A

PORTFOLIO

# WORKS AND DESIGN & BUILD TENDERS

ITALY

CREATING A BETTER REALITY

ATI | Project




# Table of contents

OUR CONSOLIDATED SUCCESS IN THE SECTOR IS BASED ON THE TEAM'S MULTIDISCIPLINARY EXPERTISE, KNOW-HOW RELATING TO INNOVATIVE MANAGEMENT TOOLS, CLOSE COLLABORATION WITH SUPPLIERS AND CONTINUOUS DEVELOPMENT AND INNOVATION

PISA
MILAN
BELGRADE
ODENSE
COPENHAGEN
PARIS
GENEVA
TALLINN

PROFILE

# Creating a better reality

Architecture, landscape and technology conceived as a source of inspiration and enrichment of everyday life.

**ATI Project** is an international firm specialized in **integrated design** in the field of architecture and engineering, committed to the development of **sustainable buildings** with a reduced environmental impact.

The studio was established in 2011 by **Branko Zrnic** and **Luca Serri**, founders dedicated to research in bioclimatic architecture and renewable energy.

In twelve years, the **team** has grown from **2 to 350 collaborators**.

The initial outline of the office is the same that still drives its growth today: a young, visionary, technological studio that natively uses **BIM** to promote **multidisciplinarity**, as well as **innovation** and sustainability.

The complexity and number of projects reflect the **internationality** of the studio, which today, in addition to its headquarters in **Pisa**, has offices in **Milan, Belgrade, Odense, Paris, Copenhagen**, **Geneva** and **Tallinn**.

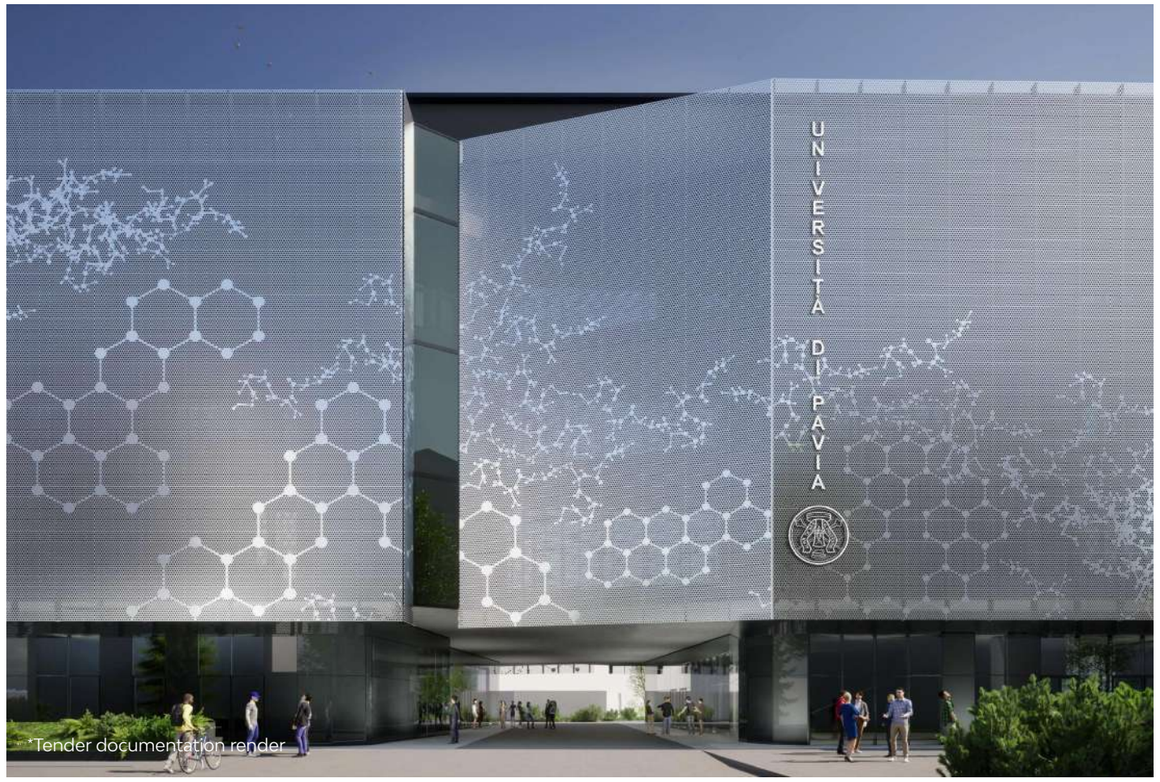
**14**
YEARS OF CONSTANT GROWTH

**25 Mln**
TURNOVER IN EUROS

**8**
INTERNATIONAL OFFICES

**1+ Milion of m²**
OF COMPLETED OR ONGOING PROJECTS

# FOCUS
# ARCHITECTURE



*Tender documentation render


*Tender documentation render

FOCUS ARCHITECTURE

# UNIPV Pharmaceutical Sciences Center

Integrated contract for the executive design and execution of works for the construction of the new Didactic Pole Institutes and Departments of Chemistry and Pharmaceutical Sciences

*Final design and tender basis render: Manens Spa - Studio Architetti Mar

**LOCATION**
Pavia, Italy

**BUDGET**
€ 48.3 mln

**TYPE OF INTERVENTION**
Education

**SERVICES**
Technical improvements project, executive design

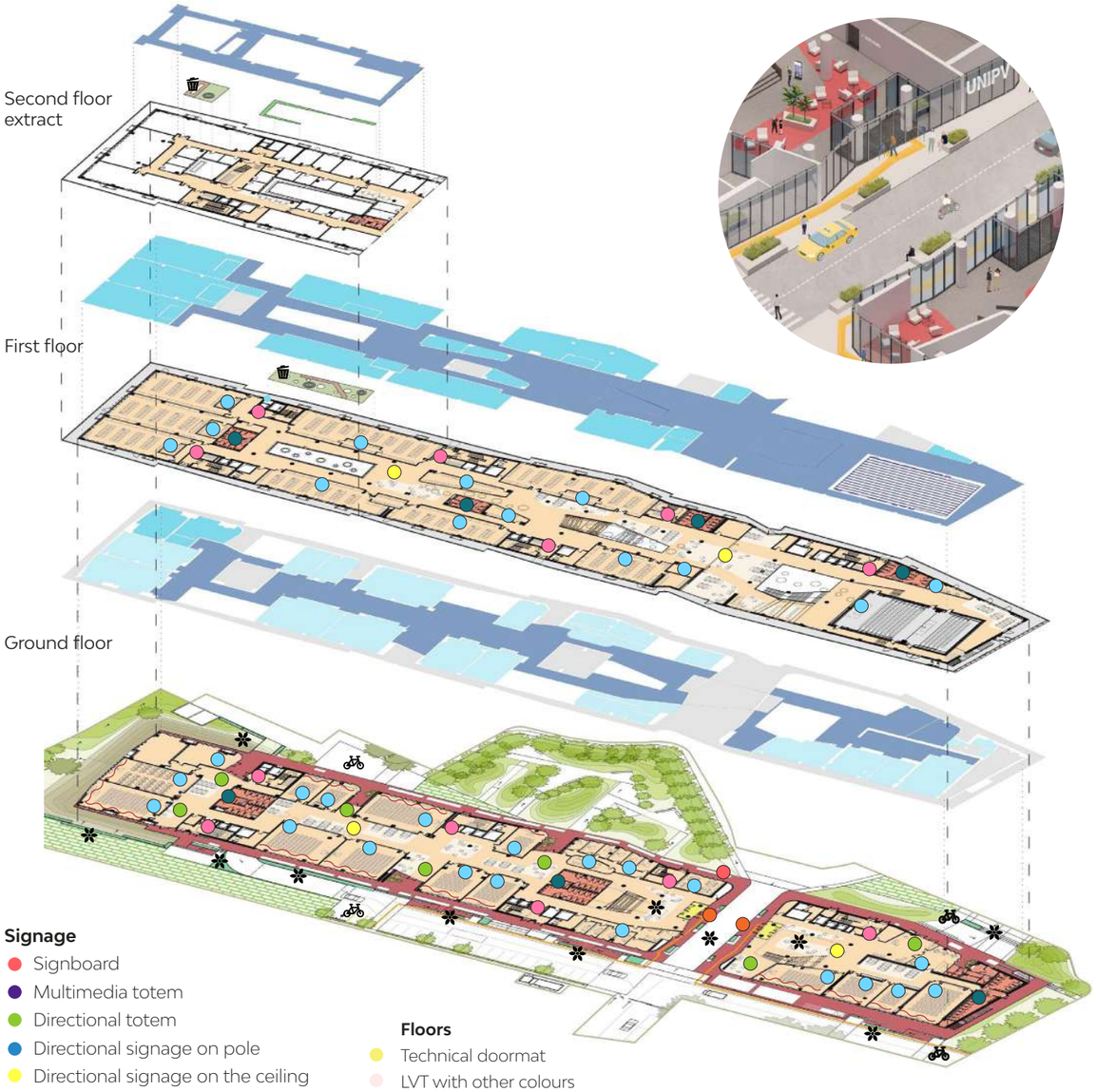
**CONTRACTING AUTHORITY**
University of Pavia

**TYPE OF CONTRACT**
Design & Build

**CONTRACTOR**
ITI Impresa Generale Spa


*Tender documentation render

# Usability and functionality of the building







### Signage

- Signboard
- Multimedia totem
- Directional totem
- Directional signage on pole
- Directional signage on the ceiling
- Directional signage on the wall
- Pictogram
- Permanent signage on the wall

### Signage for disabled people

- Tactile map
- Route loges

### Additional elements

- Modular planters x 22
- Bike racks x 10
- Baskets x 5

### Floors

- Technical doormat
- LVT with other colours
- Continuous multi-layer self-laying LVT
- Porcelain stoneware slabs 60x60 cm
- Beola stone slabs
- Draining blocks

### Countertops

- Modular 120x60 coloured/white
- Modular 120x60 washable
- Modular smooth white with hidden joints
- Sound insulation with wooden slats

### Shading

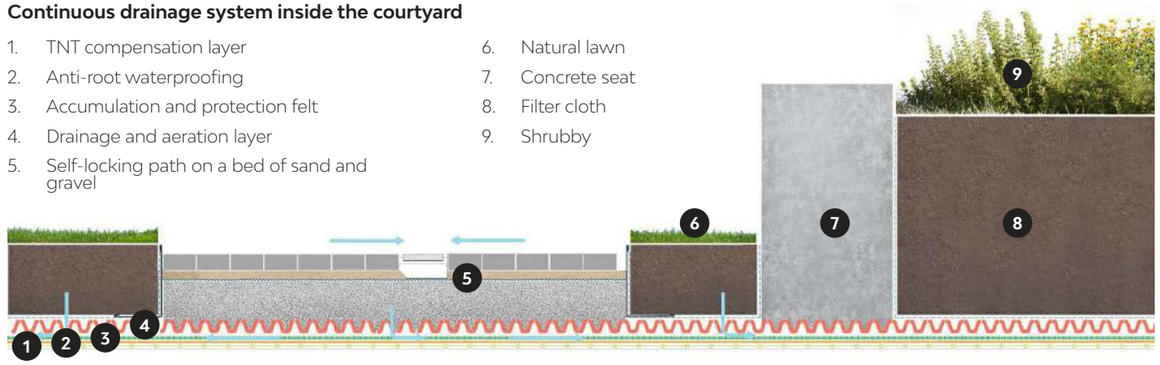
- Double motorized roller tent

### Indoor short planters

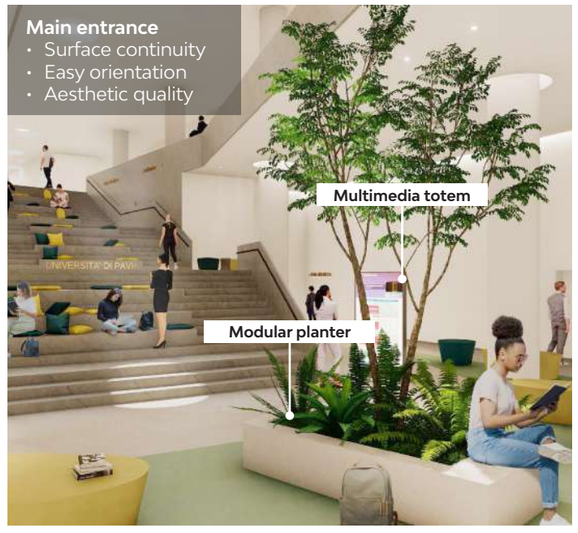
- Green court
- Route in self-locking
- Flower box on balcony
- Flower pot/shrub ring seat

### Continuous drainage system inside the courtyard

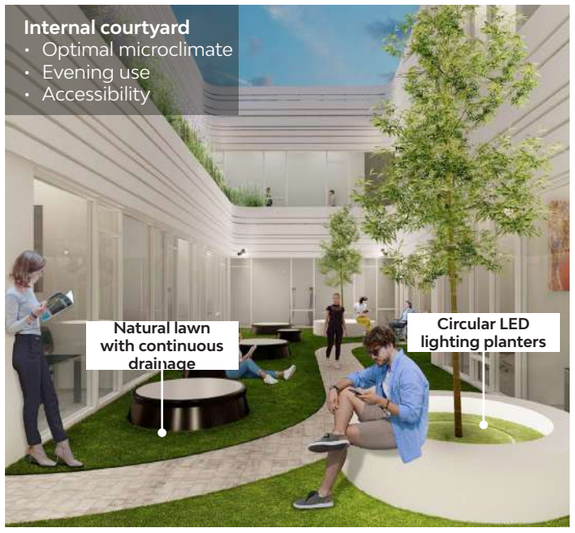
1. TNT compensation layer
2. Anti-root waterproofing
3. Accumulation and protection felt
4. Drainage and aeration layer
5. Self-locking path on a bed of sand and gravel
6. Natural lawn
7. Concrete seat
8. Filter cloth
9. Shrubby



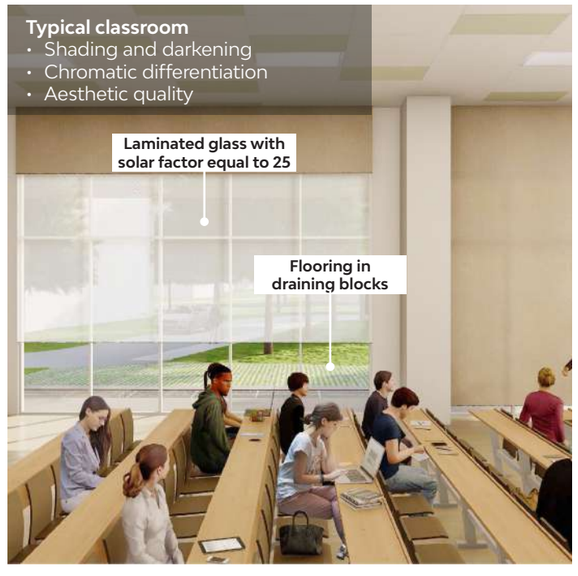

**Main entrance**
- Surface continuity
- Easy orientation
- Aesthetic quality



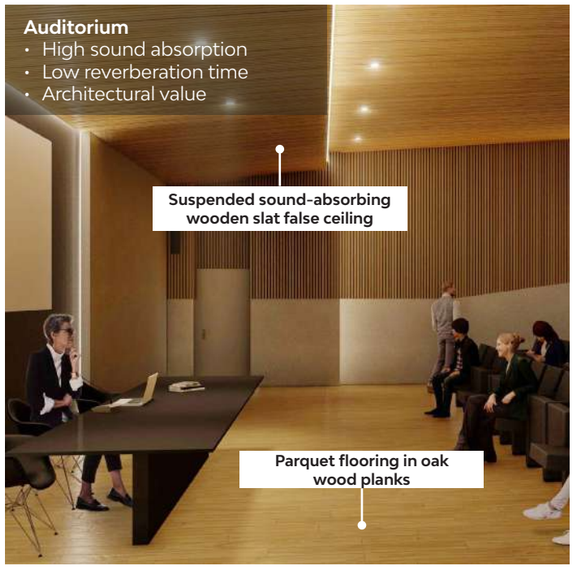

**Internal courtyard**
- Optimal microclimate
- Evening use
- Accessibility




**Typical classroom**
- Shading and darkening
- Chromatic differentiation
- Aesthetic quality




**Auditorium**
- High sound absorption
- Low reverberation time
- Architectural value



*Tender documentation render

FOCUS ARCHITECTURE

# School Complex in Via Ozanam

Integrated contract for the definitive and executive design, safety coordination in the design phase and construction of the works of the new primary school in via Ozanam in the municipality of Concorezzo

*Preliminary and tender documentation render: J+S Spa Architecture & Engineering

**LOCATION**
Concorezzo, Italy

**BUDGET**
€ 12 mln

**TYPE OF INTERVENTION**
Education

**SERVICES**
Technical improvements project, definitive and executive design

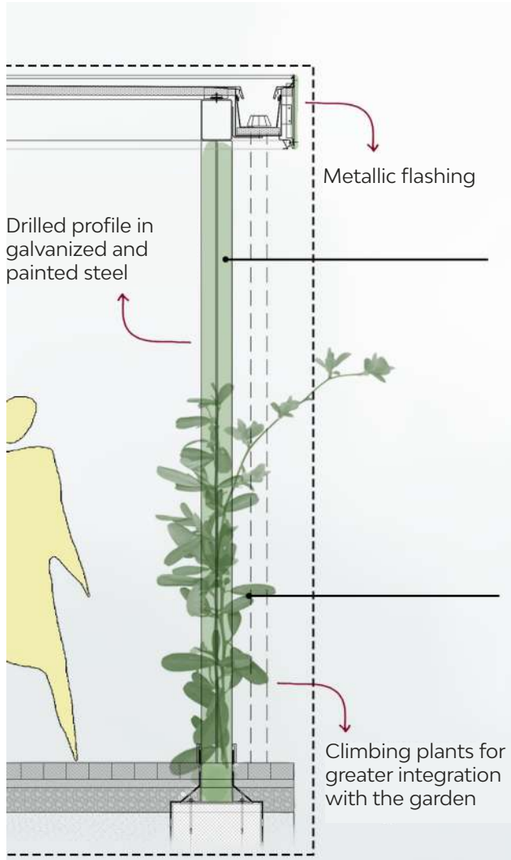
**CONTRACTING AUTHORITY**
Municipality of Concorezzo

**TYPE OF CONTRACT**
Design & Build

**CONTRACTOR**
SELI Manutenzioni Generali Srl


*Tender documentation render

## Improvement of external areas







Path that leads to the shelter intended for carrying out outdoor educational activities

## Flowering of the shelter



**MODULATION**

**STEEL CABLES**

**A=** 0,60 m

**B=** A/2= 0,30 m

**C=** A+B= 0,90 m

**D=** Ax2= 1,20 m




The image of "section 1" shows, however, a detail of the connection of the horizontal, vertical elements and sandwich panels.


*Tender documentation render


*Tender documentation render

FOCUS ARCHITECTURE

# “Fabio Besta” School Complex

Construction work for the new “Fabio Besta” Middle School

*Project and tender documentation render: Teco + Partners Stp Srl

**LOCATION**
Bologna, Italy

**BUDGET**
€ 18.1 mln

**TYPE OF INTERVENTION**
Education

**SERVICES**
Technical improvements project

**CONTRACTING AUTHORITY**
Municipality of Bologna

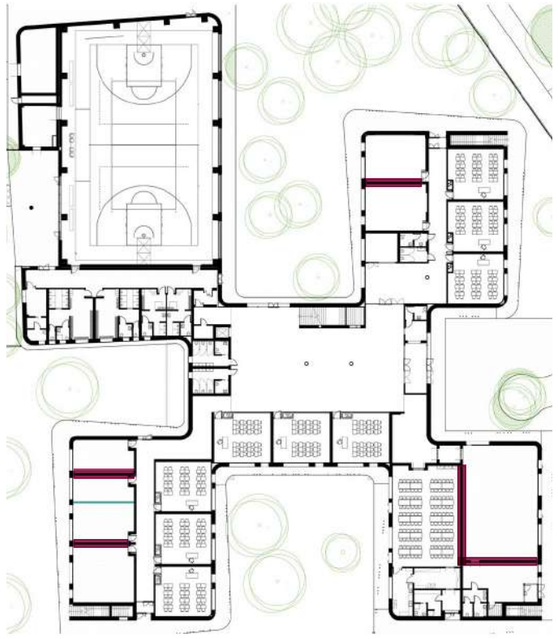
**TYPE OF CONTRACT**
Design & Build, Construction

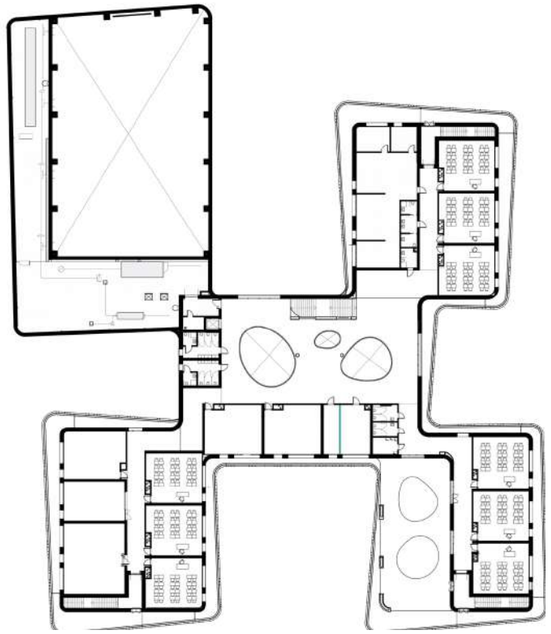
**CONTRACTOR**
ITI Impresa Generale Spa


*Tender documentation render

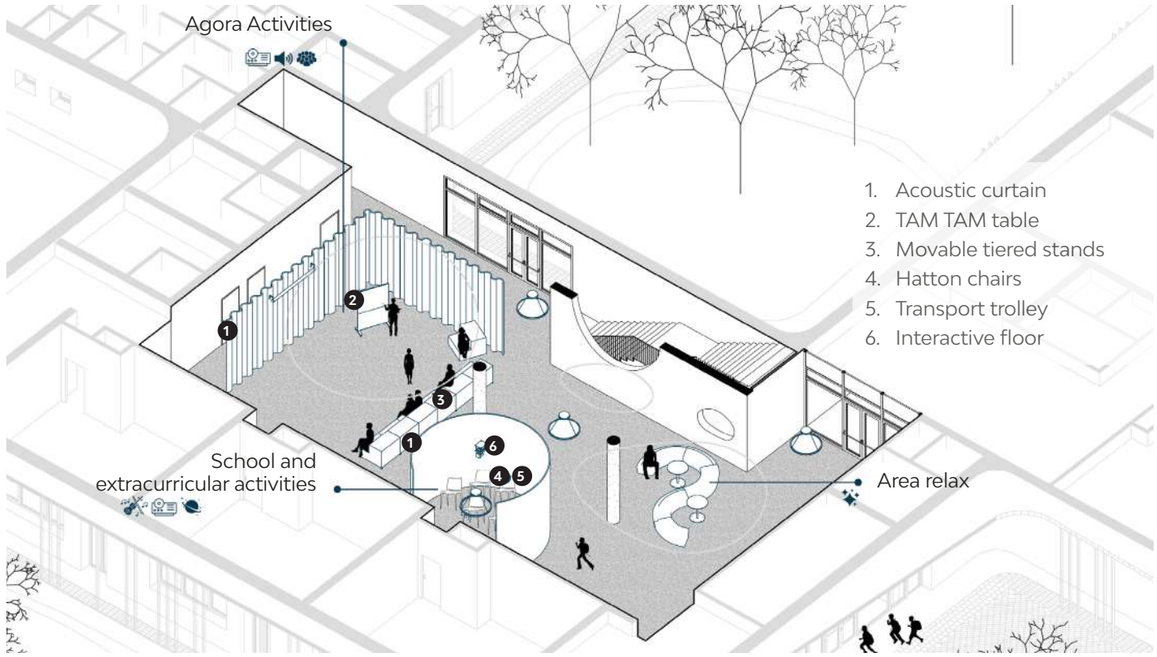
# Multifunctionality of spaces

## Operable soundproof walls





## Hall configuration




## Technological solution and movement of the walls

**1. Horizontal seals**
- Panel stability
- Maximum acoustic insulation

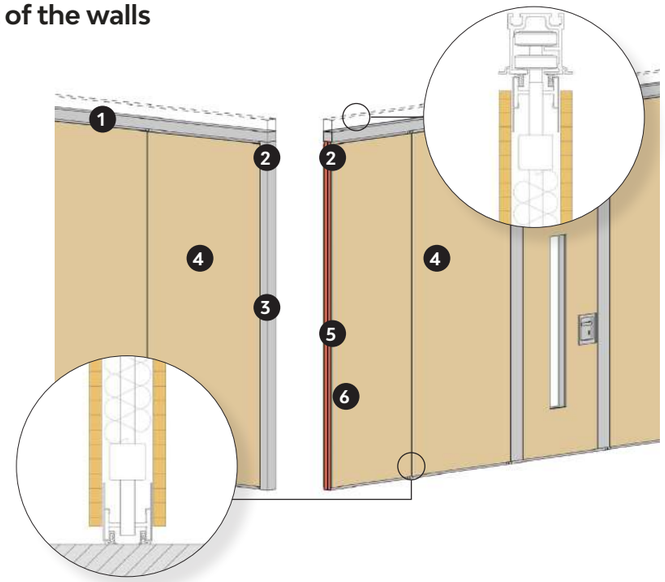
**2. Corner seals**
- Elastic corner elements that increase stability and sound insulation

**3. Vertical seals**
- Flexible Vertical Sealing Tapes
- Tapes that stretch to ensure effective interlocking

**4. Roofing panels**
- Low weight that allows free oscillation
- Surface can be coated or covered with any material

**5. Sound insulation material**
- Customizable according to acoustic requirements
- Requested, choice of 60 dB type

**6. Chassis**
- In aluminum and steel

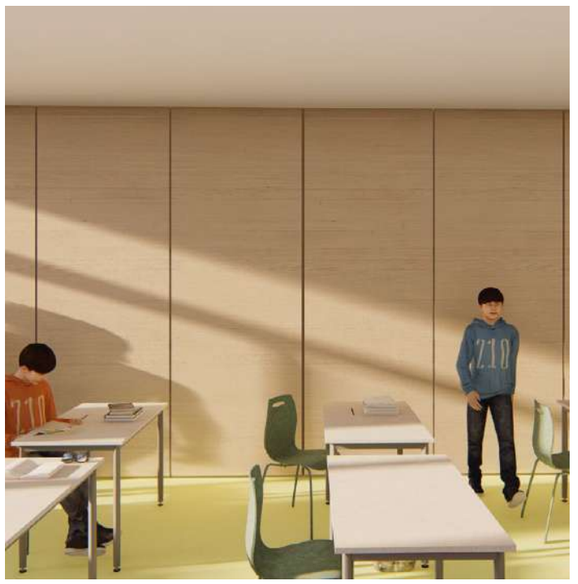



### Advantages

- Greater flexibility of teaching spaces
- Reduced thickness (88 mm) and overall size
- Insulation (Rw = 60 dB) and acoustic comfort
- Wide choice of materials and finishes
- Reduced weight and easy maneuverability
- Reaction to fire (EI 30)
- Single operation

**Configuration with open operable wall**

**Configuration with closed operable wall**



FOCUS

# CONSTRUCTION SITE

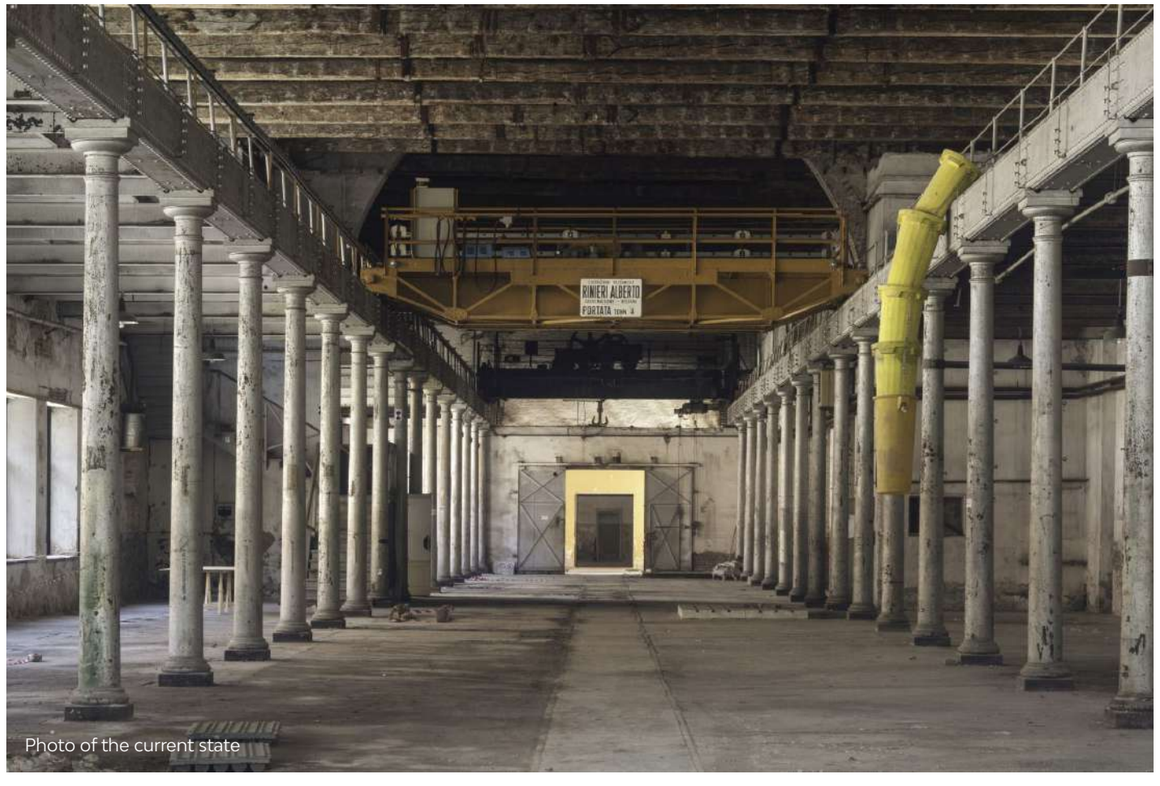
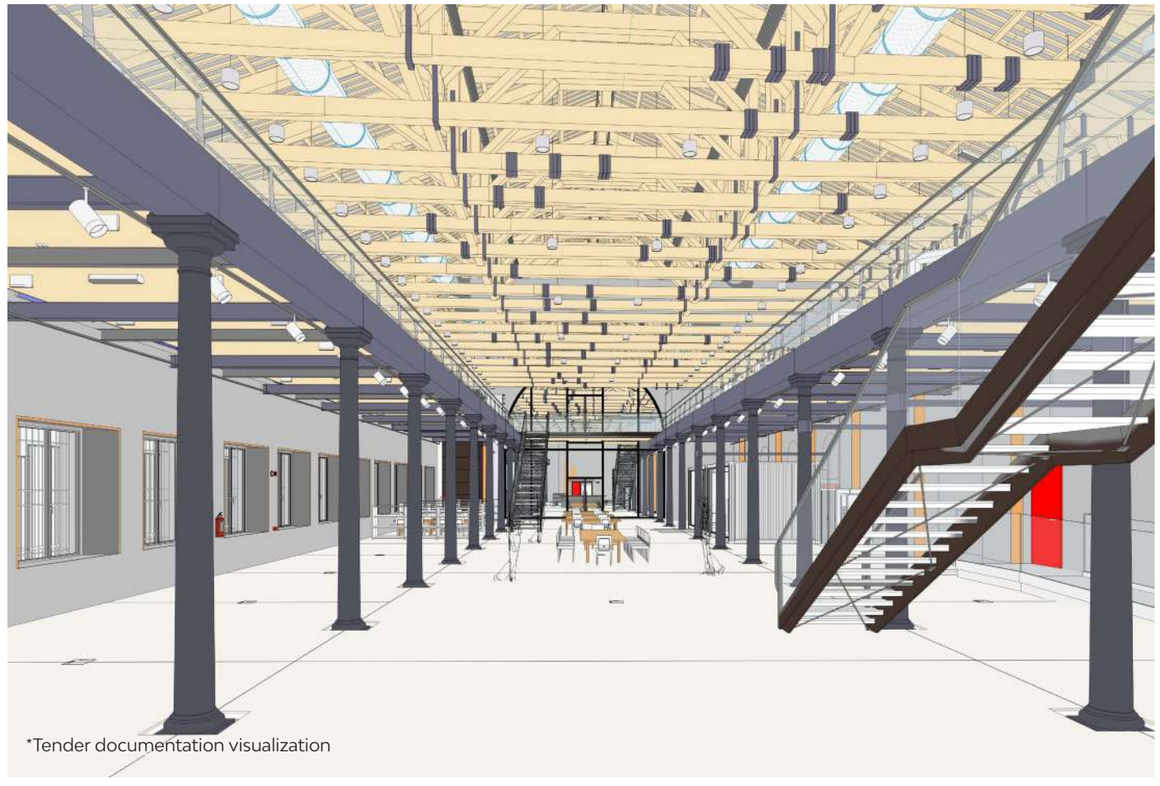


Photo of the current state


*Tender documentation visualization

FOCUS CONSTRUCTION

# Venitian Arsenal Historical Archive Restoration

Works for the restoration and redevelopment of the ASAC – Historical Archive of Contemporary Arts of the Venice Arsenal

*Tender documentation project and visualization: TA Srl Torsello Architettura - Seres di Martina Serafin Sas - Ottavio Di Blasi & Partners Srl - Milan Ingegneria Spa - TFE Ingegneria Srl

**LOCATION**
Venice, Italy

**BUDGET**
€ 24.6 mln

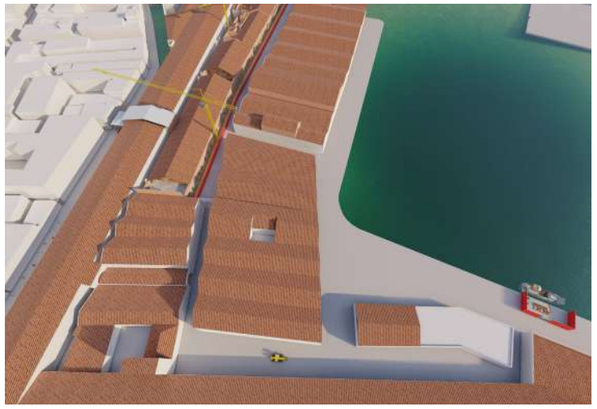
**TYPE OF INTERVENTION**
Culture

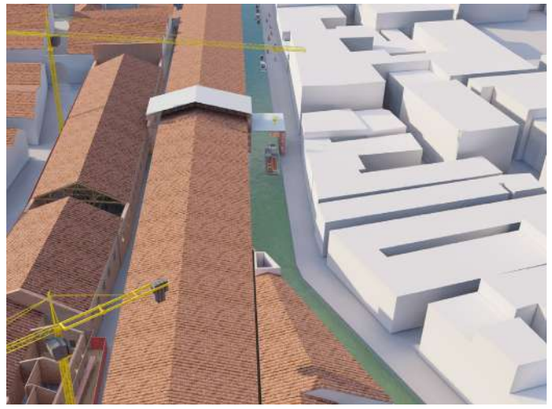
**SERVICES**
Technical Improvements Project

**CONTRACTING AUTHORITY**
Fondazione La Biennale di Venezia

**TYPE OF CONTRACT**
Construction

**CONTRACTOR**
Setten Genesio Spa





# Procurement plan

## Detailed analysis for structural works: Concrete casting

| CONCRETE CASTING | | | | | |
|---|---|---|---|---|---|
| **Element** | **Quantity (mc)** | **Transport** | **Travels** | **Productivity** | **Layout days** |
| Slab Area 1 | 299 | Concrete mixer capacity 12 m3 on barge | 25 | 30 (mc/gg) | 10 |
| Micropiles Area 1 | 136 | | 12 | 100 (mc/gg) | 2 |
| Plinths Area 1 | 6,2 | | 1 | 20 (mc/gg) | 1 |
| Pillars Area 1 | 64 | | 9 | 20 (mc/gg) | 7 |
| Slabs Area 1 | 68,4 | | 6 | 50 (mc/gg) | 2 |
| Xlam cap Area 1 | 32,2 | | 3 | 150 (mc/gg) | 1 |
| Beams Area 1 | 2 | | 3 | 20 (mc/gg) | 2 |
| Slab Area 2 | 372 | | 31 | 30 (mc/gg) | 13 |
| Plinths Area 2 | 127 | | 11 | 20 (mc/gg) | 3 |
| Pillars Area 2 | 15,7 | | 2 | 20 (mc/gg) | 1 |
| Slabs Area 2 | 107 | | 9 | 50 (mc/gg) | 3 |

Arrival and movement to the construction site:
x 1

timetable: 19.00-23.00 - 04.00-8.00

Construction site castings:
x 1

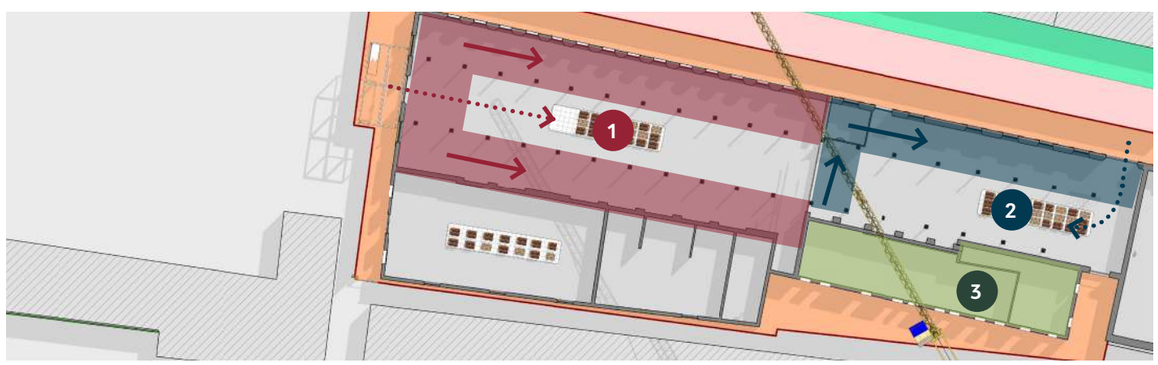
x 1


x 4

timetable: 19.00-23.00 - 04.00-8.00

## Detailed analysis for structural works: Xlam slabs

| SOLAI XLAM | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Area** | **Quantity** | **Transport** | **Travels** | **Productivity** | **Days of pose** | **Storage 1** | **Storage 2** | **Storage 3** |
| 1 | 377 mq | mototopo 220q | 3 | 200 (mq/gg) | 3 | x | | |
| 2 | 275 mq | with crane with | 4 | 200 (mq/gg) | 2 | | x | |
| 3 | 165 mq | capacity of 9q | 2 | 200 (mq/gg) | 1 | | | x |




Arrival and movement to the construction site:
x 1

x 1

timetable: 6.00-8.00

Installation Area 1 ( ) and 2 ( ):
x 2

x 4

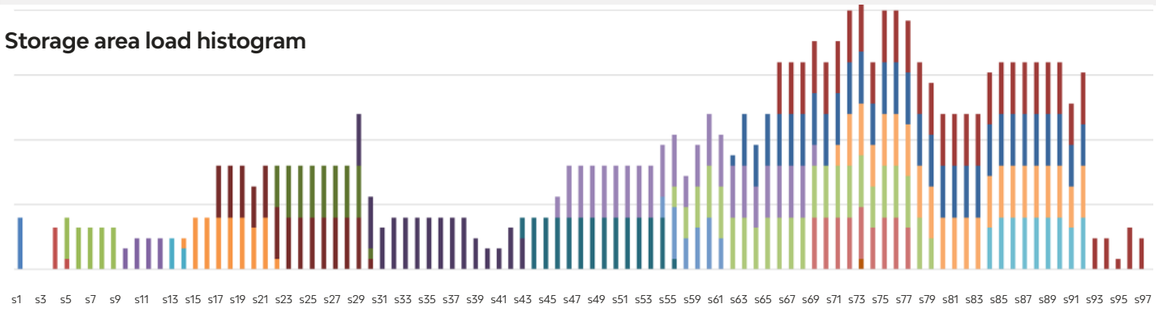
timetable: no limitations

Installation Area 3 ( ):
x 1

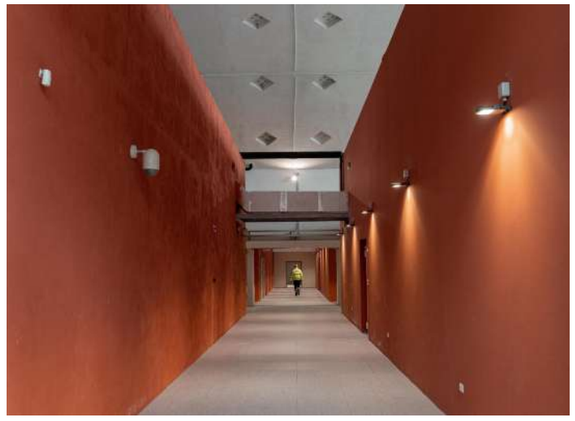
x 2

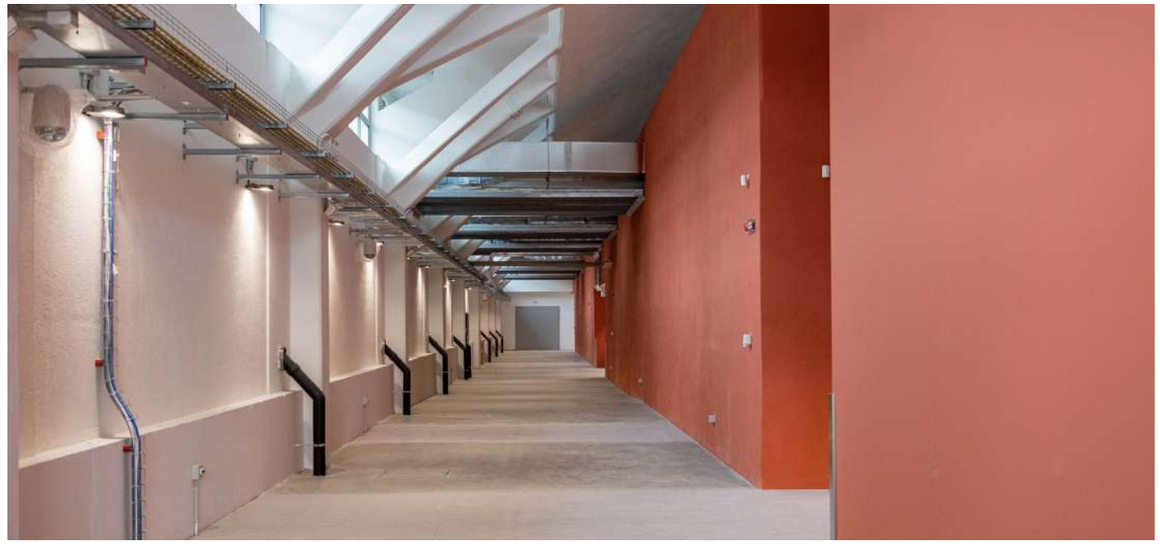
## 01 Sizing of storage areas

### Storage area load histogram




- Cop Waste
- Concrete
- XLAM
- Interior Floors and Cladding
- Waste Partition walls
- Foundations
- Restoration materials
- Windows
- Waste Structures
- Reinforced concrete structures
- Insulation and waterproofing
- Other materials
- Floor and slab waste
- Steel structural components
- Screeds
- Mechanical systems
- Earthmoving waste
- Reinforced plaster
- Internal partitions
- Electrical and special systems





FOCUS CONSTRUCTION

# ECMWF Data Center

Construction of the ECMWF Data Center through the recovery of the real estate complex of the former Manifattura Tabacchi in Bologna

*Tender documentation render: Gmp Architekten Von Gerkan, Marg And Partner - Studio T - Werner Sobek Stuttgart - Land Italia

**LOCATION**
Bologna, Italy

**BUDGET**
€ 37 mln

**TYPE OF INTERVENTION**
Industrial

**SERVICES**
Technical improvement project, construction design

**CONTRACTING AUTHORITY**
Finanziaria Bologna Metropolitana Spa

**TYPE OF CONTRACT**
Design & Build

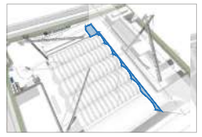
**CONTRACTOR**
Frimat Spa - Site Spa - Gianni Benvenuto Spa

# Construction site organization & logistics

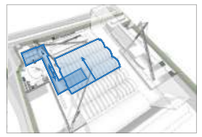
## PHASE 1

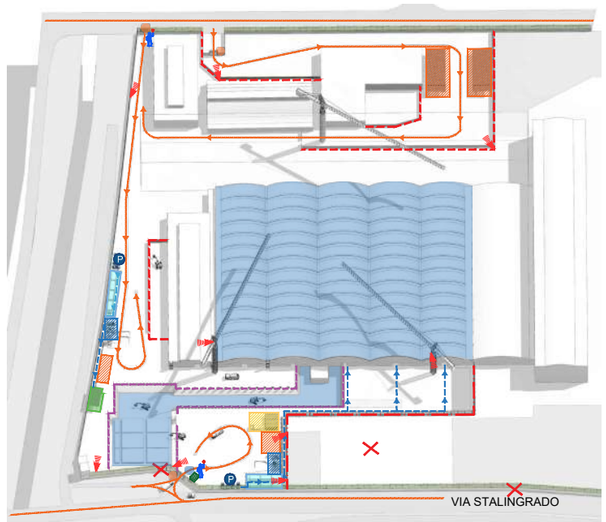
Site construction

Demolitions



Excavations & Consolidations





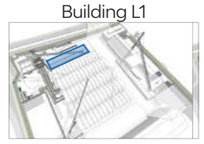

West entrance view

View of material storage area

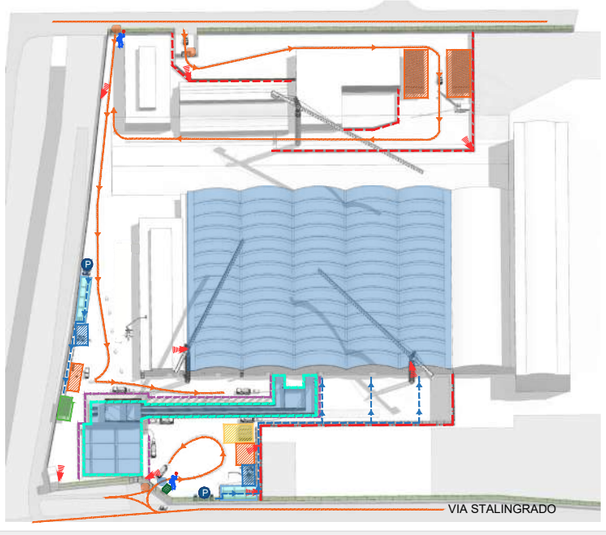
## PHASE 2

Construction of foundations

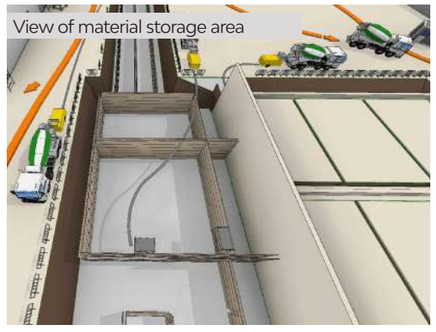
Consolidation Building L1



Consolidation & Construction of roofing




View of material storage area



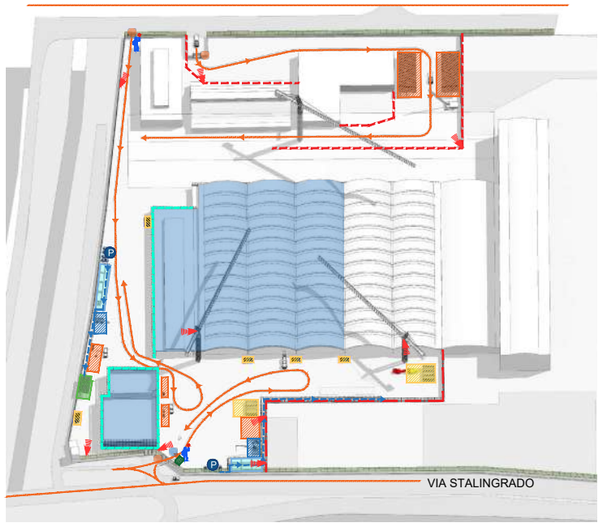
View of material storage area

## PHASE 3

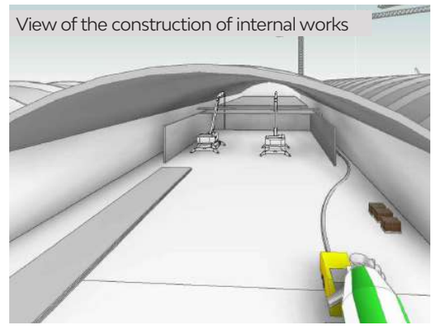
Internal works

Installation of systems

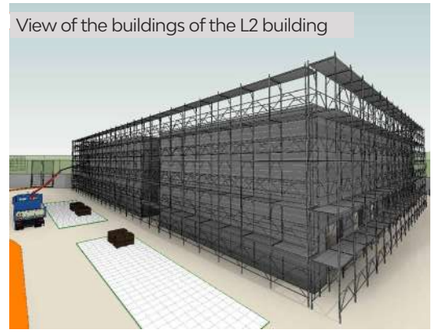
L2 Construction




View of the construction of internal works



View of the buildings of the L2 building

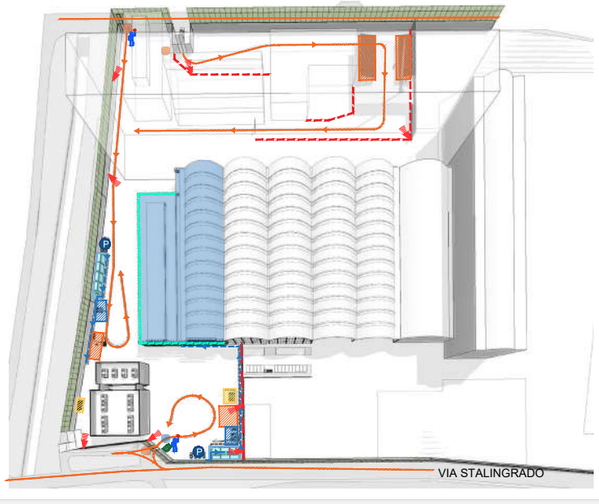


## PHASE 4

Building Delivery B2, B3 & L2

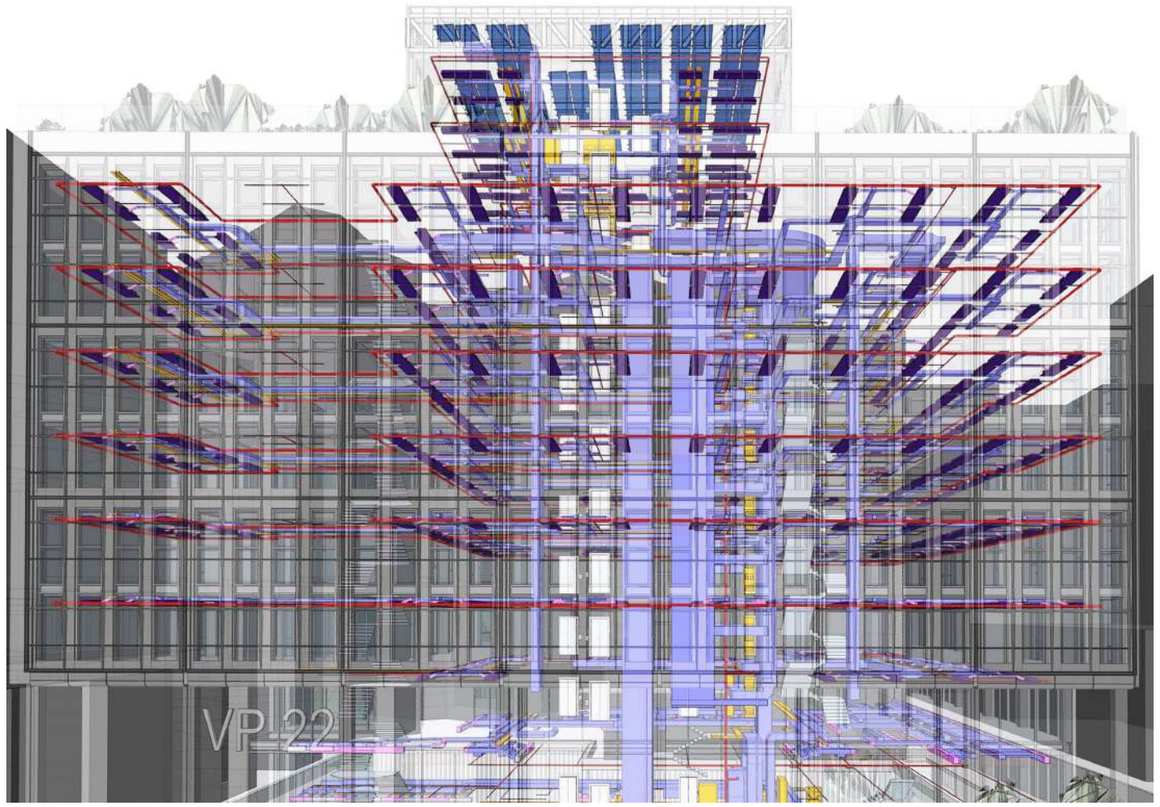
Installation of systems buildings B1&L1

Scanning and external works




View of material storage area

Scanning view




FOCUS CONSTRUCTION

# VP22 Building

Construction of the tower for A.M. Holdings, near Milan Central Station

*Tender documentation project: Tectoo Srl - Milan Lngegneria Srl - Ariatta Ingegneria Dei Sistemi Spa - Ariatta Ingegneria Dei Sistemi Spa - Erika Skabar

**LOCATION**
Milan, Italy

**BUDGET**
€ 30 mln

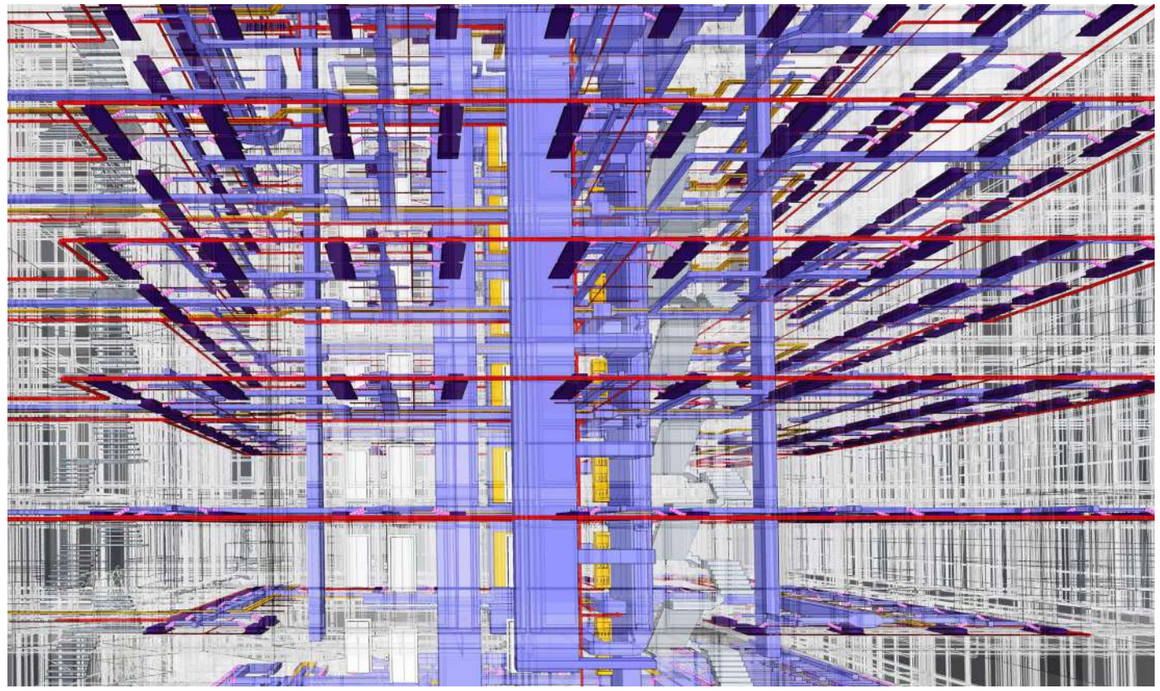
**TYPE OF INTERVENTION**
Offices

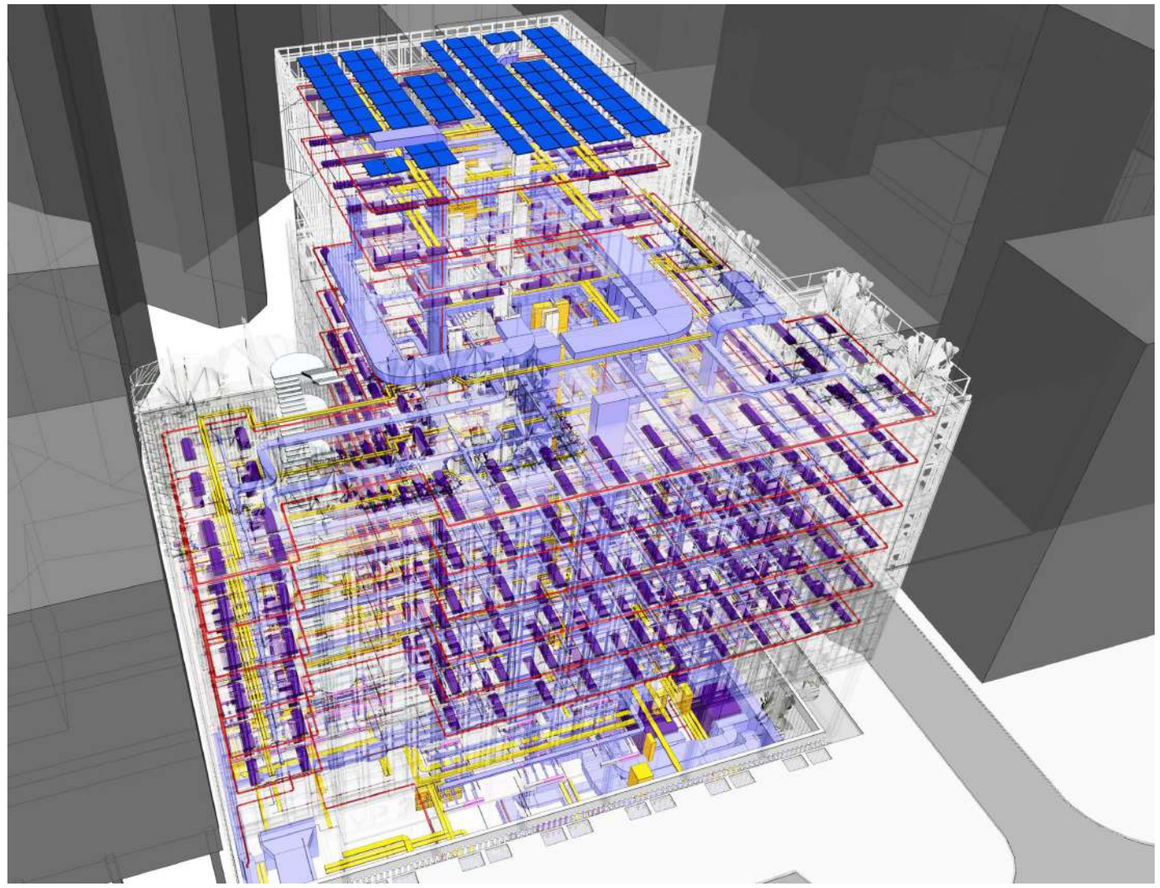
**SERVICES**
Technical improvements project, construction BIM

**CONTRACTING AUTHORITY**
AM Hodings

**TYPE OF CONTRACT**
Design & Build

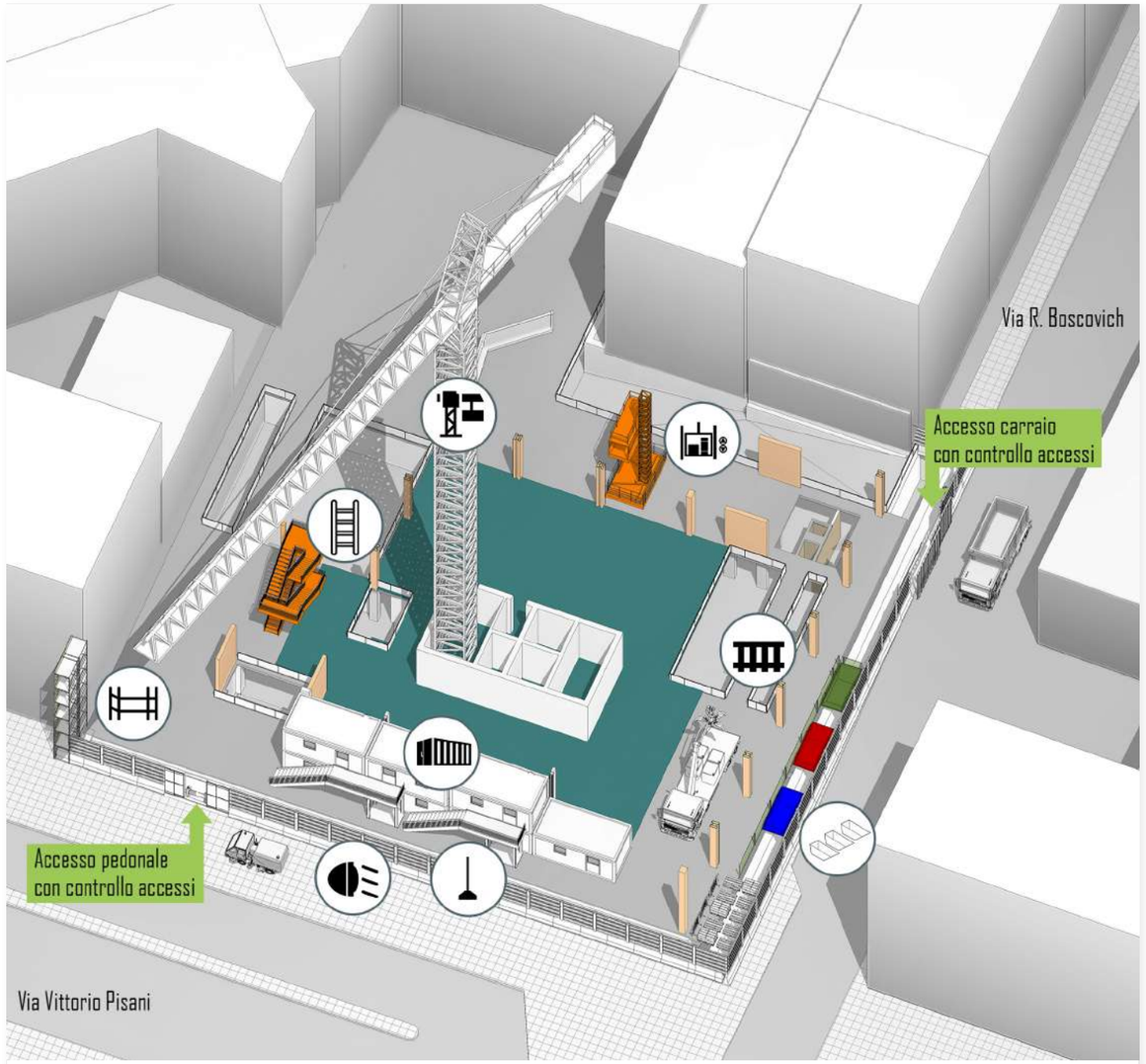
**CONTRACTOR**
Ediltecnorestauri





# Construction site organization & layout

## Construction site layout




- Signal lantern
- Construction site hoists
- Construction site shacks in phase 2
- Differentiated skip bins and waste material storage area
- Parapets
- Construction site fence H.3mt on new jersey barrier
- Construction site ladder
- Crane
- Scaffolding with sheet metal with safety net

## BIM Perspective Views

FOCUS

**SYSTEMS**

*Tender documentation render

FOCUS IMPIANTI

# Dipartimento di Scienze Veterinarie UNIPI

Works for the completion of the Department of Veterinary Sciences, comprehensive of external areas and urbanization works in San Piero a Grado, Pisa, Italy

*Tender documentation project and render: Mythos Consorzio Stabile-Tecnicaer Engineering - Politecnica

**LOCATION**
Pisa, Italy

**BUDGET**
€ 39.2 mln

**TYPE OF INTERVENTION**
Education

**SERVICES**
Technical improvements project

**CONTRACTING AUTHORITY**
University of Pisa

**TYPE OF CONTRACT**
Design & Build

**CONTRACTOR**
ITI Impresa Generale Spa


*Tender documentation render

Tender documentation render

# Lighting quality and aesthetics

**3F Filippi Linda**
DALI technology
Power consumption 28 W
Luminous flux 4340 lm
Color temperature 4000 K
Efficiency 155 lm/W



**Zumtobel Vivo II**
DALI
Power 27 W - Flux 2700 lm
Temperature 4000 K - Eff. 102 lm/W

**Tecmar Agape**
DALI
Power 35 W - Flux 4049 lm
Temperature 4000 K - Efficiency 127 lm/W

**Zumtobel Amphibia**
DALI technology
Power consumption 17 W
Luminous flux 2730 lm
Color temperature 4000 K
Efficiency 162 lm/W

**Zumtobel Panos**
DALI technology
Power consumption 19 W
Luminous flux 2619 lm
Color temperature 4000 K
Efficiency 138 lm/W

**Thorn Omega Pro 2 Tunable White**
DALI technology
Power consumption 35 W
Luminous flux 4450 lm
Color temperature 2700/6500 K
Efficiency 92 lm/W

**Thorn Omega Pro 2**
DALI technology
Power consumption 35 W
Luminous flux 4450 lm
Color temperature 4000 K
Efficiency 127 lm/W



**Zumtobel SLOTLIGHT D800**
DALI technology
Power consumption 63 W
Luminous flux 6333 lm
Color temperature 4000 K
Efficiency 101 lm/W



**Zumtobel SLOTLIGHT D1500**
DALI technology
Power consumption 92 W
Luminous flux 9407 lm
Color temperature 4000 K
Efficiency 102 lm/W



**Zumtobel SLOTLIGHT D1200**
DALI technology
Power consumption 71 W
Luminous flux 7198 lm
Color temperature 4000 K
Efficiency 101 lm/W

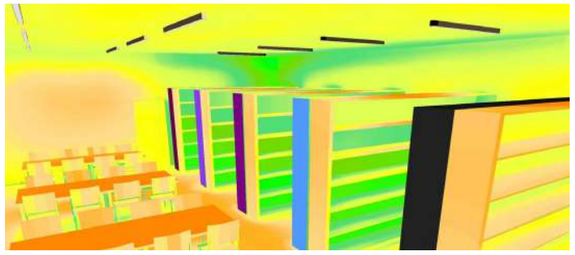

## Interior lighting simulation

**GROUND FLOOR ATRIUM EDUCATIONAL CENTER**
**Zumtobel Slotlight Sloin** or similar.
Required illumination level 100 lux
Improved illumination level > 200 lux

1 lx 40 lx 160 lx 500 lx 1000 lx

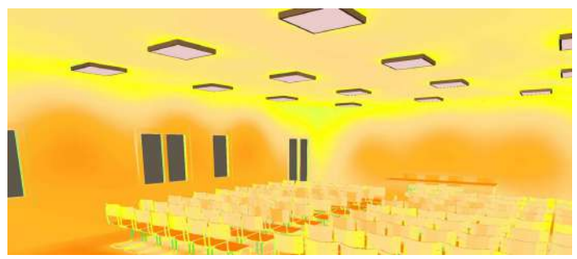
**BIBLIOTECA POLO DIDATTICO**
**Tecmare Agape** or similar.
Required illuminance level not stated
Improvement illuminance level > 500 lux





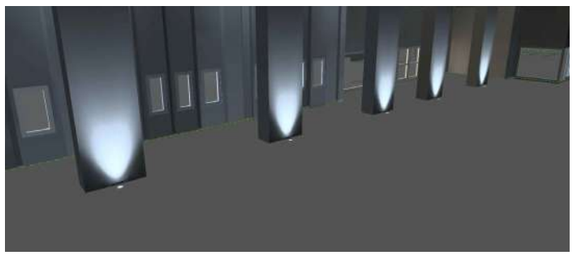
1 lx 40 lx 160 lx 500 lx 1000 lx

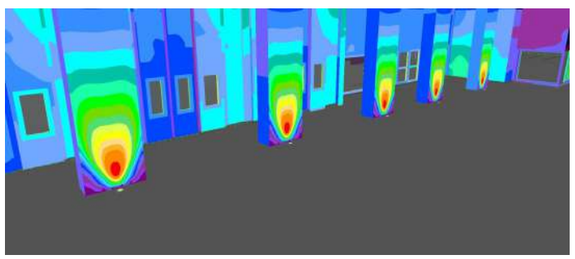
**EDUCATIONAL CENTER CLASSROOM**
**Thorn Omega Pro 2** or similar.
Required illuminance level not stated
Improvement illuminance level > 500 lux



1 lx 40 lx 160 lx 500 lx 1000 lx

**ENTRANCE TO THE EDUCATIONAL CENTER**
**Civic Era** or similar.
Required illuminance level not stated
Improvement illuminance level > 50 lux





1 lx 40 lx 160 lx 500 lx 1000 lx

FOCUS SYSTEMS

# UNIFE Biomedical Chemical Hub Extention

Design & Build tender for the executive design and construction of two new university buildings and a multi-storey car park in the former San Rocco hospital area, to support and complete the Biomedical Chemical Pole of the University of Ferrara

*Tender documentation project: Rossiprodi Associati Srl - S.B.Arch - Ingegneri Riuniti Spa - Geo Group Srl

**LOCATION**
Ferrara, Italy

**BUDGET**
€ 24.2 mln

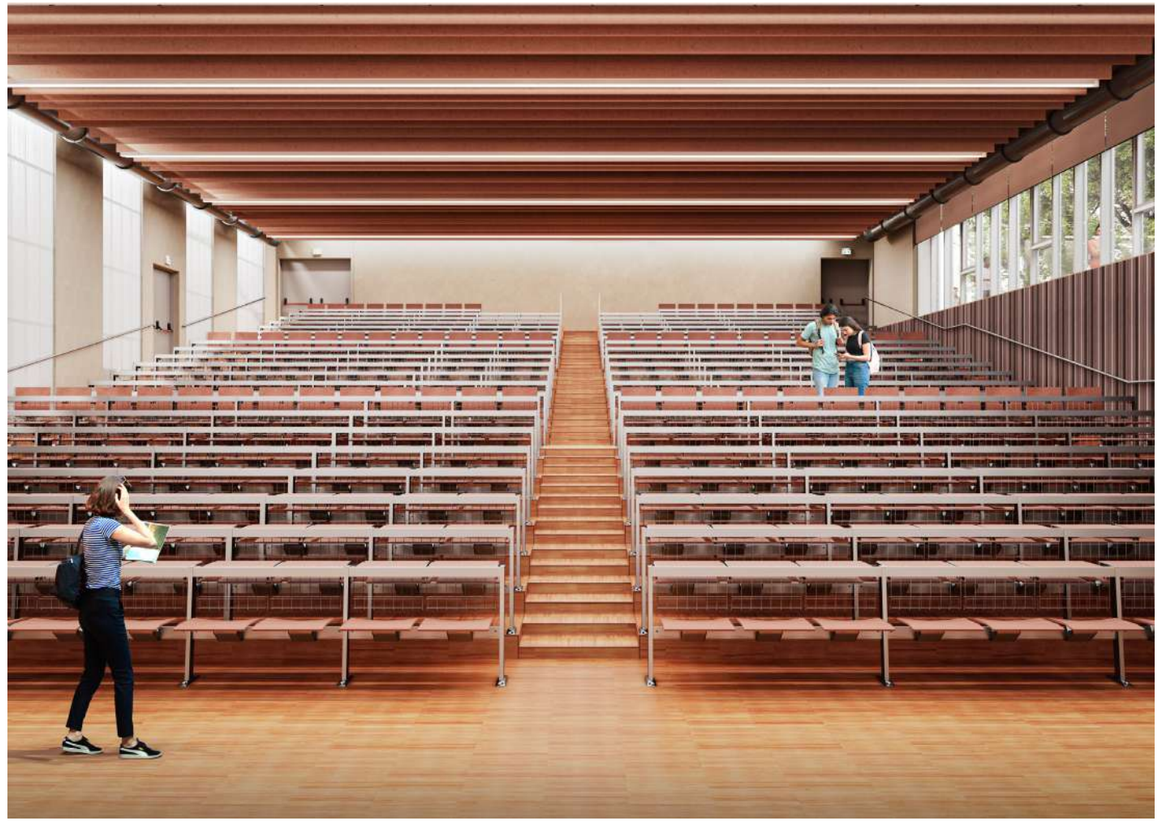
**TYPE OF INTERVENTION**
Education

**SERVICES**
Technical improvements project, executive design

**CONTRACTING AUTHORITY**
University of Ferrara

**TYPE OF CONTRACT**
Design & Build

**CONTRACTOR**
ITI Impresa Generale Spa - Milani Srl



# Technical and functional quality UTA

**Supply air**

**Air flow rate**
24.000 m³/h

**Engine power**
1 x 15,000 kW

**Heating**
80,97 kW

**Heating**
48,30 kW

**CHW-cooling**
264,24 kW

**Humidification**
94,47 kg/h

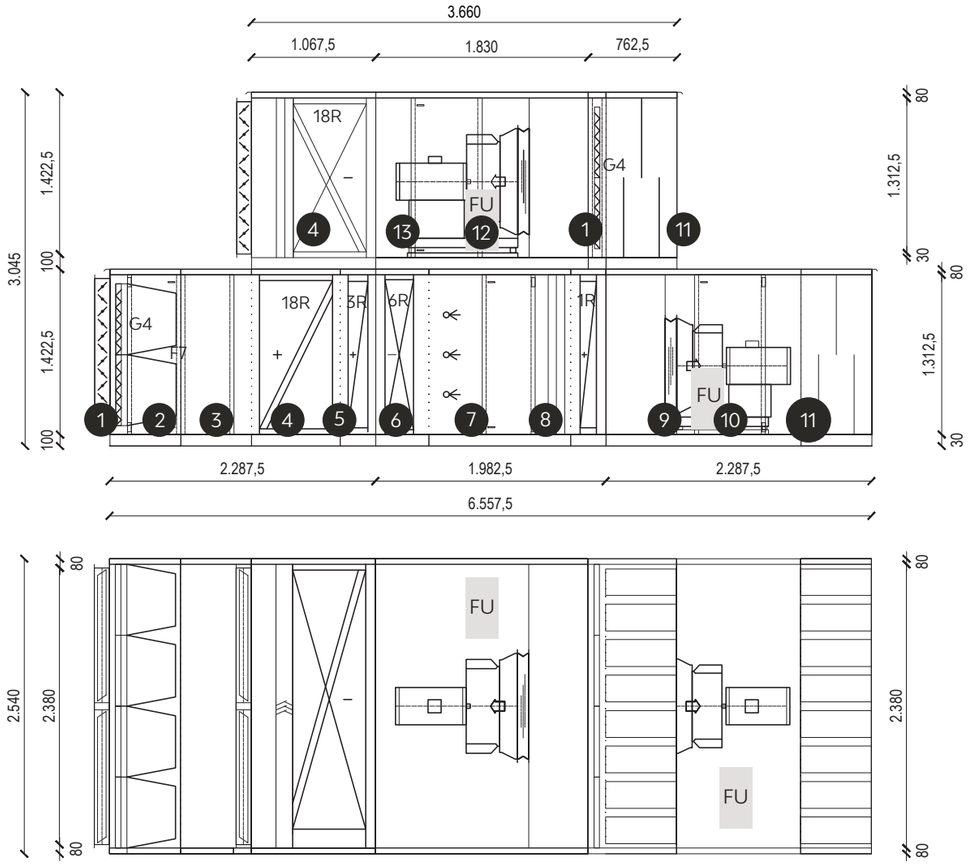
**Air expelled**

**Air flow rate**
24.000 m³/h

**Engine power**
1 x 7,500 kW

**Recovery efficiency**

**Thermal efficiency**
74,4 %

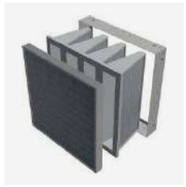



**Legend**

1. Coarse filter class G4
2. Fine filter class F7
3. UV germicidal section
4. Battery recuperator
5. Heating battery
6. Cooling battery
7. Steam humidifier
8. Post-heating battery
9. Supply fan
10. Inverter on supply fan
11. Silencer
12. Return fan
13. Inverter on return fan

**Technical data**

| | |
|---|---|
| **Series** | ZHK Inova DG |
| **Unit size** | 24 / 13,5 |
| **Inner panel** | Galvanized |
| **Bottom inner panel** | Galvanized |
| **Guides** | Galvanized |
| **Outer panel** | Plasticized galvanized |



## SUPPLY AIR

**Pocket filters with flat filter on frame**

Technical features

- Class F7
- dP initial 86 Pa
- dP final 186 Pa
- Filter surface 29,60 m²

**Coarse pre-filter**

Technical features

- Class G4
- dP initial 63 Pa
- dp final 113 Pa
- Filter surface 4,80 m²

## BATTERY RECOVERY

**Cooling**

Technical features

- Rank 18R
- Power 150,52 kW
- Air intake 23,00 °C
- Air outlet 4,70 °C
- Thermal efficiency 73,2 %

**Heating**

Technical features

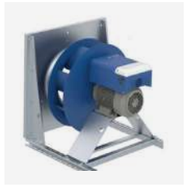
- Rank 18R
- Power 150,52 kW
- Air intake -2,00 °C
- Air outlet 16,61 °C
- Thermal efficiency 74,4 %



## COOLING BATTERY

Technical features

- Speed 2,36 m/s
- Power 264,24 kW
- Air intake 30,00°C
- Air outlet 14,00°C
- dP dry air side 129 Pa
- SHR 0,49



## FREE IMPELLER SUPPLY FAN

Technical features

- Fan 710
- External pressure 200 Pa
- Sound power 91,6 dB (A)
- Power absorbed 10,01 kW
- Yield 76,9%
- Motor 160-4

## SILENCER

Technical features

- Phono-asso septum type 230 MFK
- Execution/model standard
- Frame material galvanized
- Insulating mineral wool
- Insulating class A1
- Pressure 26 Pa

FOCUS

**BIM**


*Tender documentation render

FOCUS BIM

# Intermunicipal Water Plant

Works for the development of the Cornadero intermunicipal water extraction system serving the municipalities of Milano Nord

*Tender documentation render: ETC Engineering Srl

**LOCATION**
Cornadero, Italy

**BUDGET**
€ 10.8 mln

**TYPE OF INTERVENTION**
Industrial

**SERVICES**
Technical improvements project

**CONTRACTING AUTHORITY**
CAP Holding spa

**TYPE OF CONTRACT**
Design & Build

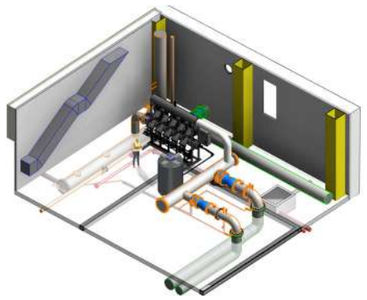
**CONTRACTOR**
Giudici Spa - Civelli Costruzioni Srl


*Tender documentation render

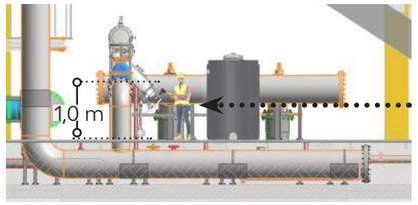

*Tender documentation render

# BIM modeling. As-built production and construction site management

### Product warranties and maintenance aspects



### Section

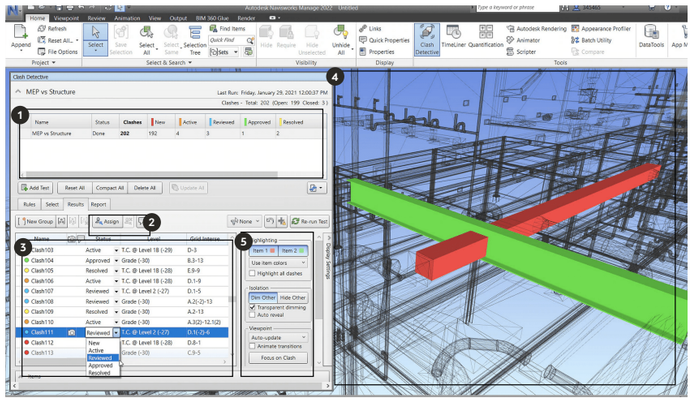



The operator can position himself directly in front of the 5 filters and will not need additional preparations to perform the maintenance activity. The small size of the individual components will also facilitate their movement.

The improvement project includes the replacement and increase of the filters. These will be tilted downwards to allow easy access and viewing by the maintenance worker without the aid of ladders or other preparations.

### Example of a screen with a geometric interference highlighted

1. **Summary table**
   Summary sheet describing all the Clash Detections detected.
2. **Assignment of the order**
   The resolution of interferences is assigned to the person in charge, inserting clarifying comments.
3. **Interference Information**
   All the interferences found are reported here, with the main characteristics.
4. **3D View**
   You can visualize the geometric interference found, so you can identify and resolve it more easily.
5. **Viewing options**
   Using the options provided, you can customize the display of graphic elements in the 3D viewport.

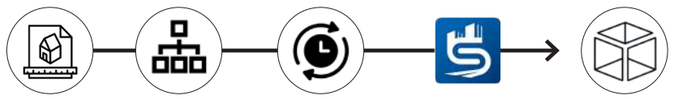


### Checks for space-time interference: Management software and 4D modeling

TeamSystem® Construction SYNCHRO™

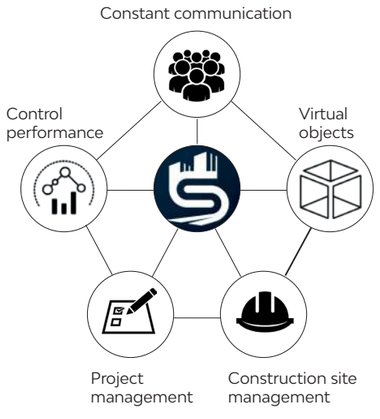
To improve and supervise the timing and operations of the construction site, the use of a **4D management software such as SYNCHRO** Pro by Bentley Systems or similar, distributed in Italy by Teamsystem Construction or similar, is planned. The program collects all the information that characterizes the model, combined with the WBS classification and the time program, exploits the potential of high-precision graphics, reducing errors on the construction site, thanks to the creation of construction sequences, assembly simulations and feasibility analysis of critical operations.

### Workflow

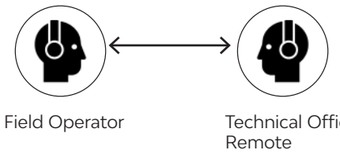




### Controlled parameters




### Direct connection




### How to use

- Accesso al sistema tramite le proprie credenziali o delle credenziali Guest ID;
- Avvio della chiamata, selezionando un contatto online dalla lista Contatti;
- Attivazione delle funzionalità necessarie per lo svolgimento della sessione (modalità streaming, modalità foto, etc.);
- Utilizzo di elementi grafici virtuali (widget) disponibili durante la chiamata. Possono essere inseriti all'interno di un video o di un'immagine grazie alla Realtà Aumentata.
- La funzionalità di condivisione documenti consente agli operatori di inviare manuali, tabelle, immagini e altri documenti al proprio interlocutore, per facilitare il completamento dell'intervento.

### Functionality


- Graphic instructions overlayed on videos;
- Real-time commands;
- Animated cursors that facilitate service operations.


- Interactive visualization of the complete 3D model;
- Exploration of details
- Intervention areas highlighted graphically;


- Advanced photographic instructions;
- Detailed description of each procedure;
- Numbered labels to indicate the elements and areas of intervention;
- Progressive numbers show the correct sequence of the processes.

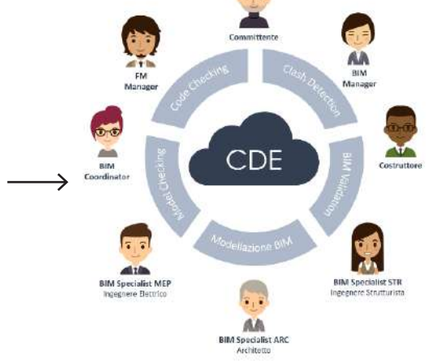

- Entire list of procedures filtered by categories;
- Easy identification of categories, through the use of icons;
- Summary documentation with detailed information.

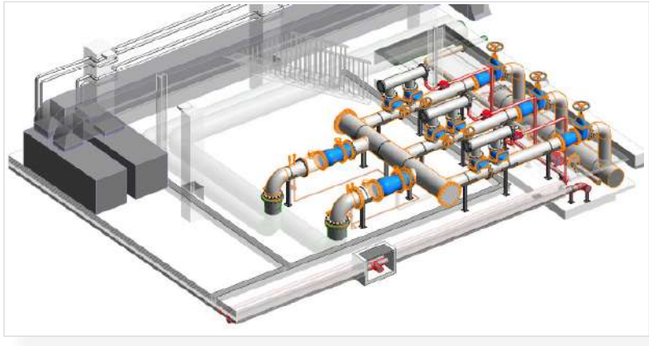
### Adequacy of Professional Figures

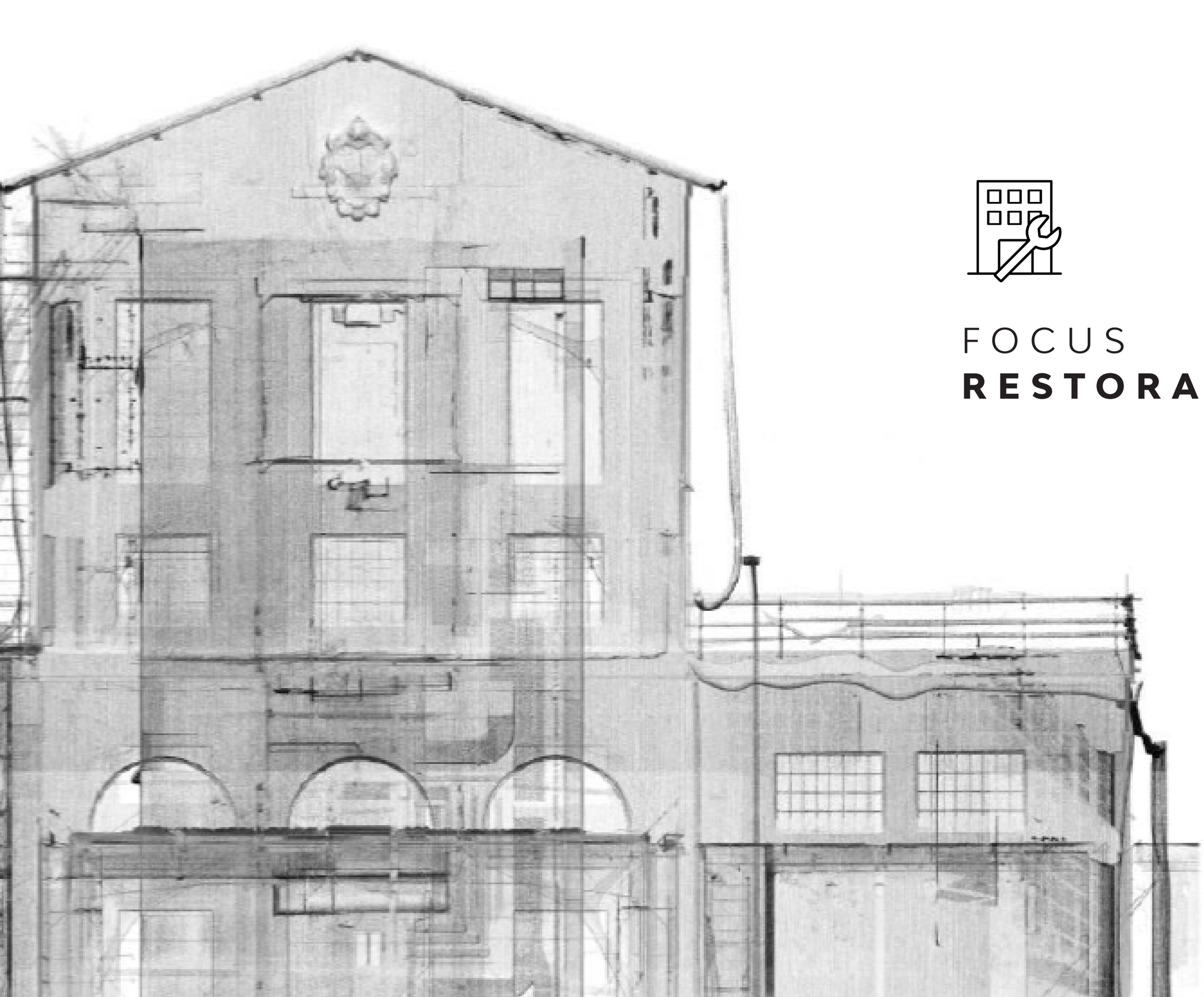
**BIM Manager**
Manager of the interdisciplinary BIM model and the effective integration of all data. He is responsible for the development and compliance with the BEP, the coordination of file sharing servers, the choice and management of software licenses and the company BIM library.

**BIM Coordinator**
Responsible for the interdisciplinary coordination of BIM specialist activities, development and updating of contents.

**BIM Specialist**
Specialized manager of 3D modeling, with specific knowledge of data management and information flows.





FOCUS

**RESTORATION**



FOCUS RESTORATION

# Ex Enel Plant Renovation

Works for the renovation and restoration of the ex Enel plant in the former Amcm sector in Modena: Nuovo Teatro delle Passioni.

* Tender documentation project and render: Politecnica Ingegneria e Architettura Soc. Coop.

**LOCATION**
Modena, Italy

**BUDGET**
€ 7.6 mln

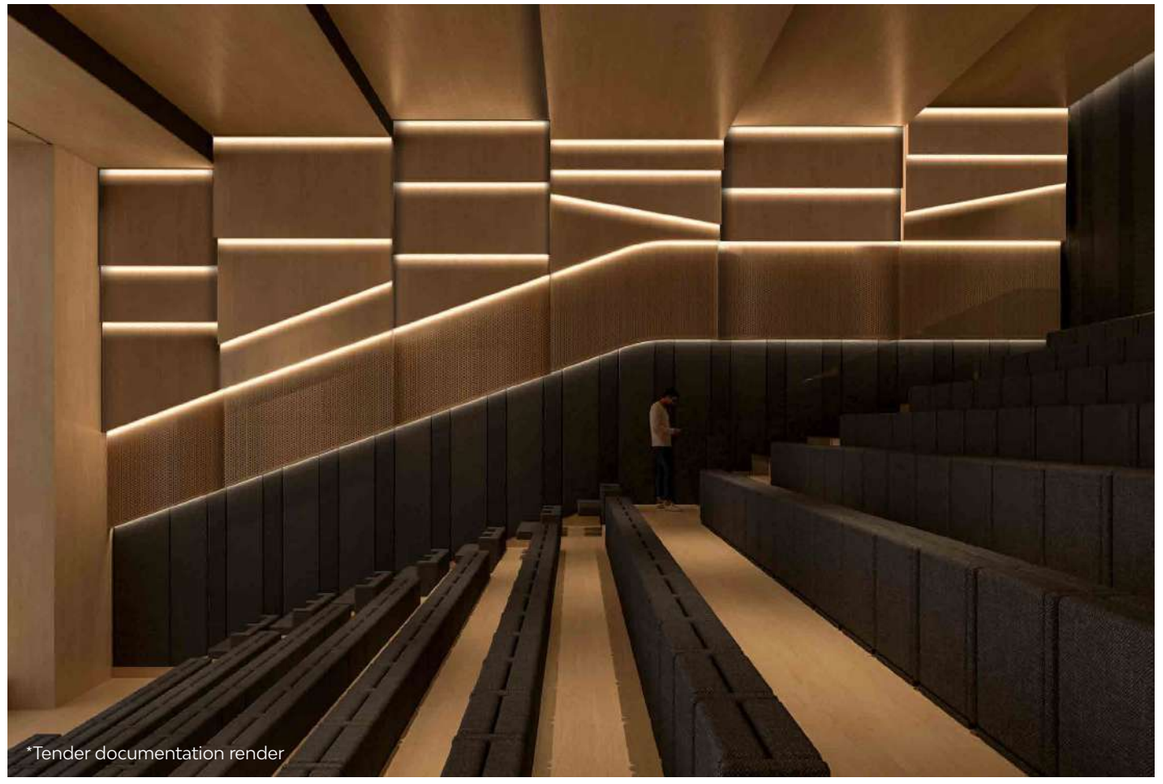
**TYPE OF INTERVENTION**
Culture

**SERVICES**
Technical improvements project

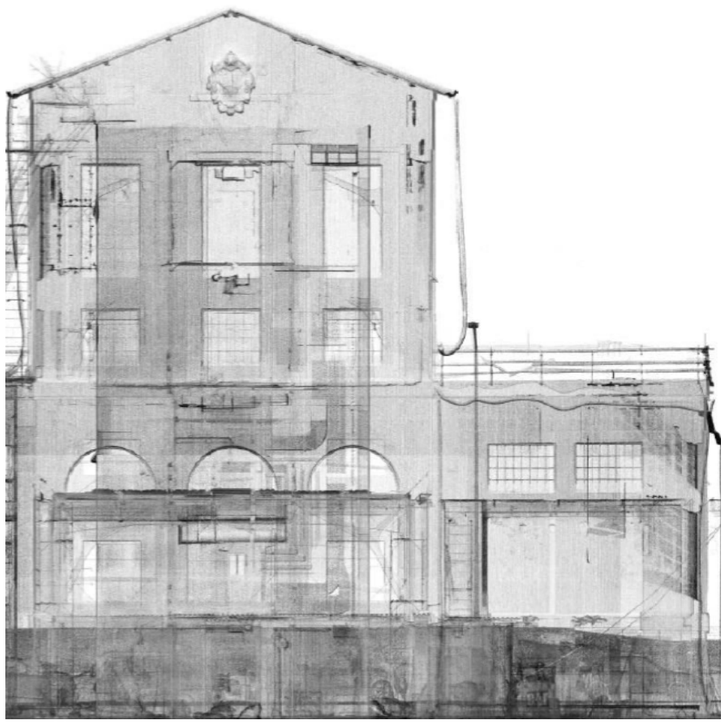
**CONTRACTING AUTHORITY**
Municipality of Modena

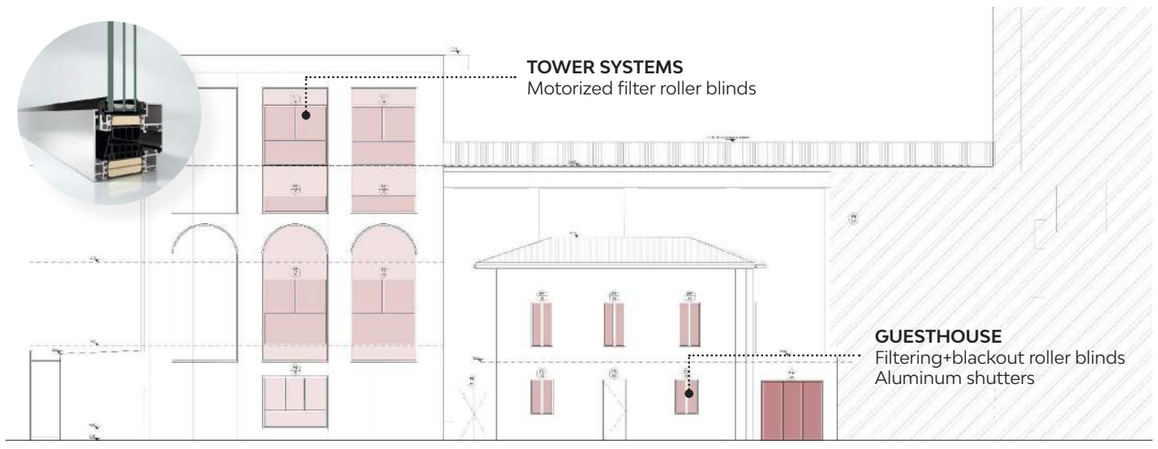
**TYPE OF CONTRACT**
Gara OEV

**CONTRACTOR**
AeC Costruzioni Srl



# Improving design performance







**Improvement of transparent window frames**

- **Aluminium window frame type Schüco AWS 90.SI+ or similar**
- Thermal break frame with Uf=0.7 W/m2K performance
- Cradle to Cradle Certification, plastic materials from renewable sources

- **Aluminium window frame for French windows type Schüco ADS 90.SI or similar**
- Thermal break frame with Uf=1.4 W/m2K performance
- Cradle to Cradle Certification, plastic materials from renewable sources

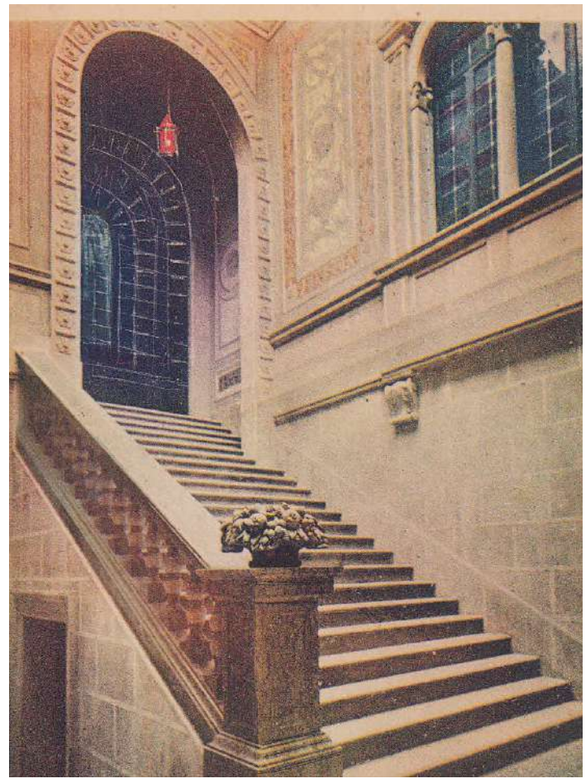
- **Triple glazing, Saint Gobain type or similar (in all the windows presented)**
- High thermal performance Ug=0.5 W/m2K
- Excellent acoustic performance Rw=52 dB

**Improvement of opaque internal fixtures**

- Single-leaf fire doors type SEBINO Chiusure or similar
- Double-leaf fire doors, type SEBINO Chiusure or similar
- Accessories for fire doors
- Protective systems for internal doors

**Improved shielding systems**

- Motorized roller blind filtering, type Latemar by Pellini or similar
- Motorized roller blind darkening and filtering, type Latemar by Pellini or similar
- Motorized Venetian blind type ScreenLine SL20-22MB by Pellini or similar
- Aluminum shutter with wood finish



Renovation work on the Mirandola Town Hall

*Tender documentation render: Enerplan Srl

FOCUS RESTORATION

# Renovation of the "Town Hall" in Mirandola

**LOCATION**
Mirandola, Italy

**BUDGET**
€ 5.2 mln

**TYPE OF INTERVENTION**
Mixed use

**SERVICES**
Technical improvements project

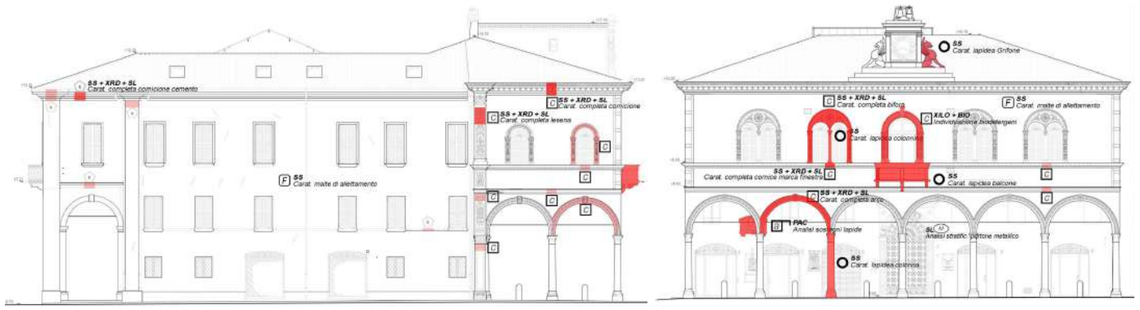
**CONTRACTING AUTHORITY**
Unione Comuni Modenesi Area Nord

**TYPE OF CONTRACT**
Construction

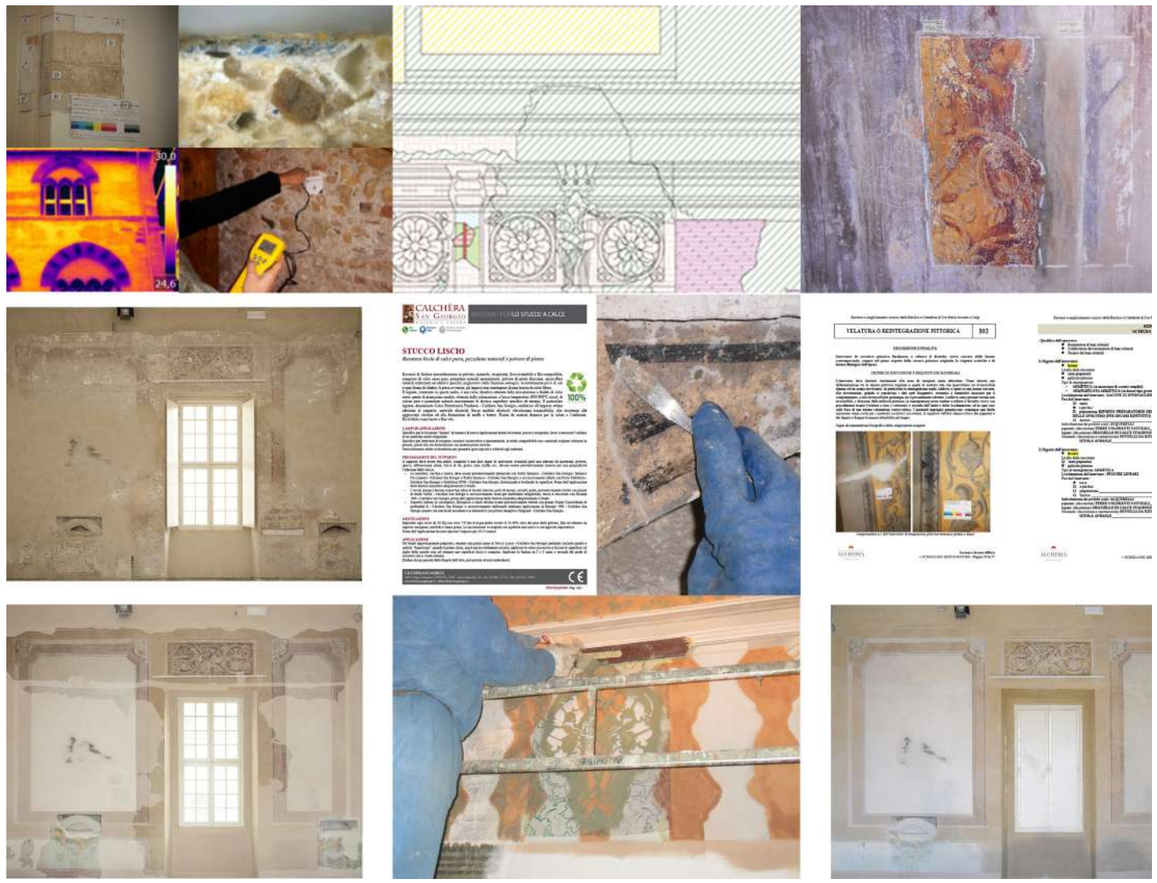
**CONTRACTOR**
AeC Costruzioni Srl -
Alchimia_Laboratorio di Restauro

# Restoration works with seismic improvement

## Investigations into the existing




## Restoration intervention approach - GREAT HALL




# Improved external lighting

## Check lighting levels

FOCUS
**STRUCTURES**

FOCUS STRUCTURES

# Cinecittà Studios

Construction work for a sound stage and related dressing rooms and equipment in the C4A and C4B areas of Cinecittà

*Tender documentation project: Arch. Bruno Moauro - Prof. Ing. Francesco Sylos Labini - Ing. Carmine Sommella - Ing. Joseph De Santis - Ing. Alfredo Innocenti - Ing. Anna Tarsitano - Arch. Massimiliano Moauro

**LOCATION**
Rome, Italy

**BUDGET**
€ 30 mln

**TYPE OF INTERVENTION**
Culture

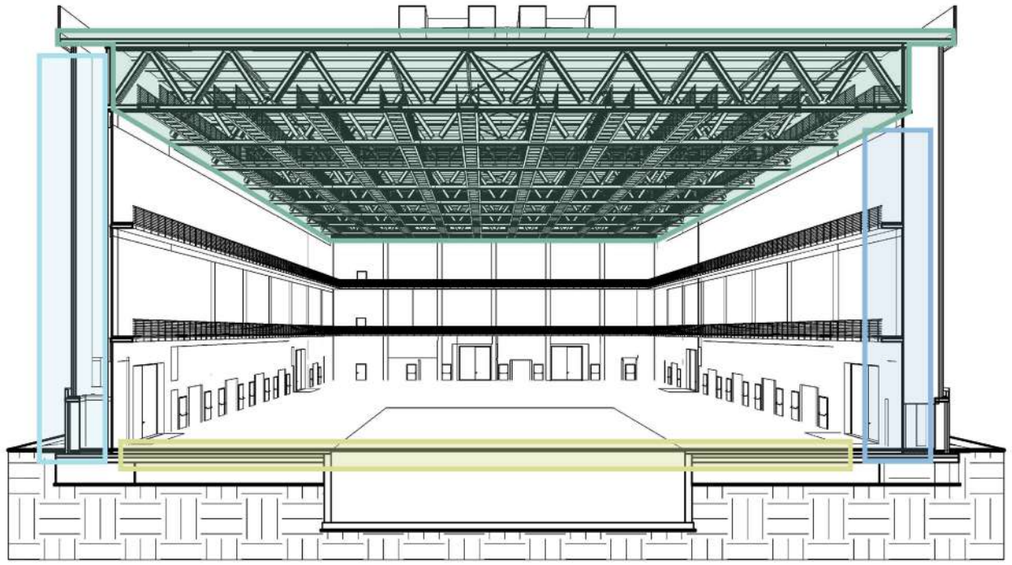
**SERVICES**
Technical improvements project

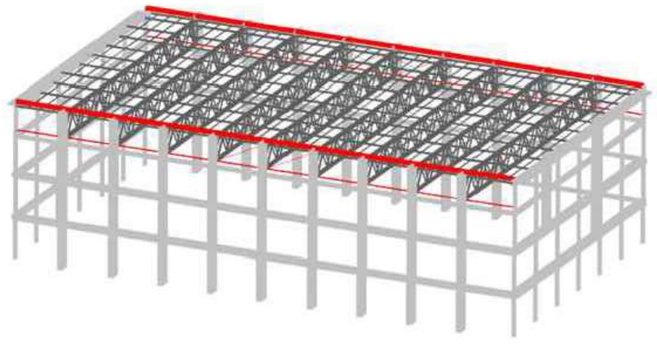
**CONTRACTING AUTHORITY**
Cinecittà

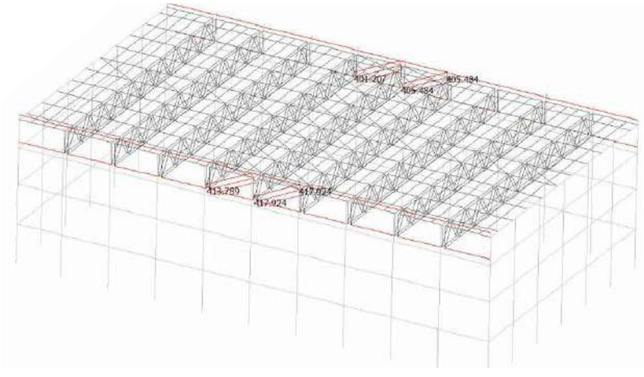
**TYPE OF CONTRACT**
Construction

**CONTRACTOR**
Setten Genesio Spa

# Improving structural performance








**Coverage**

As regards the roofing, additional longitudinal bracing and infill support elements have been identified.

The additional 2L60x8 braces were also sized.

| | MIN | MAX |
|---|---|---|
| AxForce (kN) | -414.214 | 417.924 |
| | [Bm:2405] | [Bm:2406] |

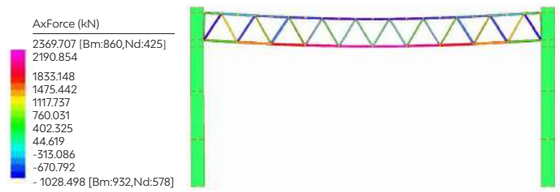
**Advantages**

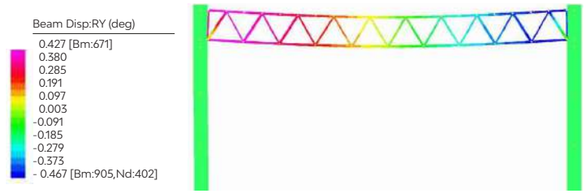
Insertion of elements not present in the base of the wind bracing system capable of stiffening the structure, giving it the resources necessary to resist horizontal forces, such as wind force and earthquakes.

**Support devices**

The correct calculation of the roof girder was carried out, taking into account the yielding of the supports and the eccentricity with respect to the barycentric axis of the columns, and the rotation at the imposts at the SLU was evaluated for the optimal choice of the support device.

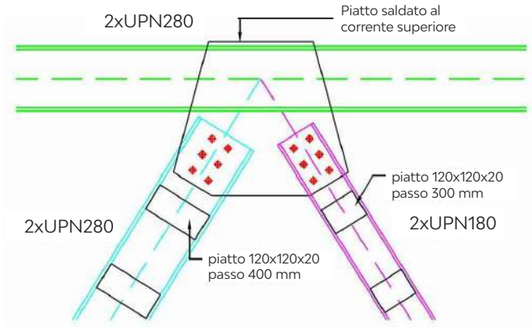
The use of a confined elastomeric disk bearing device is proposed. Based on the maximum rotation allowed for this type of device, equal to 2%, the device type VF 200-60 from FIP MEC or similar has been identified.



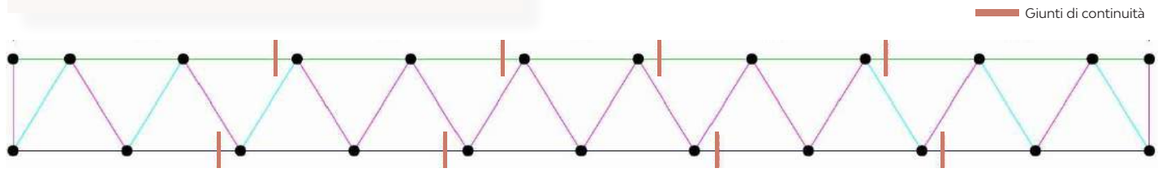

**Truss beam: connections and joints**

The solution envisaged on the basis of the tender includes bolted connections to be made on site. The improvement project proposes the creation of the unions of the steel elements of the lattice truss mainly in the workshop and the replacement of the bolting of the diagonals with welding in the workshop. The positioning of the continuity joints of the beams is also revised so that they are placed in the points subject to less stress.




**Advantages**

- Optimization of connections by making them in the workshop and reducing bolting
- Revision of the continuity joints of the beams
- Optimization of transport and installation times



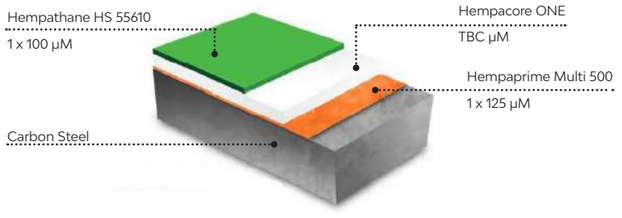

**Confined elastomeric disc bearings**

PTFE steel bearings in which rotations around any horizontal axis are ensured by the deformability of a rubber disc confined in a monolithic steel base.

**Fire protection**

To improve the fire behavior of the roof slab, the corrugated sheet metal is reinforced with bars of the type B 450 C.

It is also expected to offer additional protection of the metal carpentry of the roof against fire with R90 single-component intumescent paint in aqueous emulsion applied in three layers such as Hempel or similar. For each of the profiles constituting the roofing lattice beams, a specific dimensioning of the thickness of the intumescent paint to be applied has been carried out in order to guarantee the correct protection.



*Tender documentation render

*Tender documentation render

FOCUS STRUCTURES

# Renovation Mugello Hospital

Renovation and expansion works with seismic adaptation of the hospital facility of the Mugello Hospital - Excerpt 1: Technology center, buildings under expansion and seismic adaptation

*Tender documentation project and render: Tecnicaer, consorziata Mythos Scar - aei progetti - M&E Management and Engineering

**LOCATION**
Borgo San Lorenzo, Italy

**BUDGET**
€ 35 mln

**TYPE OF INTERVENTION**
Health

**SERVICES**
Technical improvements project

**CONTRACTING AUTHORITY**
Azienda U.S.L. Toscana centro

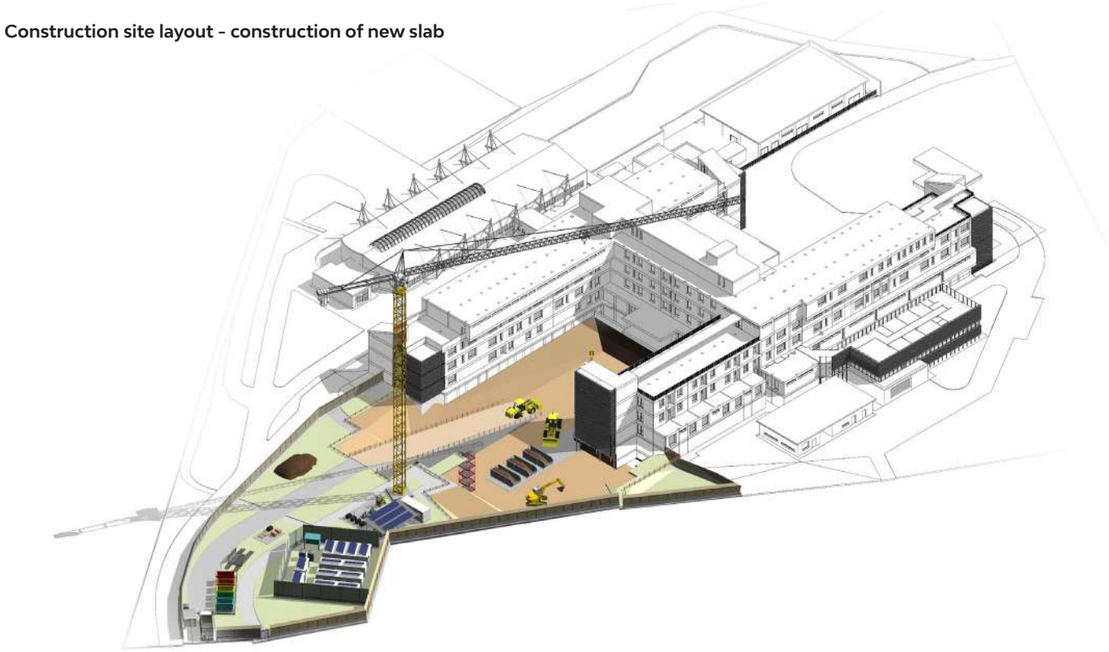
**TYPE OF CONTRACT**
Construction

**CONTRACTOR**
Nbi Spa - Webuild Group

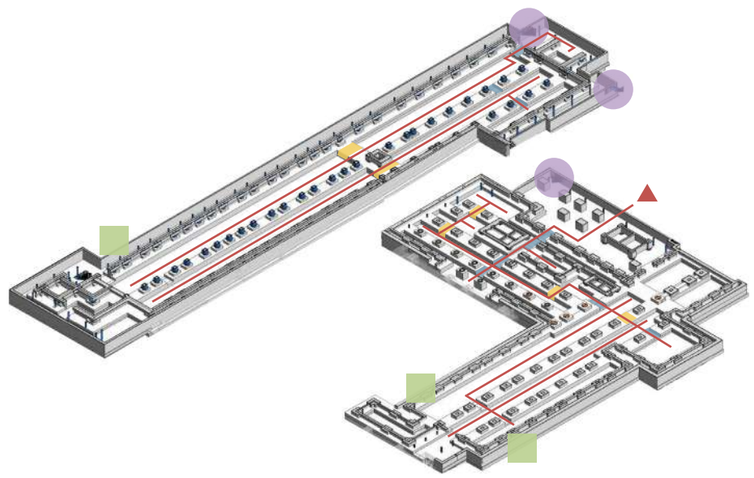
*Tender documentation render

# Optimization of structural works

**Construction site layout - construction of new slab**



**Access methods and sequence of laying of insulators**



**Inferno internal paths**

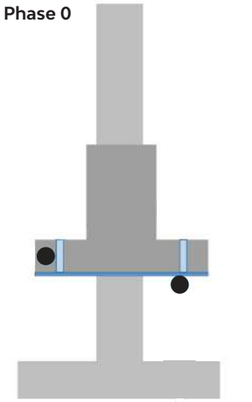
- Available routes
- Available and existing passages for the passage from one area to another
- Passages to be obtained through excavation necessary to access all the insulators
- Access ladder for construction site workers
- Installation of freight elevators useful for transporting vehicles and equipment to the infernotti
- Access ramp for construction site vehicles

In order to reduce the risk of minimum possible settlements in the loading phase of the isolators, it was considered appropriate to integrate the system of cylindrical jacks for loading the structures preparatory to cutting the pillars, with a flat jack to be positioned under the isolator.
The flat jack allows the isolator to be loaded before the cylindrical jacks for loading the structure are unloaded, thus ensuring better contact with the pillar with a reduction in the risk of minimum possible settlements occurring with other procedures.

This procedure, borrowed from the interventions for replacing structural supports for bridges in operation, guarantees a significant reduction in the risk of settlement due to settlements caused by imperfect contact between the isolator and the pillar base.

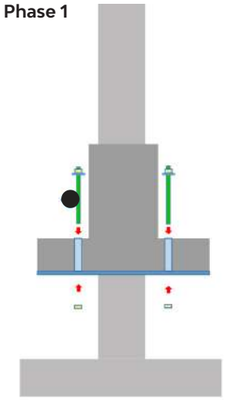
The proposed solution also aims to resolve, through a lower template, the problems of positioning, alignment and fixing of the isolators.

**Phase 0**



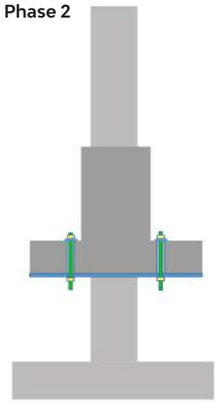
Steel tubes for housing through bars and 2 15 mm steel C-plates

**Phase 1**



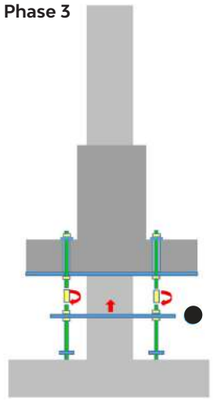
Inserting through bars

**Phase 2**



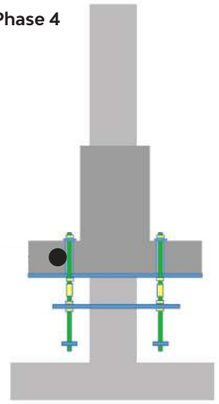
Fixing through bars with nut and lock nut

**Phase 3**



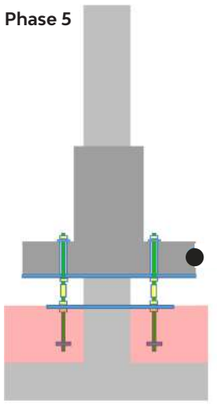
Insertion of lower template - 2 C-shaped plates in 4 mm steel and closure with sleeves for threaded rods

**Phase 4**



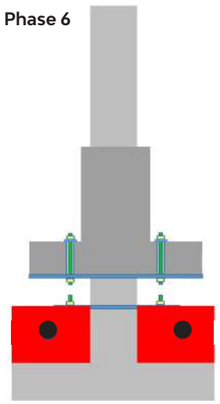
Jig fixed at the final casting height for foundation reinforcement

**Phase 5**



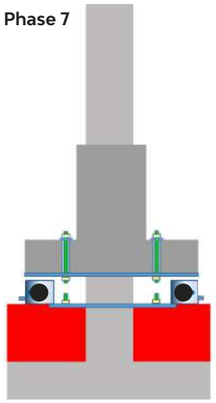
Armature and foundation reinforcement casting

**Phase 6**



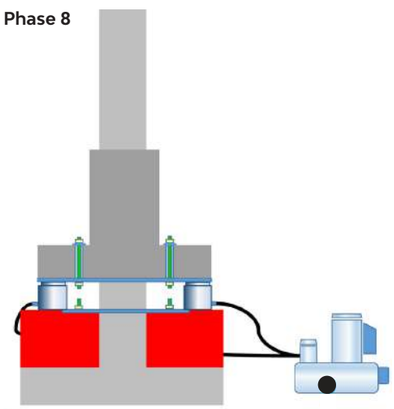
Release of sleeves and separation of the upper jig-bar system

**Phase 7**



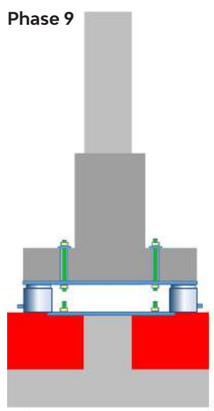
Jack placement

**Phase 8**



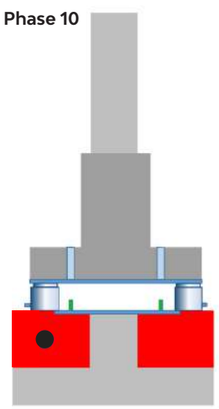
Loading the jacks

**Phase 9**



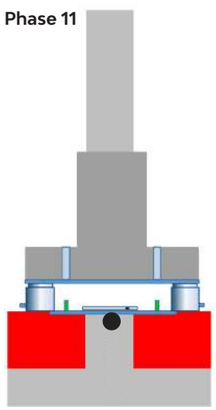
Pillar cutting using a controlled cutting saw

**Phase 10**



Removing bars and bolts

**Phase 11**



Flat jack installation

# Certifications

BIM UNI PDR 74:2019
CERTIFIED COMPANY

ISO 9001:2015
CERTIFIED COMPANY

ISO 14001:2015
CERTIFIED COMPANY

ISO 45001:2018
CERTIFIED COMPANY

UNI PDR 125:2022
CERTIFIED COMPANY

SA 8000:2014
CERTIFIED COMPANY

ASSOCIATE OF
CONFINDUSTRIA
ASSOIMMOBILIARE

MEMBER OF
OICE

MEMBER OF
EFCA

MEMBER OF CNETO
CENTRO NAZIONALE EDILIZIA
E TECNICA OSPEDALIERA

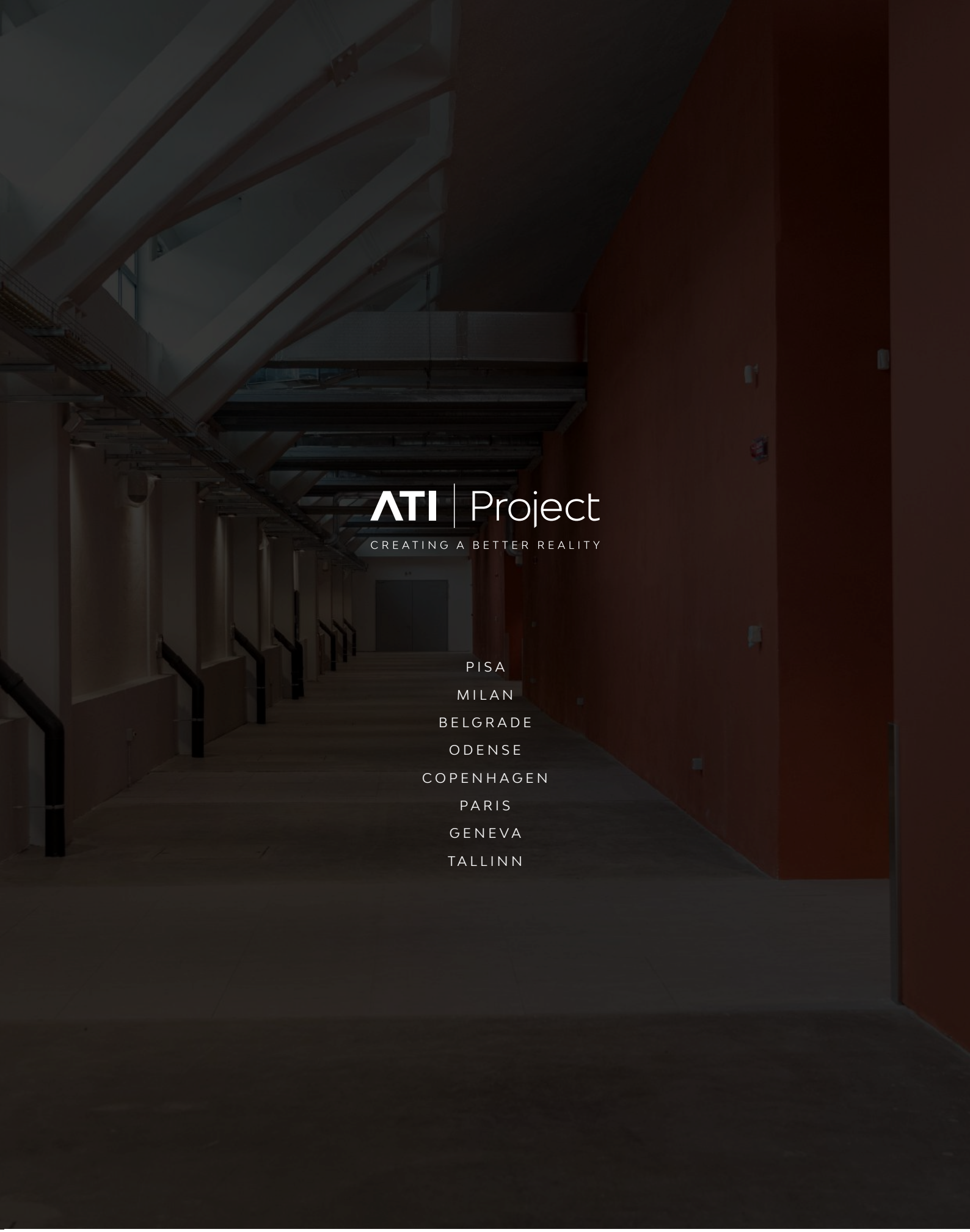
MEMBER OF GREEN
BUILDING COUNCIL ITALIA

LEGAMBIENTE
IDENTITY CARD

BIM QUALITY
ENVIRONMENT POLICY

SOCIAL RESPONSABILITY
POLICY

GENDER EQUALITY
POLICY



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