



innovative living facades

www.eco-facade.com | www.ekofasady.pl



New Home of The Witcher in Warsaw





Lublin Metropolitan Station

civil buildings

Green facades are an innovative solution that involves covering vertical surfaces with vegetation. They perform exceptionally well in public buildings such as train stations, government offices, and hospitals. Green walls improve air quality, reduce noise, and provide natural thermal insulation, which translates into lower energy costs. They also have a calming effect, enhancing users well-being while promoting pro-ecological values.





Hotel Apart in Świnoujście



Pipelife Headquarters



Residential Complex in Kraków

residential buildings, businesses, and many more

Plant facades in hotels, office buildings, and residential complexes enhance the prestige of properties, creating a modern and eco-friendly image. Green walls improve the microclimate, foster creativity and user comfort, and attract customer attention. Thanks to their modular systems, they are easy to install and maintain, while their aesthetics highlight the unique character of each space.



Hotel Apart in Świnoujście

How is it made?

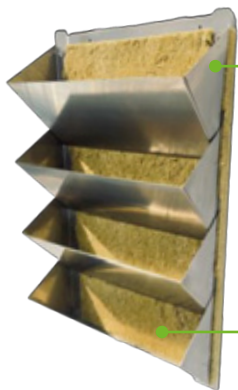
1. Technology

EcoFacade is an innovative solution in the field of sustainable construction, enabling the creation of living, green facades. The system is based on modules made of stainless steel with a rockwool insert, ensuring not only durability and efficiency but also fire safety.

Technology Overview

The module is a smart blend of durability, efficiency, and aesthetics. Designed with sustainability and user comfort in mind, it delivers long-lasting performance while enhancing the visual appeal of any space. Below, you will find the key features of our product.

Construction Materials

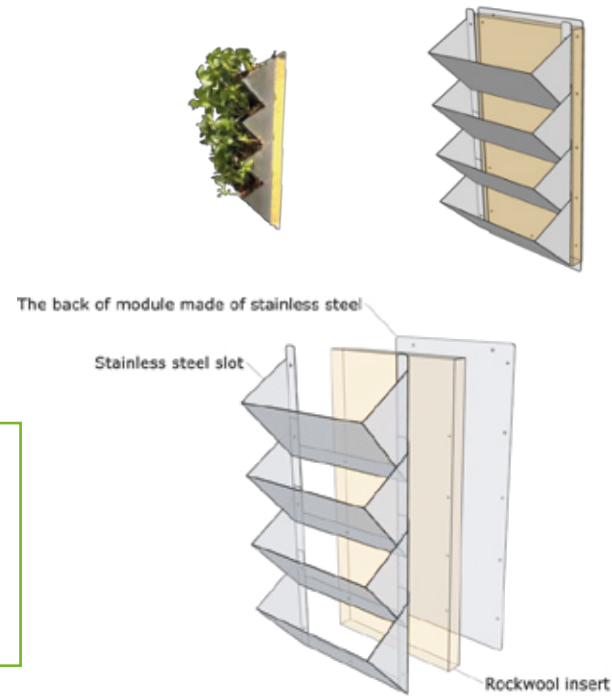


Austenitic Stainless Steel

This type of stainless steel ensures exceptional corrosion resistance, which is crucial for the system's longevity. Austenitic steel is also highly valued for its strength and durability, making it an ideal choice for outdoor applications.

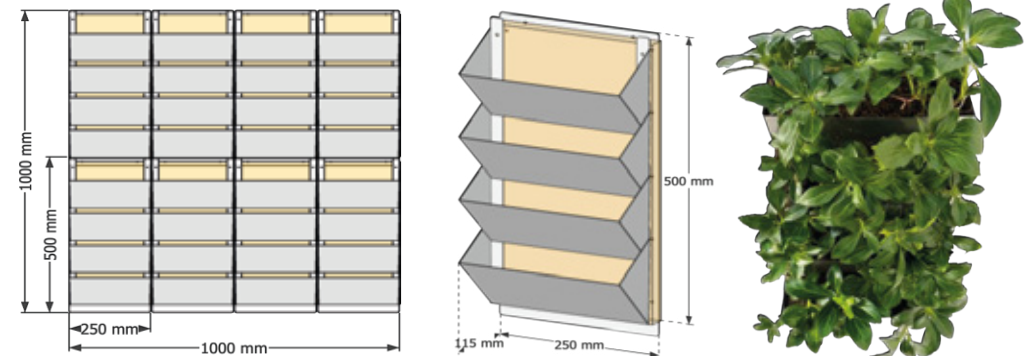
Rockwool Insert

As a growth medium, rockwool provides excellent conditions for healthy plant development. It supports optimal root growth and maintains proper moisture balance, while allowing effective air circulation — a key factor in preserving the vitality and longevity of green walls.



Dimensions and Configuration

A single module measures 25 cm in width and 50 cm in height, allowing flexible design of walls in various sizes and shapes. The modules can be freely combined and adjusted to fit any required dimensions, giving architects and designers full freedom in creating unique facades. Each square meter of the system contains 64 plants, ensuring a dense and visually appealing green surface. The fully saturated modular system weighs approximately 60 kg/m².



2. Construction and Installation

Construction

The construction and installation of **Eco-Facade** modular system combine innovative technologies with simplicity of assembly, ensuring the durability and functionality of each component. For the installation of the facade vertical garden system, we apply proven ventilated facade construction technologies.

Installation

The structure consists of load-bearing and wind brackets, L-shaped vertical profiles (Fig.1), and Z-shaped horizontal profiles. Brackets are fixed with chemical or mechanical anchors, depending on the type of supporting wall surface. The modular system is then mounted onto the Z-profiles with self-drilling screws (Fig.2).

The design takes into account all potential loads, including the weight of plants, substrate, and retained water, ensuring durability and safety.



Fig. 1

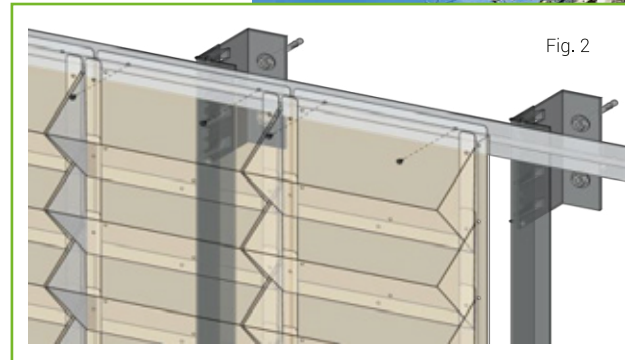
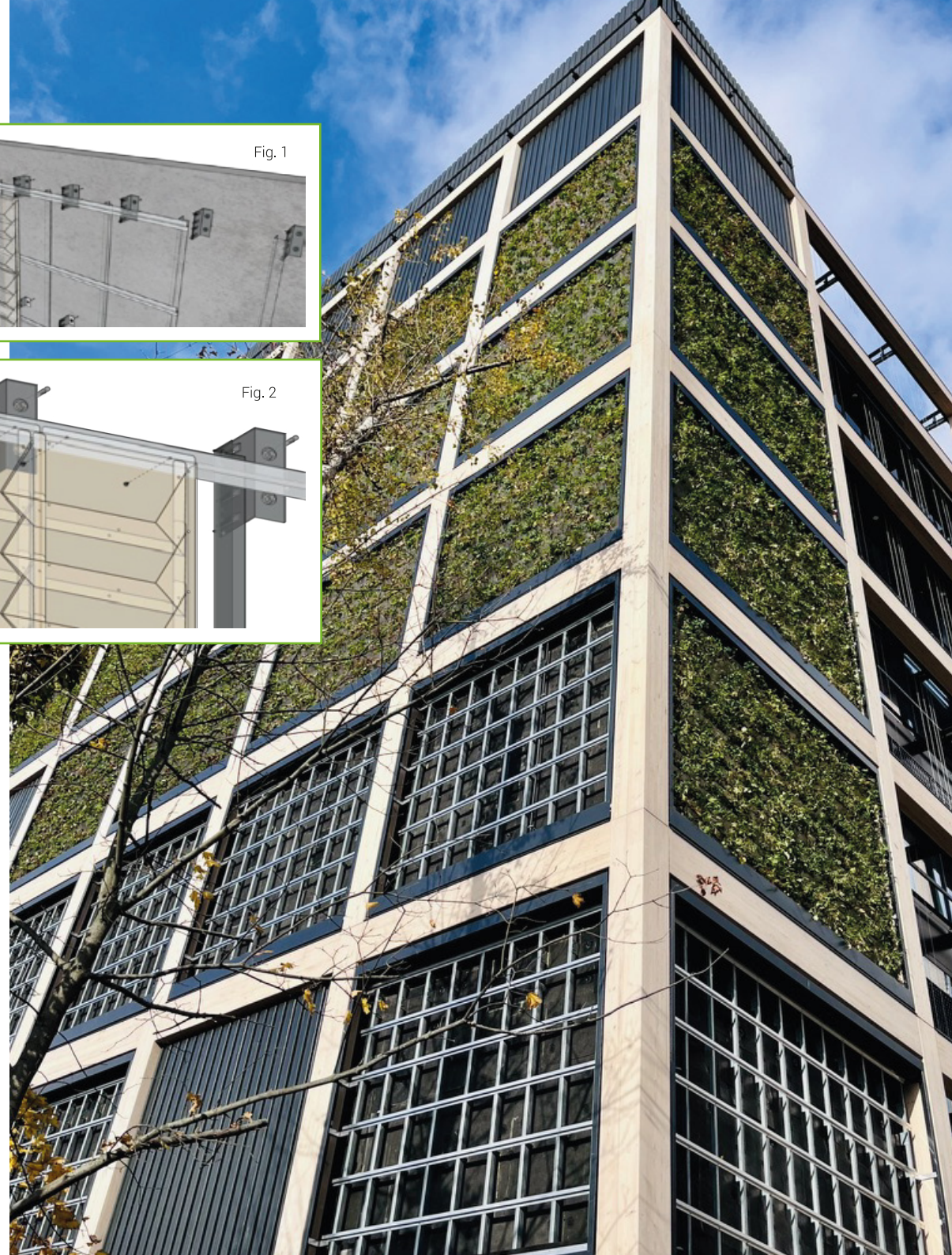
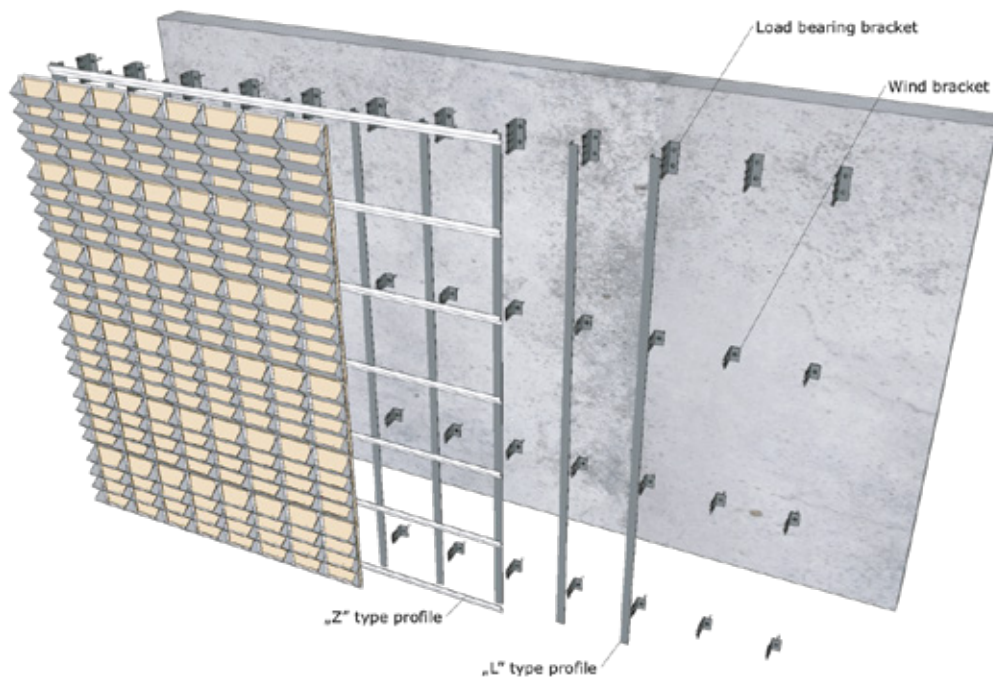
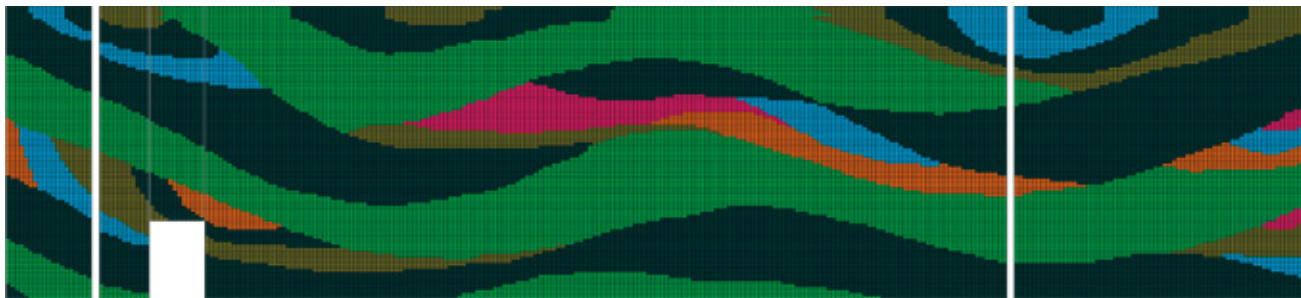


Fig. 2





Nazwa łacińska | powierzchnia nasadzenia | procentowy udział rośliny na powierzchni ściany

Rośliny zielonobiałe

1. *Bergenia cordifolia* 22 m² (8%)

2. *Pachysandra terminalis* 119 m² (41%)

Rośliny półzielonobiałe

3. *Geranium macrorrhizum* 113 m² (38%)

4. *Geranium x cantabrigiense* 12 m² (4%)

5. *Brunnera macrophylla* 9 m² (3%)

Rośliny sezonowe

6. *Hosta 'Halleys'* 10 m² (5%)

Łączna powierzchnia zieleni - 290 m² - nasadzenia roślin 96 szt. / m²
Łączna ilość roślin - 26666 szt.



1



2



3



4



5



6

3. Cultivation and Design

Cultivation

Before installation on a building, it is considered good practice to pre-plant and cultivate the modules at a nursery. During this stage, plants are given the opportunity to establish their root systems and adapt to vertical growing conditions. This approach significantly reduces the risk of plant loss after installation and ensures that the green wall will remain healthy, dense, and visually attractive from the very beginning. While this process is not strictly required, it represents a recommended best practice to guarantee long-term performance and reliability.

Design Process

Location Selection:

When choosing a site for a green wall, it is important to consider sun exposure, shade, and local climate conditions. The system should be adapted to the specific environment of the chosen location to ensure optimal growing conditions for the plants.

Plant Selection:

A key factor is choosing plant species that are suitable for the light, humidity, and temperature conditions of the installation site. It is important to ensure species diversity, promoting biodiversity while creating an attractive appearance throughout the year. Plants should be well adapted to the local climate. Our designs aim to delight year-round by incorporating evergreen species that maintain visual appeal in every season.

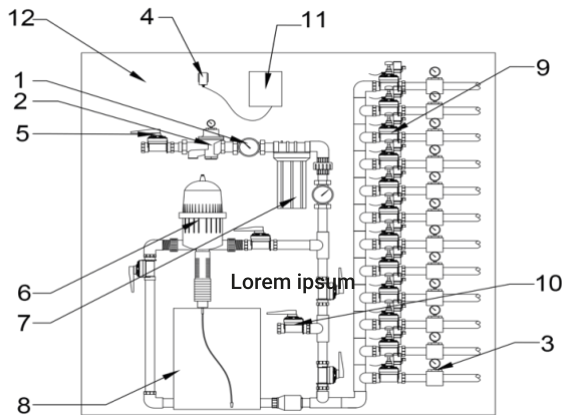
4. Irrigation System

Irrigation System

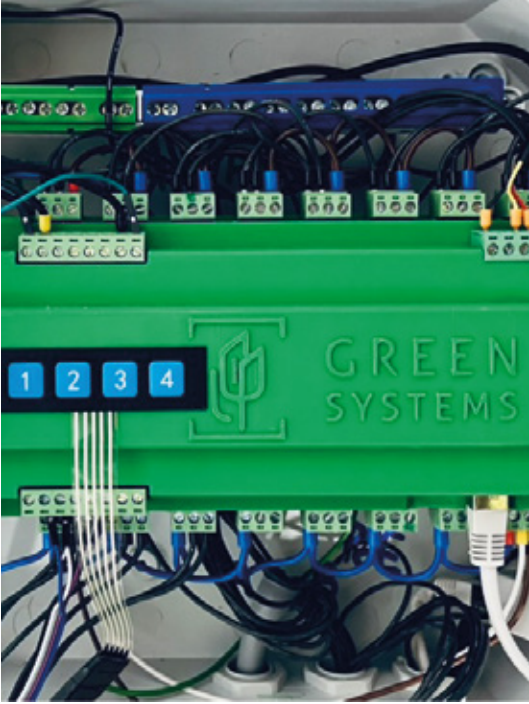
The module structure has been designed to minimize the risk of plant dehydration. The hygroscopic properties allow to absorb water, which is then taken up by the plants, while also allowing air to reach the roots. However, for the proper functioning of a green wall, a well-designed irrigation system is essential.

At our company, irrigation is designed from scratch, including a controller that can incorporate advanced functions such as automatic system drainage before the winter season. The standard control box measures 100 × 100 cm. The installation site for the box requires both a water and power supply, typically a ¾" water valve and a standard 16-amp socket.

The water demand for 1 m² of green wall is 32 l/m², with an average consumption of around 2.5 l/m² per cycle.



1. Water Meter
2. Pressure Reducer
3. Manometer (Pressure Gauge)
4. Electrical Socket
5. Main Shut-Off Valve
6. Fertilizer Dispenser
7. Water Filter with Replaceable Cartridge
8. Fertilizer Container (used during fertilization process)
9. Solenoid Valves
10. Shut-Off Valves
11. Multi-Section Timer Controller
12. Irrigation Box



5. Fire Safety and Certification

Our modular green wall system is designed and tested with fire safety in mind. The materials used, including the supporting structure and substrate, meet stringent fire resistance standards required for building applications. Certified in accordance with relevant European norms, the system provides architects and investors with the assurance of compliance, safety, and durability.



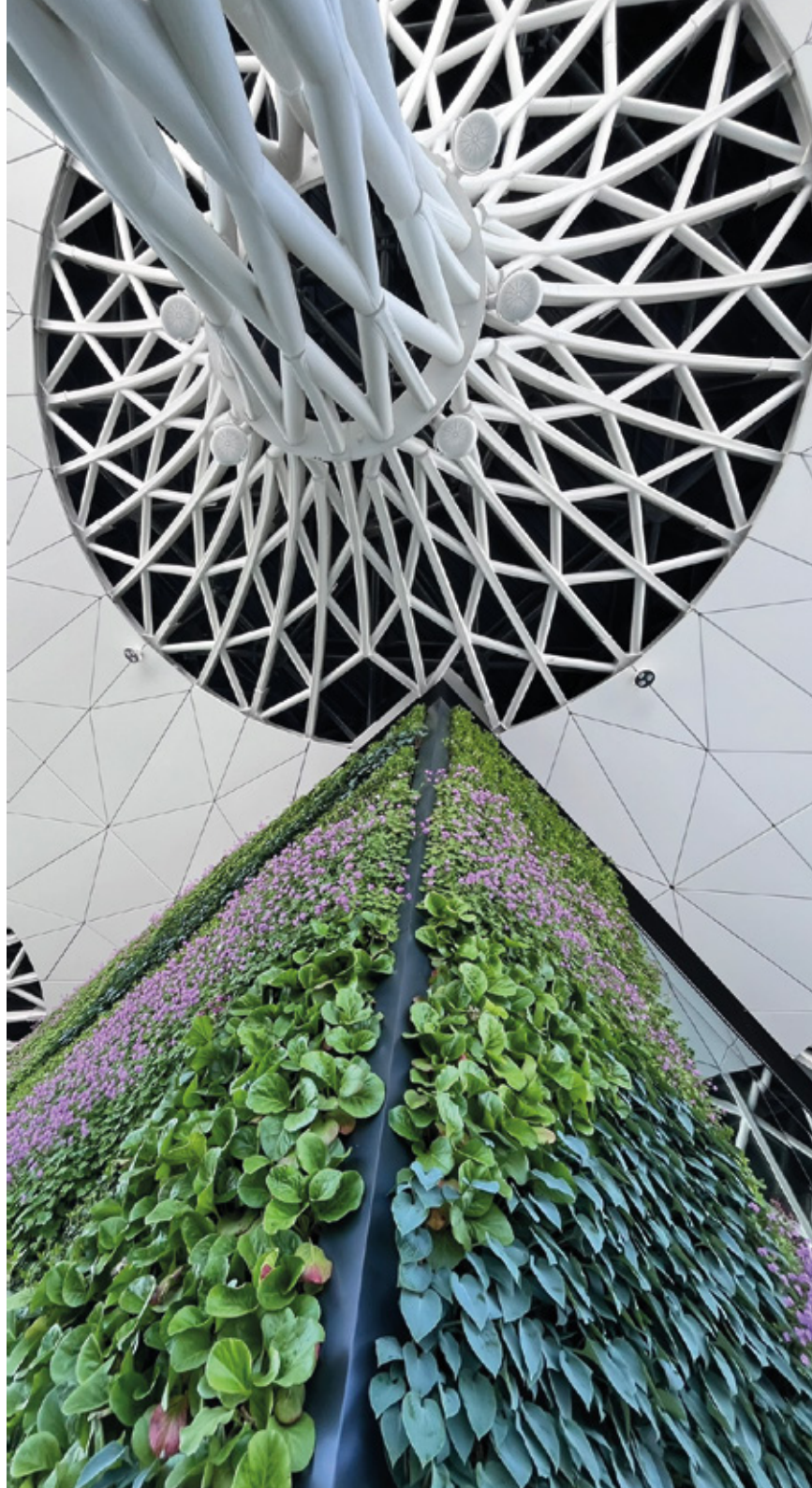


6. Service and maintenance

Every green wall requires at least minimal maintenance. It is recommended to plan access to the vertical garden already at the design stage — ideally through a lift or facade cradle. Rope access is also possible.

As a best practice, the wall should be maintained by a professional company that can monitor the irrigation system and ensure proper plant care. This approach guarantees the long-term health and appearance of the green wall.





Thank you,
and we look forward
to hearing from you.

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