



ZERO  
GRAVITY  
EDEN®

theverticalgarden









# VERTICAL GARDEN MODULES

ItalMesh, which has always supported the use of environmentally sustainable technologies with low environmental impact, has signed Zero Gravity Eden, a green project supporting sustainable architecture.

Expanded metal mesh is transformed into a true vertical garden. These are green walls designed to cover buildings with the aim of optimizing the building's energy and insulation performance and improving its aesthetics.

The product, patented since 2016, includes an automatic irrigation system and provides for the cultivation of multiple species of plants, researched and selected to guarantee maximum resistance to the climate of the area of installation.



The company has a green heart, not only given by all the ecological initiatives carried out within its production, but also for the products developed with a green perspective.



## TECHNICAL DETAILS

- Modular system with structure-independent panels;
- Automated irrigation for each individual panel, supported by a wi-fi connection to the nearest weather station that guarantees the right water supply to crops with constant remote control and management;
- Excess water recovery;
- Customized panel sizes according to project and customer requirements;
- 100% Made in Italy certified and recyclable aluminum panel;
- Quick and modular anchoring system for easy installation;
- Powder coating guaranteed 20 years against corrosion, available in a wide range of customizable colors.



## ZERO GRAVITY EDEN BENEFIT

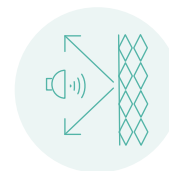
### THERMAL INSULATION

Zero Gravity Eden modules thermally insulate the walls of the entire building, dispersing heat in the summer months and retaining it in the winter months. Tests carried out on the product showed a temperature difference between the front of the panel and the rear of almost 20°C. This is because part of the solar radiation is absorbed by the panel and is not transmitted to the building behind. This new patented technology therefore allows for significant energy savings.



### ACOUSTIC INSULATION

As plants are natural acoustic insulators, Zero Gravity Eden also acts as a sound-absorbing barrier. Noise attenuation is enhanced by the depth of the panels.



### INCREASING GREENERY IN URBAN AND INDUSTRIAL AREAS

Green becomes the protagonist, improving the environment of the surrounding areas. It enables climate mitigation and air purification and improvement. Plants help filter the air naturally, absorbing pollutants in the atmosphere. Not to be overlooked is the psychophysical well-being given to the human body by living in a green environment.



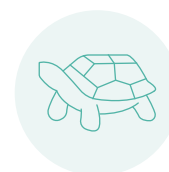
### MADE IN ITALY

The panel is produced and assembled in Italy with certified raw materials.



### GUARANTEED LONGEVITY

Zero Gravity Eden is designed and tested to last. With the help of professionals, the best plants are chosen that best suit the installation environment. However, there is the possibility of changing the plant part by having a new vertical garden and starting a new life cycle.









## GROWTH PHASES

MAY



JUNE



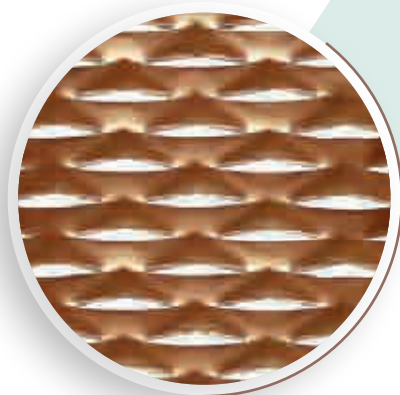
## MAINTENANCE

Vertical garden modules are easy to maintain. A gardener is required once or twice a year for maintenance and pruning, depending on the type of plants and the effect desired by the customer.

APRIL



MARCH





# INSTALLATION POSSIBILITIES





# INSTALLATION POSSIBILITIES



PUBLIC



PRIVATE



INDUSTRIAL



# OUR PROJECTS

The garden  
from background  
to protagonist









**ITALMESH**

LOCATION  
Montirone, Brescia – Italy



# ZERO GRAVITY EDEN

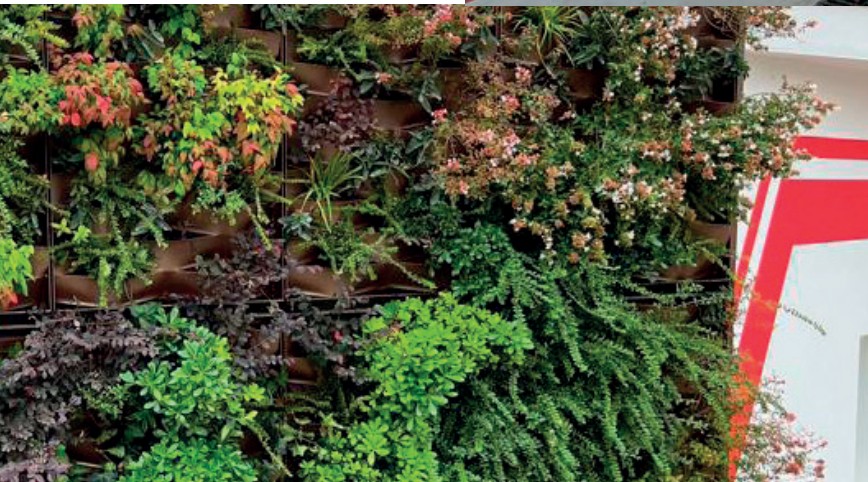
OFFICE  
REQUALIFICATION

LOCATION  
Donoratico – Italy





# ZERO GRAVITY EDEN



## STADIUM OFFICES

LOCATION  
Monza - Italy



# ZERO GRAVITY EDEN

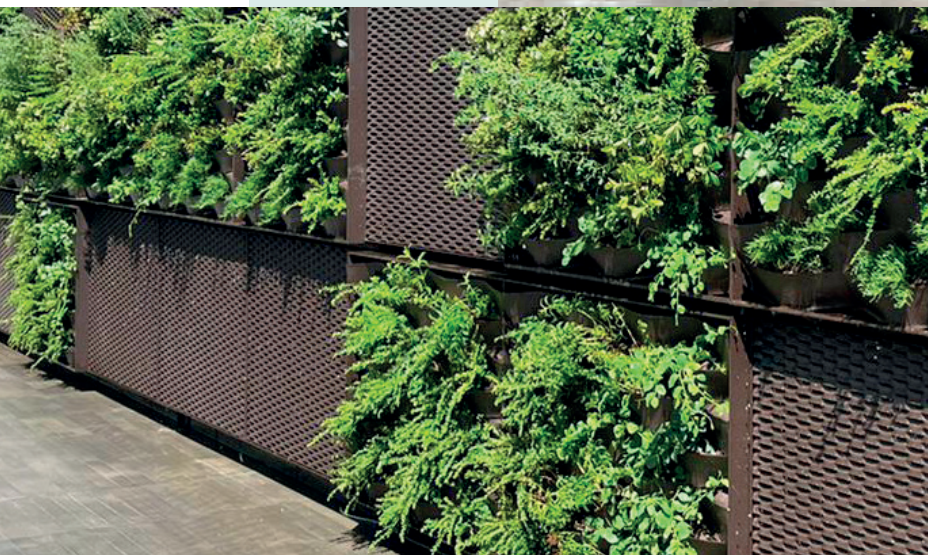


**COMPANY  
REQUALIFICATION**

LOCATION  
Brescia – Italy



# ZERO GRAVITY EDEN

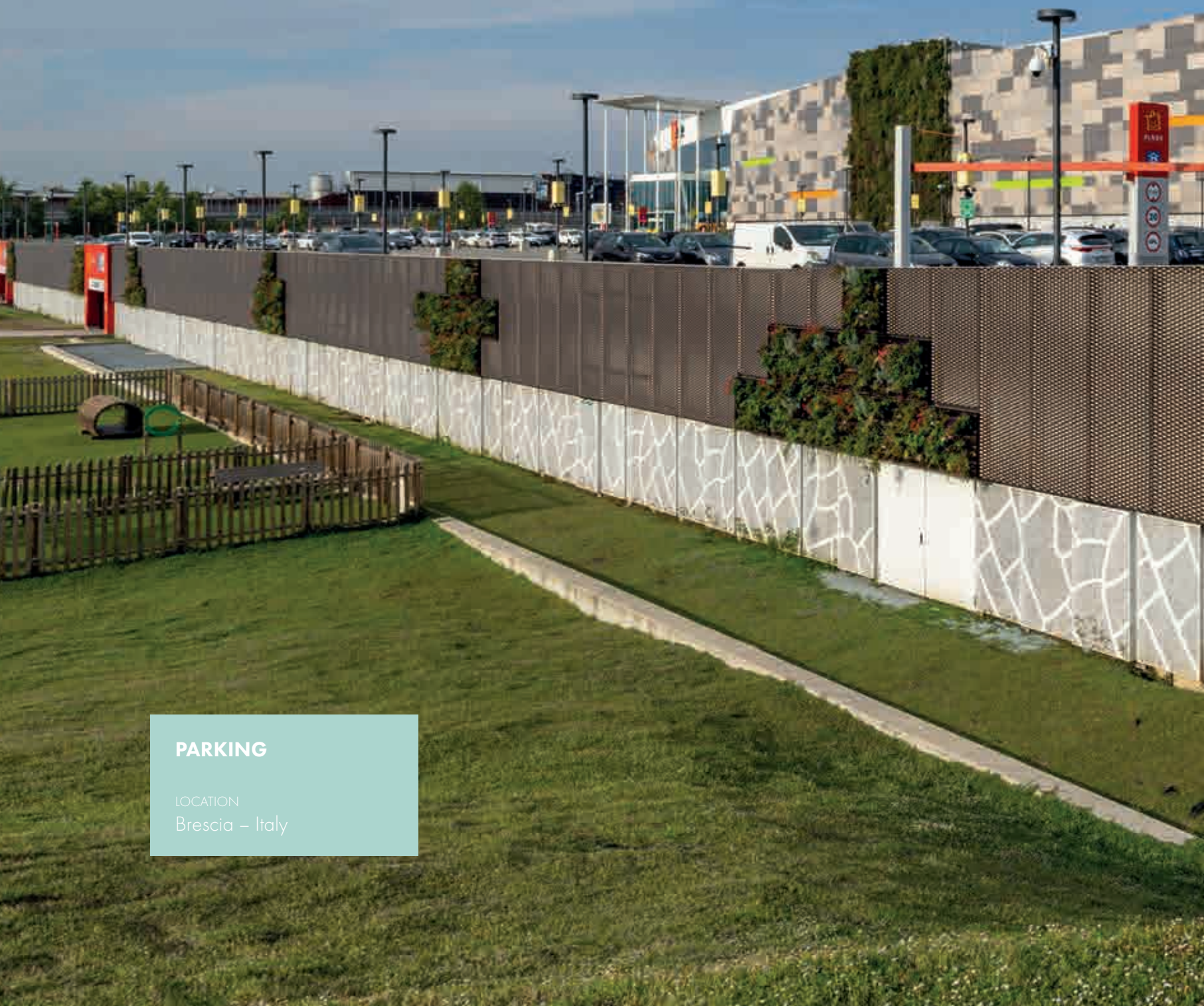


## PRIVATE VILLA

LOCATION  
Soiano del Garda – Italy



# ZERO GRAVITY EDEN



## PARKING

LOCATION  
Brescia – Italy







# ZERO GRAVITY EDEN

## BONSIGNORI INSTITUTE

LOCATION  
Remedello  
Brescia – Italy



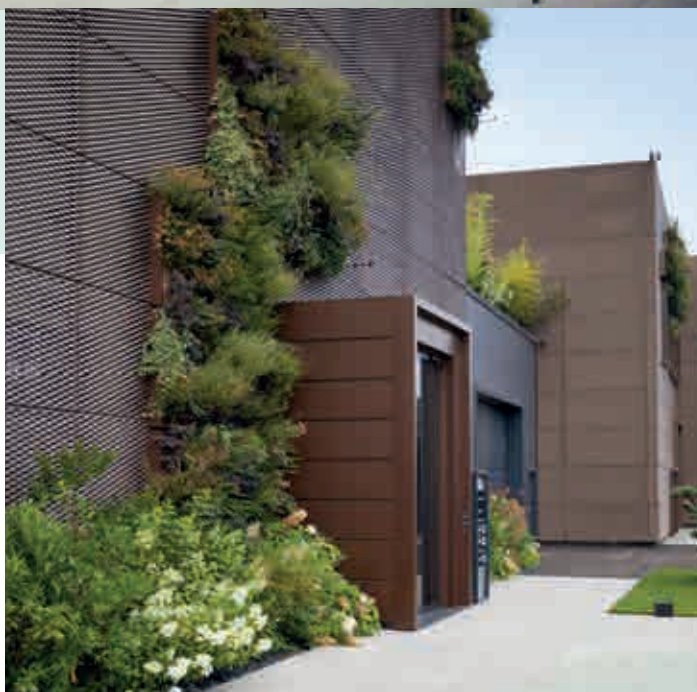


# ZERO GRAVITY EDEN



**COMPANY  
RIQUALIFICATION**

LOCATION  
Bergamo – Italy





# ZERO GRAVITY EDEN



## COMPANY FAÇADE

LOCATION

Novara - Italy





# ZERO GRAVITY EDEN



## MARTINENGO PALACE: MONDRIAN INSTALLATION

LOCATION  
Brescia – Italy



# ZERO GRAVITY EDEN



**MEET**  
**Digital culture centre**

LOCATION  
Milan – Italy



# ZERO GRAVITY EDEN

## PARCO DELL'ACQUA

LOCATION  
Brescia - Italy





## DESIGN AND ENGINEERING



**In addition to the design study, ItalMesh provides the customer with the study of the details and feasibility of the project.**

ItalMesh follows the customer in the realization of its project through all phases, from concept to design, engineering, product realisation and installation. The team of agronomists and landscape architects supports the customer in choosing the best plants and seeds for the creation of the vertical garden considering the climate and exposure of the installation.

The team supports in the phases of:

- Structural calculations;
- Dimensional calculations;
- Mock-up realization;
- On-site supervision;
- Post-laying maintenance

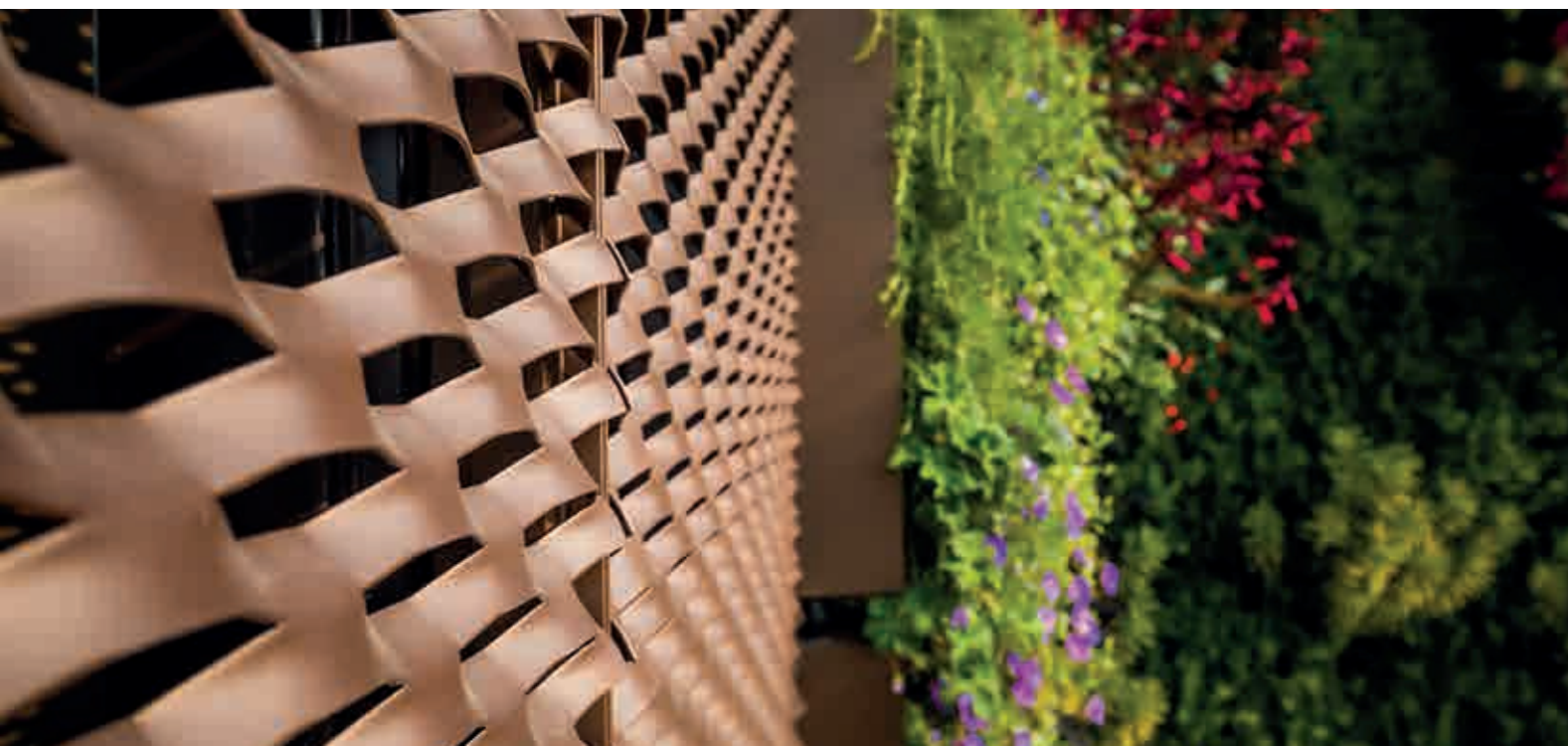


# MISSION

**The ItalMesh team is committed to a global campaign on urban, industrial and private requalification that multiplies the presence of green in cities and at the same time contributes to the reduction of CO<sub>2</sub> emissions.**

ItalMesh believes in and works for a low environmental impact economy aimed at present and future generations to build a system in which sustainability is the focus of daily life. The company works in different markets and is turned towards the future: it constantly seeks new materials and new installation systems to make the product more

versatile and easy to apply. ItalMesh's mission is therefore to pursue objectives that improve present and future living conditions, minimizing environmental impact and at the same time trying to find the right balance between aesthetics, innovation and versatility.





## RESEARCH WITH UNIVERSITY

Since 2019, ItalMesh has been supporting scientific research in collaboration with the Milan Polytechnic.

At the Polo Universitario di Milano and the Athalassa Campus of the Cyprus Institute, several Zero Gravity Eden modules have been installed. Tests on vertical gardens focus on the constant detection of benefits against air pollution.

The research team focused on integrating biodiversity within urban centers and quantifying the positive impacts of Zero Gravity Eden modules in terms of environmental sustainability.

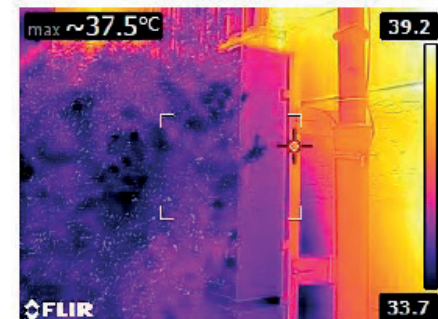
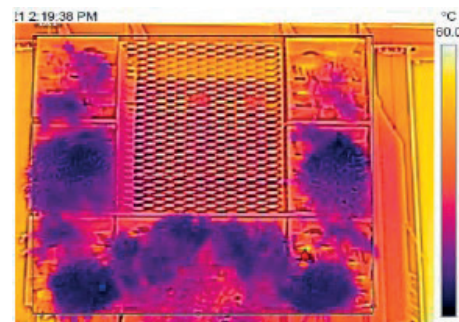




# RESEARCH GOAL

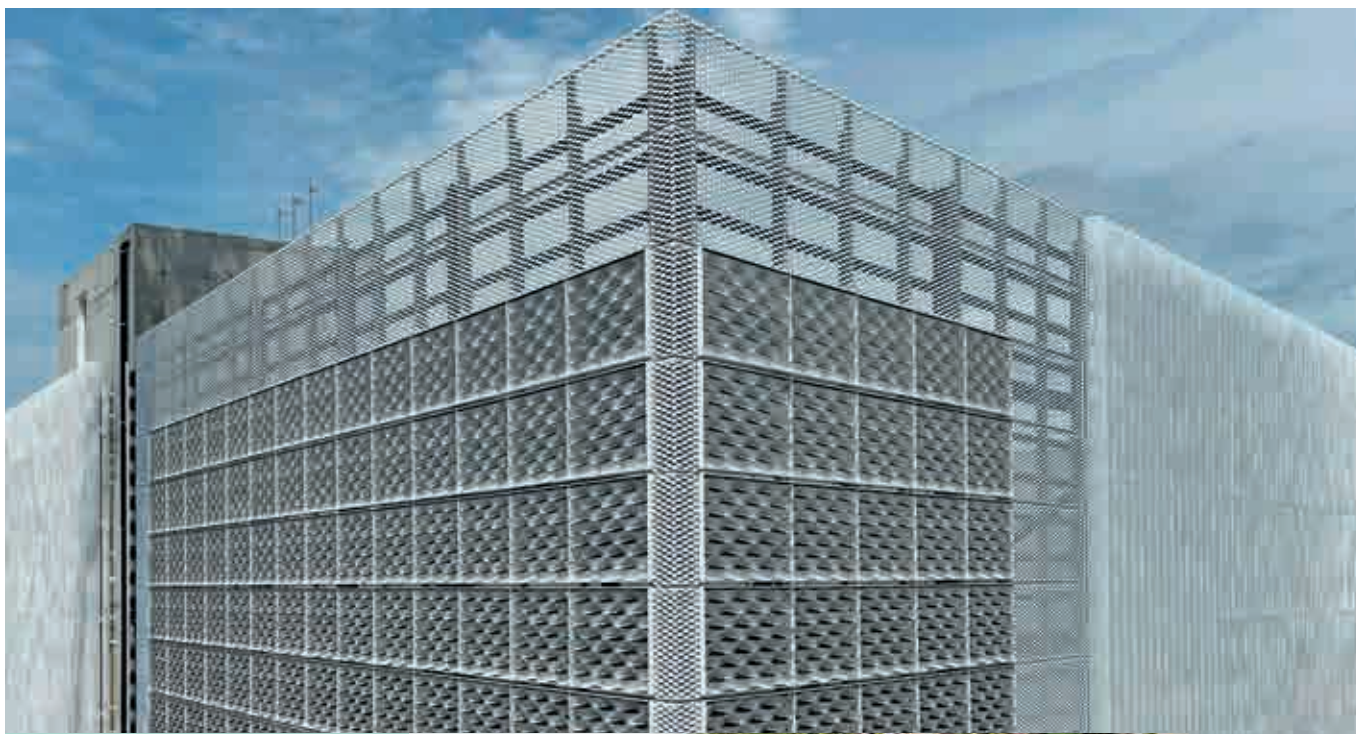
- Sound absorption study;
- Thermal absorption study;
- Pollutant emission reduction index study through application of the Vertical Garden;

- Feasibility study of the intervention, in terms of economic sustainability and practical feasibility;
- Type of planting of the Vertical Garden in different climatic conditions: Developing standards to be proposed in hypothetical 4/5 different climatic scenarios.





# WORK IN PROGRESS



## PREALPINO

LOCATION  
Brescia – Italy







ItalMesh





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