structural recovery and rehabilitation of constructions and civil, industrial and historical buildings. Ardea Srl is present in the market with the trade name Betontex, and has developed specific new technologies (EP0994223 A1-B1) for the production of thermo welded fabrics based on carbon, glass, aramid and high modulus fibers. Ardea is developing an important R&D activity with development of new patents and is present in the market with the following trade name: Betontex, Ardfix, Ardwo, Betontex Tie. Taking advantage of a long experience and know-how in the field of traditional FRP applications Ardea Srl can offer a great warranty of good results and new solutions specifically optimized for many problems and situation often not solved by traditional technologies.

La società Art-Test s.a.s. di Emanuela Massac, nasce a Firenze nel 2011. Fornisce servizi e tecnologie innovative, strumenti e software specifici per il settore dei Beni Culturali. La società si è specializzata inizialmente nella diagnostica ottica ad immagine su superfici dipinte. I potenziali campi di applicazione si sono rivelati numerosi, grazie alla non invasività delle indagini proposte. L'obiettivo primario è di arricchire i servizi offerti per le esigenze dei clienti, di evolvere la strumentazione per ottimizzare le prestazioni, mantenere il riconosciuto livello di eccellenza, e migliorare costantemente la qualità dei risultati sperimentando su materiali e contesti differenti. Art-Test esegue acquisizioni ed analisi multispettrali, propone inoltre indagini chimiche e termografiche e opera in sinergia con restauratori qualificati ed accreditati storici dell'arte.

Art-Test s.a.s. di Emanuela Massac, was born in Florence in 2011. It provides innovative services and technologies, instruments and softwares specifically devised for Cultural Heritage. It initially specialized in optic diagnosis for painted surfaces. Its new non-destructive optic tests allow Art-Test to investigate on a potentially very wide area of application. Its primary aims are to enhance the provided services for customer's requirements, to develop the instrumentation to optimized the results, to hold its known excellent level and to improve constantly the quality of the results that are obtained through tests on different materials and contexts. Art-Test provides multispectral analysis, chemical tests and long wave IR thermography; it also cooperates with qualified restores and art historians.

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www.art-test.it - www.art-test.com





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ACROPOLI srl - Salone dell'Arte del Restauro e della Conservazione dei Beni Culturali e Ambientali

Viale Mercanzia, blocco 2B, galleria A70, CP 39  
40050 Centergross - Fumo di Angelato Bologna (Bo)

Tel. +39 051 6646832 - Fax +39 051 864313

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Segreteria organizzata di Restauro "Salone dell'Arte e della Conservazione dei Beni Culturali e Ambientali", la prima importante rassegna in Italia per la conservazione, tutela e la valorizzazione del patrimonio architettonico, artistico e monumentale. Quattro intense giornate ricche di eventi (convegni, mostre tematiche) e incontri tecnici con le aziende espositrici, in quella che può considerarsi una capitale europea della cultura e del restauro. I numeri del Salone: 16.000 mq in 6 padiglioni moderni e funzionali; più di 300 espositori; 30.000 visitatori; 40 convegni internazionali; 110 incontri tecnici organizzati dagli espositori; 10 mostre tematiche.

Organizational office for Restauro, the "Art and Cultural and Environmental Assets Conservation Salon", the premier Italian event concerned with the conservation, protection and valorisation of architectural, artistic and monumental heritage. Four busy days full of events (conferences, theme exhibits) and technical meetings with exhibiting companies, in what can be considered the European capital of Culture and Restoration. Show figures: 16,000 sqm in 6 modern and functional halls; more than 300 exhibitors; 30,000 visitors; 40 international conferences; 110 technical meetings organized by exhibitors; 10 theme exhibits.

ANNO DI FONDAZIONE: 1965

CERTIFICAZIONI: ISO 9001:2008 - Italiana ed Inglese. Certificazione SOA: OG01-classe IV-BIS, OG02-classe IV-BIS, OG03-classe I, OS07-classe I, OS21-classe III

AhRCOS® è azienda leader per il restauro conservativo ed il consolidamento di strutture edili e storiche mediante l'utilizzo delle tecnologie più avanzate, operando con sistemi multipli e brevettati, riconosciuto tra i propri valori quello dell'arte dal sapore antico, che insieme alla conoscenza dei materiali e delle tecnologie di consolidamento sempre più evolute, fanno del restauro parte rilevante del proprio DNA professionale. AhRCOS® dispone di uno staff interno che si occupa di Ricerca e Sviluppo in collaborazione con varie Università italiane. La conoscenza di tecniche tradizionali, unitamente alla costante ricerca e sperimentazione di più aggiornate modalità di intervento, ci consente di lavorare nel pieno rispetto della natura e della conservazione delle strutture, conosci delle responsabilità e dell'impegno del nostro lavoro.

AhRCOS® is a leading firm involved in conservative restoration and consolidation of civil and historic structures. Using the most advanced technologies, operating with multiple and patented systems, and recognising that, among its own values, the art of antique taste together with advanced knowledge of instruments and consolidation technology, AhRCOS® makes restoration a key part of its own professional DNA. AhRCOS® has at its disposal a strong team that is in charge of Research and Development in cooperation with various Italian universities. Our knowledge of traditional techniques, together with committed research and experimentation of more developed intervention methods, allows us to work while fully respecting the nature and preservation of structures, and remaining conscious of the responsibility and commitment we devote to our work.

AHRCOS srl

Via Torquato Secchi 5 - 400132 Bologna  
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amministrazione@ahrcos.it  
www.ahrcos.it

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Associazione Italiana per il Patrimonio Archeologico Industriale

Piazzale Antonio Bosco 3/A - 05100 Terni

info@patrimonioindustriale.it  
www.patrimonioindustriale.it

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L'Associazione italiana per il Patrimonio Archeologico Industriale (AIPAI), la sola operante in quest'ambito a livello nazionale, è stata fondata nel 1997 da un gruppo di specialisti del patrimonio industriale e da alcune tra le più importanti istituzioni del settore del Paese. L'AIPAI, articolata in sezioni regionali e commissioni di settore nazionali, conta oggi oltre 300 soci attivi e interagisce profondamente con università, centri di ricerca, fondazioni, musei, organi centrali e periferici dello Stato (Ministeri, Soprintendenze, Regioni, Province, Comuni, Comunità montane, Agenzie di promozione turistica e di sviluppo, ecc.). L'Associazione ha firmato nel 2008 un protocollo d'intesa con il TICCIH (The International Committee for the Conservation of Industrial Heritage) che la riconosce come suo unico rappresentante in Italia.

The Italian Association for Industrial Archaeological Heritage, the only one of its kind in Italy, was founded in 1997 by a group of industrial heritage experts and some of the most important Italian institutions in this field. It has over 300 members working in its regional sections spread all over the country and it cooperates with universities, research centres, institutions, museums, central and local State bodies (Ministries, Superintendencies, Regional and Provincial Authorities, Municipalities, Mountain Communities, Agencies for the promotion of tourism and local development, etc.). In 2008 AIPAI signed an agreement with TICCIH (The International Committee for the Conservation of Industrial Heritage), thus AIPAI became the official representative of TICCIH for Italy.

ANNO DI FONDAZIONE: 1997

AM.T.A.R.E.S srl offre un'ampia gamma di prodotti, attrezzature e servizi per la conservazione ed il restauro dei beni culturali. La qualità dei prodotti, garantita da test sul campo e di laboratorio ed il continuo monitoraggio applicativo, assicura interventi di restauro attenti e rispettosi. Lo staff tecnico di AM.T.A.R.E.S ha una lunga e consolidata esperienza. AM.T.A.R.E.S offre inoltre un servizio di analisi diagnostica.

AM.T.A.R.E.S srl offer a wide range of products, equipment and services for the conservation and restoration of cultural heritage. The quality of products, pre-launch field tests and continuous application monitoring ensure that the products and equipments meet the needs of a careful, conscious and focused restoration. The technical team of AM.T.A.R.E.S srl have a long and consolidated experience in the conservation field. AM.T.A.R.E.S srl perform chemical, biological and imaging analysis applied to cultural heritage.



AM.T.A.R.E.S srl

Via A. Moro 24/A - 40068 San Lazzaro di Savena (Bo)  
Tel. +39 051 6259816

info@antaresrestauro.it  
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**PROGETTI INTERNAZIONALI / INTERNATIONAL PROJECT**



The signing ceremony of the Joint Protocol Assorstauru - FGUP CNRPM and of the School of Specialization in Architectural Heritage and Landscape of UNIROMA - La Sapienza was held on December 4th, 2013, and after confirmation of ICE financing (in Balance Sheet 2014), the training project dedicated to the 40 Russian independent contractors of the CNRPM and other state or private agencies was held on December 4th. The project consisted of 7 training sessions: 6 sessions in Moscow divided between the graduate faculty, Russian professors and Assorstauru companies. A two-week training session in Italy which consisted of three days in school and the remaining days at the construction sites/monuments presented by Assorstauru companies. The scheduled activity sessions came to an end in June 2014 and the closing ceremony of the course was held in October 2014.

The publication of the school records is underway in both English and Russian, and a preview of the digital version will be shown during the exhibition.

**RESTORATION SCHOOL RUSSIA - ITALY**

As the result of the excellent institutional relations that Assorstauru kept and fed in Turkey during the last years, the association has signed a Memorandum of Understanding with the President of the Republic of Turkey and the Istanbul Technical University (ITU) for a cooperation/consultation in the development of the restoration project and the future construction site of the Huber Palace, an important residential complex of the early 20th century, which now serves as the residence of the President of the Republic in Istanbul. The Protocol of Intent has invoked an initial consultation by associate companies coordinated by arch. Francesca Brancaccio (B5). The project is financed by the Presidency of the Republic of Turkey.

**HUBER PALACE PROJECT - ISTANBUL**

As the result of the excellent institutional relations that Assorstauru kept and fed in Turkey during the last years, the association has signed a Memorandum of Understanding with the President of the Republic of Turkey and the Istanbul Technical University (ITU) for a cooperation/consultation in the development of the restoration project and the future construction site of the Huber Palace, an important residential complex of the early 20th century, which now serves as the residence of the President of the Republic in Istanbul. The Protocol of Intent has invoked an initial consultation by associate companies coordinated by arch. Francesca Brancaccio (B5). The project is financed by the Presidency of the Republic of Turkey.

Il 4 dicembre 2013 si è svolta a Mosca la cerimonia della firma del protocollo congiunto Assorstauru - FGUP CNRPM e Scuola di Specializzazione in Beni Architettonici e del Paesaggio di UNIROMA - La Sapienza e alla conferma del finanziamento ICE (in Bilancio 2014), il 4 dicembre è stato dato avvio al progetto di formazione dedicato a 40 professionisti russi del CNRPM ed altri enti statali o privati. Il progetto prevede 7 sessioni formative: 6 sessioni a Mosca suddivise tra docenti della scuola di specializzazione, docenti russi ed aziende di Assorstauru. Una sessione formativa di due settimane in Italia che ha previsto tre giornate presso la scuola e le restanti giornate presso cantieri monumentali presentati dalle aziende di Assorstauru.

Si è conclusa a giugno 2014 il ciclo di attività previsto e la cerimonia di chiusura del corso si è tenuta a ottobre 2014.

È in corso la pubblicazione degli atti della scuola in lingua inglese e russa, di cui verrà data un'anteprima della versione digitale durante la fiera.

**SCUOLA DI RESTAURO RUSSIA - ITALIA**

Fruito agli ottimi rapporti istituzionali che Assorstauru ha tessuto e allmen-tato in Turchia negli anni scorsi, l'associazione ha firmato un protocollo di Intesa con La Presidenza della Repubblica Turca e l'Università Tecnica di Istanbul ITU per una cooperazione/consulenza nello sviluppo del progetto di restauro e del futuro cantiere di Palazzo Huber, importante complesso residenziale degli inizi del XX secolo, attuale residenza del Presidente della Repubblica a Istanbul. Il protocollo di intenti ha proproziato una prima consulenza da parte di aziende associate coordinate dall'arch. Francesca Brancaccio (B5). L'intervento è finanziato dalla Presidenza della Repubblica della Turchia.

**PROGETTO PALAZZO HUBER - ISTANBUL**



**MED-ART**  
2012-2015



**RUSSIAN SCHOOL OF RESTORATION**  
2013-2014



**PALAZZO/PALACE HUBER**  
2014-2015



#### MED ART – INTERNAZIONALIZZAZIONE DEL SETTORE DEL RESTAURO IN TURCHIA

*Transnational Cooperation for Cultural Heritage Preservation*, Progetto promosso da Assorestaurero e dalla Regione Emilia Romagna, progettato dalla società di business consulting, Roncucci&Partners srl, con focus sull'internazionalizzazione delle imprese italiane di comparto, per la penetrazione commerciale del settore del restauro in Turchia

In ottobre si è concluso formalmente il progetto Med-Art, dando formalmente avvio alle attività di follow up grazie al finanziamento ICE e al **protocollo di intesa istituzionale con il VGM T.R. Prime Ministry Directorate of Foundations**, la maggiore istituzione turca deputata alla conservazione di tutto il patrimonio culturale religioso della Turchia. Attraverso il progetto si è aperta la possibilità per i soci di diventare punto di riferimento e di consulenza per i colleghi turchi. Vi sono stati inoltre importanti momenti di attività in Turchia con la partecipazione alle fiere sopra menzionate. All'interno del Progetto si sono tenuti tre importanti momenti di promozione delle aziende associate aderenti al progetto a Istanbul "Turkeybuild 2013" 24-28 aprile, ad Antalya YAPEX 2013: 31 ottobre - 3 novembre e infine sempre a Istanbul: B2B Meetings 4-5 novembre

#### MEDART FOLLOWUP

L'attività è proseguita e sta proseguendo con il cantiere scuola della Moschea Sheik Suleyman di Istanbul.

Nel corso del 2013 a ottobre si è svolta la prima sezione di formazione da parte delle aziende italiane diretta ai professionisti del VGM con sede presso le due università di Istanbul. L'attività svolta dagli associati nelle lezioni frontali è successivamente in cantiere, grazie all'alta competenza e professionalità dimostrata hanno permesso di rafforzare la credibilità e l'apprezzamento delle nostre aziende presso il VGM.

#### PROGETTO MEDART2 - IN FASE DI PRESENTAZIONE

Il Progetto MED ART 2 ha come tema: "Un progetto per internazionalizzare imprese di progettazione, costruzione e ricostruzione antisismica in Turchia". La struttura è la medesima di MED ART. Ente finanziatore la Regione Emilia Romagna, Ente promotore Assorestaurero, Ente attuatore Assorestaurero Servizi, Project Management Roncucci&Partners.

#### MED ART - INTERNAZIONALIZATION OF THE RESTORATION SECTOR IN TURKEY

Transnational Cooperation for Cultural Heritage Preservation, a Project promoted by Assorestaurero and the Emilia Romagna Region, designed by the business consulting company, Roncucci&Partners Ltd., with focus on the internationalization of the Italian companies of the sector, for the market penetration of the restoration sector in Turkey.

In October, project Med-Art was officially closed, officially giving way to the follow-up activities with ICE financing and the **Memorandum of Understanding with the institutional VGM T.R. Prime Ministry Directorate General of Foundations**, the largest institution in Turkey dedicated to the preservation of the entire religious cultural heritage of Turkey. Through this project the opportunity arose for members to become a point of reference and expert advice for Turkish colleagues. There were also important activity opportunities in Turkey through participation in the trade fairs mentioned above, inside the Project there were three important promotional opportunities of associated companies involved in the Istanbul project "Turkeybuild 2013" April 24<sup>th</sup> to 28<sup>th</sup>, 2013 in Antalya YAPEX 2013: October 31<sup>st</sup>-November 3<sup>rd</sup>, and, finally, again in Istanbul: B2B Meetings - November 4<sup>th</sup>-5<sup>th</sup>.

#### MEDART FOLLOWUP

The activities proceeded and still continue with the construction school of the Sheikh Suleyman Mosque in Istanbul.

During 2013, in October, the first training session for VGM independent contractors was held by Italian companies in the two universities in Istanbul. The work carried out by the members in the leading lectures and later in the construction site, thanks to the expertise and professionalism demonstrated, has helped to enhance the credibility and appreciation of our companies at the VGM.

#### MEDART2 PROJECT - DURING THE PRESENTATION PHASE

The subject of the MED ART 2 Project is: "A project to internationalize anti-seismic design, construction and reconstruction companies in Turkey". The structure is the same as MED ART. Financing: Emilia Romagna Region, Promoter: Assorestaurero, implementation: Assorestaurero Services, Project Management: Roncucci&Partners.



- Seismic Safety, Istanbul, Aprile 2014
- YAPEX, Ankara, Novembre 2013
- YAPI Turkeybuild, Istanbul, Ottobre 2013
- Denkmal, Lipsia, Novembre 2012

## ■ REALIZZAZIONE DELLA NUOVA GRAFICA DEL SITO WEB E POTENZIAMENTO SETTORE COMUNICAZIONE

È in corso un completo restyling del sito che rappresenta la prima fase di un potenziamento del sistema di comunicazione sia interno all'associazione che verso l'esterno, al fine di fornire fra i soci e per i soci nuovi strumenti e momenti di comunicazione e confronto.

## ■ PROGETTI INTERNAZIONALI

- Assorestauo ha organizzato nel 2014 tre workshop internazionale su co-finanziamento di ICE:
- Marzo 2014 - Workshop internazionale per operatori esteri in corrispondenza delle Fiera di Ferrara
- Giugno 2014 - Workshop internazionale a Sofia
- Ottobre 2014 - Workshop internazionale per operatori esteri, Napoli-Lecce

### WORKSHOP ICE

## PROGETTI DI INTERNAZIONALIZZAZIONE MAE-REGIONI-CINA

In settembre 2013 si è conclusa l'attività di questo progetto e si è chiusa la relativa rendicontazione. Il progetto ha visto Assorestauo come soggetto attuatore di Regione Lombardia nell'ambito del progetto finanziato dal MAE e cofinanziato dalle Regioni con missioni di formazione e scambio tra tecnici italiani e cinesi. Le tre principali azioni sono state quelle della presentazione in Italia delle Regioni e dei soggetti attuatori. Seminari e stage in azienda in Italia per tecnici cinesi e momenti di scambio e presa di contatto fra esperti in Cina per aziende italiane. Assorestauo ha organizzato l'evento di lancio presso la sede di Regione Lombardia, Sala Pirelli, sia le missioni di networking in Cina. Ambedue le azioni si possono considerare positivamente per la partecipazione degli associati e per la qualità dei contatti avuti.

## MAE-REGIONI-CINA INTERNAZIONALIZATION PROJECTS

In September 2013 the activities of this project were closed and all relative reporting of ICE:

- March 2014 - International Workshop for foreign operators in correspondence to the Ferrara Fair
- June 2014 - International Workshop in Sofia
- October 2014 - International Workshop for foreign operators, Napoli-Lecce

### ICE WORKSHOP

## ■ INTERNATIONAL PROJECTS

A complete redesign of the website is underway, which represents the first phase of an enhancement of the communications system inside the association as well as outside, in order to provide new tools, and communication and discussion opportunities among and in favor of the members.

## ■ CREATING THE NEW GRAPHIC DESIGN OF THE WEBSITE AND ENHANCING THE COMMUNICATIONS SECTOR

- Seismic Safety, Istanbul, April 2014
- YAPEX, Ankara, November 2013
- YAPI Turkeybuild, Istanbul, October 2013
- Denkmal, Leipzig, November 2012



**QA\_A03N02** - SOFIA - THE RESTORATION OF THE SURFACES OF HISTORICAL ARCHITECTURES: FRESCOS, MOSAICS AND STONE ARTWORKS  
**QA\_A03N01** - ACTA OF THE INTERNATIONAL WORKSHOP: ITALIAN TOP CONSERVATION WORKSHOPS: MANAGEMENT, MAINTENANCE AND RESTORATION

**CONVEGNI**

Assorestauro organizza convegni sul territorio nazionale ed internazionale in occasione di progetti internazionali, sia su risorse finanziarie interne, sia su cofinanziamento di enti istituzionali, sia con il prezioso contributo degli associati.

sociali.

Nel 2013/2014 i più importanti eventi sono stati:

**ISTANBUL, 3-4 NOVEMBRE** - Simposio internazionale "PROTECTION OF CULTURAL HERITAGE Restoration Implementations From Turkey & Italy - Restoration of Sheikh Suleyman Mesjid and Training Project.

**LECCE, 16 OTTOBRE 2014** - "Conservation, Management and Valorization of Cultural Heritage" - PALAZZO TURRISI PALUMBO, via Marco Bassano.

**COPERTINO, 15 NOVEMBRE 2013**: "Patrimonio storico e nuove tecnologie: un binomio possibile" (usufruendo esclusivamente delle risorse interne all'Associazione e grazie al fondamentale contributo dei consiglieri Michele Taddel e Cecilia Zampa delegati della Regione Puglia, Stefano Pallara e Cristina Calio)

**FIERA DI RIFERIMENTO IN ITALIA E FIERE INTERNAZIONALI**

Presso il Salone del Restauro di Ferrara, Assorestauro organizza da 8 anni consecutivi una collettiva soci in un'area espositiva e nella LOUNGE AREA INCONTRI, si sono svolti i B2B del Workshop ICE.

In concomitanza con il Salone del Restauro viene organizzato l'annuale WORKSHOP ICE, corso itinerante sul Restauro e la Conservazione in Italia con tappe previste in tutta Italia e gestito oramai da 9 anni da Assorestauror su incarico dell'Istituto Nazionale per il Commercio Estero, cui partecipatodelegati esteri esperti nel settore del restauro e rappresentanti istituzionali provenienti da paesi di tutto il mondo.

Assorestauro partecipa inoltre ad eventi fieristici all'estero come:

**QA\_A03N02** - SOFIA - THE RESTORATION OF THE SURFACES OF HISTORICAL ARCHITECTURES: FRESCOS, MOSAICS AND STONE ARTWORKS  
**QA\_A03N01** - ACT OF THE INTERNATIONAL WORKSHOP: ITALIAN TOP CONSERVATION WORKSHOPS: MANAGEMENT, MAINTENANCE AND RESTORATION

**CONVENTIONS**

Assorestauro organizes conventions on national and international territory in the case of international projects, both on internal financial resources, cofinancing of institutional businesses, and with the associates' invaluable contribution.

In 2013/2014, the most important events were:

**ISTANBUL, NOVEMBER 3<sup>RD</sup>-4<sup>TH</sup>** - International Symposium "PROTECTION OF CULTURAL HERITAGE Restoration Implementations From Turkey & Italy - Restoration of Sheikh Suleyman Mesjid and Training Project.

**LECCE, OCTOBER 16<sup>TH</sup>, 2014** - "Conservation, Management and Valorization of Cultural Heritage" - TURRISI PALUMBO PALACE, via Marco Bassano.

**COPERTINO, NOVEMBER 15<sup>TH</sup>, 2013**: "Historical heritage and new technologies: an achievable combination" (using exclusively internal resources of the Association and thanks to the fundamental contribution of advisors Michele Taddel and Cecilia Zampa, delegated by the Puglia Region, Stefano Pallara and Cristina Calio)

**TRADE FAIR IN ITALY AND INTERNATIONAL FAIRS**

At the Restoration Fair of Ferrara, for the last 8 consecutive years Assorestauro has organized a collective membership in an exhibition area, and the ICE B2B Workshops were held in the MEETING/LOUNGE AREA, in conjunction with the Restoration Exhibition, the annual ICE WORKSHOP takes also place, which is an introduction to Restoration and Conservation in Italy with scheduled stopovers throughout Italy created 9 years ago by Assorestauror and commissioned by the National Institute of Foreign Trade, the participants of which were foreign delegates, experts in the field of restoration as well as institutional representatives from countries from all around the world. Assorestauro is also participating in trade fairs abroad such as:

Founded in 2005, the Italian Association for Architectural, Artistic and Urban Restoration is Italy's first association of materials, equipment and technology producers, as well as providers of services and specialized businesses created to represent the cultural heritage restoration and conservation sector at both national and international levels. Assorestauro is autonomous, independent, nonpartisan and nonprofit. We can say that today it is in fact the only association as well as a point of reference both nationally and internationally. The association promotes dialogue between companies and businesses and the institutional world, that is the institutions and organizations for the Protection of Cultural Heritage, the Ministry of Cultural Heritage and Activities, the Ministry of Economic Development, and the Institute of Foreign Trade; developing organizations and the academic world so as to create a virtuous circle of cooperation in the field of scientific research and in the application of its results in a regulatory framework in constant growth.

## MAIN ACTIVITIES

### COMMISSION COMMUNICATION, PUBLICATIONS AND FAIRS

This is the official journal of the Association. The journal represents the construction sites, projects and activities carried out by the members as part of specific projects; their publication is indeed always tied to specific initiatives, often of international character. The annual event dedicated to the publication of the journal is linked to the organization of the ICE International Workshop/Assorestauro during the "restoration" fair of Ferrara. From 2013 this issue of the journal also includes the annual publication of the Yearbook Members.

Many of the QA issues that are published refer to internationalization activities, projects, Workshops and MedArt FollowUp.

In 2014, three issues were published:  
**QA\_A03N03** - ASSORESTAURATING AND COMMERCIAL VISIT TO ITALY FOR FOREIGN ARCHITECTS AND RESTORERS. EXPORT SOUTH PROGRAMME - CONSERVATION, MANAGEMENT AND VALORIZATION OF CULTURAL HERITAGE



## ATTIVITÀ PRINCIPALI

### COMMISSIONE COMUNICAZIONE, PUBBLICAZIONI E FIERE

Fondata nel 2005, l'Associazione Italiana per il Restauro Architettonico, Artistico e la prima associazione italiana tra i produttori di materiali, attrezzature e tecnologie e i fornitori di servizi e imprese specializzate nata per rappresentare il comparto del restauro e della conservazione del patrimonio materiale sia a livello nazionale sia a livello internazionale. Assorestauro è autonoma, indipendente, apolitica e senza fini di lucro. Possiamo dire che oggi è veramente l'unica associazione e il punto di riferimento sia nazionale sia internazionale. L'associazione promuove il dialogo tra aziende e imprese ed il mondo istituzionale, ovvero le istituzioni e gli Organismi di Tutela dei Beni Culturali. Il Ministero per i Beni e le Attività Culturali il Ministero dello Sviluppo Economico e l'Istituto per il Commercio Estero; in particolare si propone di avvicinare il mondo imprenditoriale sia agli enti di normazione che al mondo accademico in modo da creare un circolo virtuoso di collaborazione nell'ambito della ricerca scientifica e nell'applicazione dei suoi risultati in un quadro normativo in costante crescita.

I numeri di QA Sono usciti sono numerosi in relazione alle attività di internazionalizzazione, sui progetti, Workshop e MedArt FollowUp.

Nel 2014, sono stati pubblicati 3 numeri:  
**QA\_A03N03** - ASSORESTAURATING AND COMMERCIAL VISIT TO ITALY FOR FOREIGN ARCHITECTS AND RESTORERS. EXPORT SOUTH PROGRAMME - CONSERVATION, MANAGEMENT AND VALORIZATION OF CULTURAL HERITAGE

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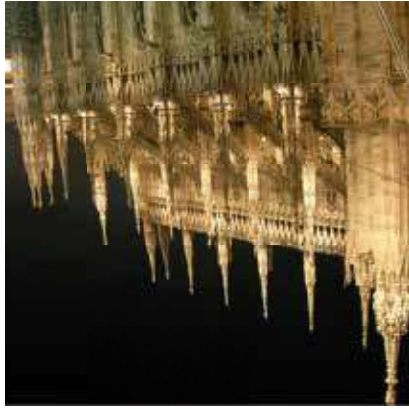
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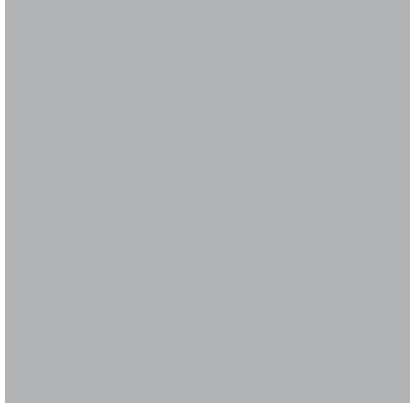
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