

COMPARATIVE ANALYSIS

In an Industry Searching for Innovation, Sagegreenlife is Emerging as the Clear Leader

The living wall industry is characterized by unsophisticated systems with limited intellectual property, high plant replacement rates, inefficient water usage, poor aesthetics, inflexible scalability and limited climate adaptability. In a world where sustainability and green space is a growing priority, Sagegreenlife is revolutionizing a cottage industry with its intellectual property and advanced technology committed to bringing nature into any environment.

Industry Overview

Tray



Container



Pot Rack



Tray



Felt



Patrick Blanc

Trellis



Moss



Artisan MOSS®

System Overview | Tray



Modular systems that use metal compartments or plastic trays that are filled with engineered soil mix and pre-grown in greenhouses.

The Problem:

The tray systems are comprised of segmented compartments that create an engineered obsolescence as the compartment **limits the plant's ability to continually grow and expand its root system**. The plant will eventually become root-bound and die.

Our Solution:

The Sagegreenlife system is a sustainable & long-lived system, with little limitations for plant growth. Plants can utilize the whole Biotile™ and the drainage mat to continually expand its root system. This allows plants to establish themselves and grow to maturity.

System Overview | Container



A support structure is erected that holds a series of planting units. This category is very similar to Tray systems but each planting unit isn't segmented. Containers also use an engineered soilless mix.

The Problem:

Over time this degradation of the soil will **require the containers to be removed and replaced**. The soilless mix used in containers is a constantly changing substrate, as it ages the horizontal layers separately with the smaller organic particles constantly moving to the surface and large particles settling toward the bottom.

Our Solution:

Rockwool consists of long fibers of stone, it's chemically and biologically inert so it will never decay or lose it's unique composition. **Ensuring there will be no need for replacements.** The patented Biotile™ utilizes rockwool as it's main growing substrate. Rockwool is 100% natural substance, made from volcanic basalt rock and has been used in the hydroponic growing of plants since 1970.

System Overview | Pot Rack



A series of plastic bins are attached to a support structure. The bins hold a number of potted plants with a water reservoir at the base from which the potted plants wick up water

The Problem:

The individual pots limit the plant's ability to continually grow, **increasing the cost of maintaining this system over time**. Potted plants have a determined life span until issues arise. Eventually the plant becomes root-bound and dies. Plants in pots never develop fully and the installation never reaches its full potential.

Our Solution:

The cost of plant maintenance actually decreases over time with the Sagegreenlife system due to minimal replacement. Sagegreenlife system is a living landscape that will get more complex and interesting as it matures. The Biotile™ creates an excellent environment to maintain plant health, allowing plants to grow and reach maturity.

System Overview | Felt

Patrick Blanc



Synthetic felt attached to a support structure. All felt systems are planted onsite.

The Problem:

Felt systems inefficiently consume water and typically act as living waterfalls. Water is constantly being supplied to the top and then gravity pulls excess water to the bottom. The felt is exposed to the ambient air so water is constantly evaporating off. This is a major issue in any areas that see water use restrictions.

Our Solution:

Sagegreenlife's system is the most water conserving system in the world. Each Biotile™ is housed in a plastic shell which limits water loss to only what the plants transpire (vapor off of the plant surface). Our standard Biotile™, which has 20 plants, typically consumes only 2 cups of water per day.

System Overview | Trellis



Trellis systems are modular support systems in which vines are planted at the base of structures to climb and create 'green screens'. Typically used in exterior applications.

The Problem:

Trellis systems are limited to the biology of vines and typically don't exceed 10' in height. Vines naturally have uneven coverage, leaving unattractive visual gaps. **Trellises are temporary 'green screens' with vines turning brown during winter and having to be cut back each spring.**

The Solution:

Sagegreenlife excels indoors, but also outside. **It is the only living wall system that was specifically developed to excel** in cities that experience 4 seasons. It out performed all competitors when tested in the cold winters of the Northeast and the summer heat of the Southwest.

System Overview | Moss

Artisan MOSS®



These are *artificial* living walls that utilize plastic plants or chemically preserved moss and lichens to recreate the look of real living plants.

The Problem:


Although they may look real, faux plants and preserved **moss walls have none of the air cleaning properties that their living counterparts have.** Faux plants are made of plastic and the moss is first harvested then chemically preserved and finally dyed back to green. In fact, most moss systems give off harmful gas and chemicals that living walls are installed to clean.

The Solution:

Sagegreenlife walls are **functional as it is beautiful. The plants in the wall act as a natural air-filtration system removing VOCs and other harmful impurities in the air.** This creates a cleaner, more invigorating work environment that leads to better overall employee health and productivity. Living walls also generate LEED and WELL Building Standard credits.

Introducing the World's Most Advanced Living Design Technology

Sagegreenlife's visually stunning, adaptable, scalable and sustainable and bring any environment to life. We are committed to building a better quality of life for our customers and to inspire healthier natural environments.



Unrivaled Aesthetics & Scalability

Sagegreenlife provides the highest level of personalization with a focus on the most attractive aesthetics. Seamless visual integration. Modular, scalable, and flexible. The ability to wrap around corners. Accommodates unique spaces. The options are endless.

Before | (Felt)



After | sagegreenlife



The Industry's Lowest Cost of Ownership & Maintenance

Our Biotile™ is 100% recyclable, and our rockwool base does not decay over time. A real advantage over maintenance requirements of soil-based systems and up to 95% plant survival with proper maintenance.





CHICAGO, IL

Chicago | Winter climate
Installed | 2014



NORWAY, SCANDINAVIA

Norway | High wind
environment
Installed | 2010



ABU DHABI, U.A.E

Abu Dhabi | Extreme heat
Installed | 2013

Adaptable to Any Environment.

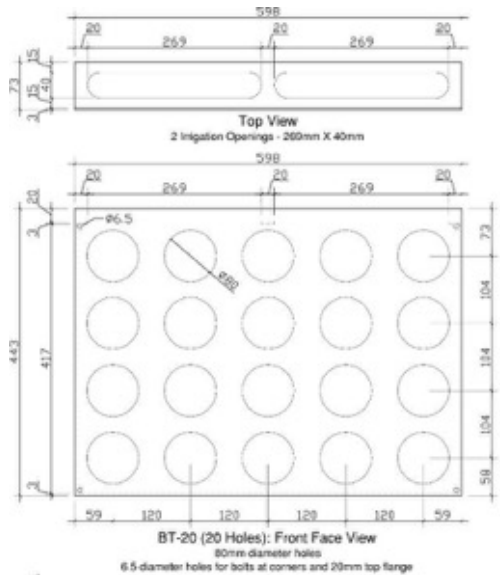
Sagegreenlife living wall systems are designed to endure challenging exterior environments: heat, cold, wind and snow. Our Biotile™ system is unique in its ability to insulate dormant plants in winter, maintaining life-protecting moisture for the longevity of the plants.



10× More Water Efficient Than Soil-Based Systems.

Sagegreenlife's self-irrigation technology distributes the perfect amount of water to circulate evenly throughout the wall.

Biotile™

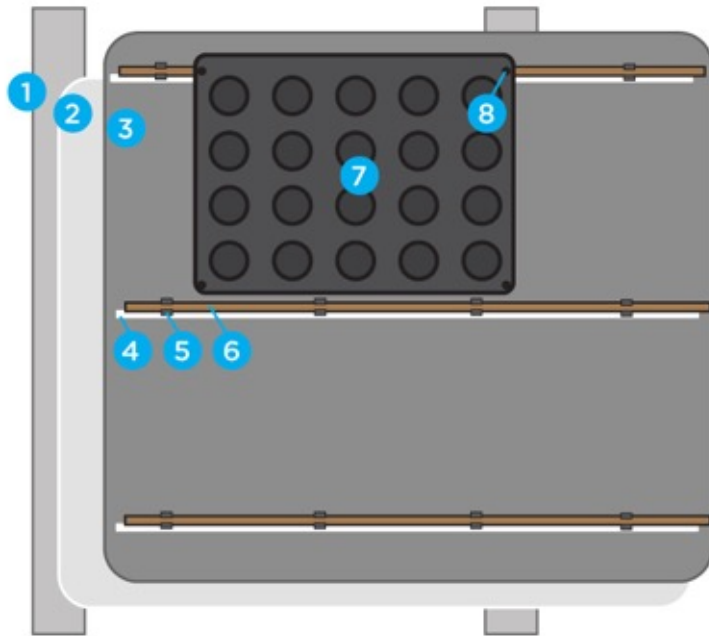


The Biotile™ is the cornerstone of our patented hydroponic wall system. These tiles use a layered basalt rock fiber known as rockwool that evenly distributes water, oxygen and nutrients and does not decay or break down over time. This provides an ideal rooting and growing environment.

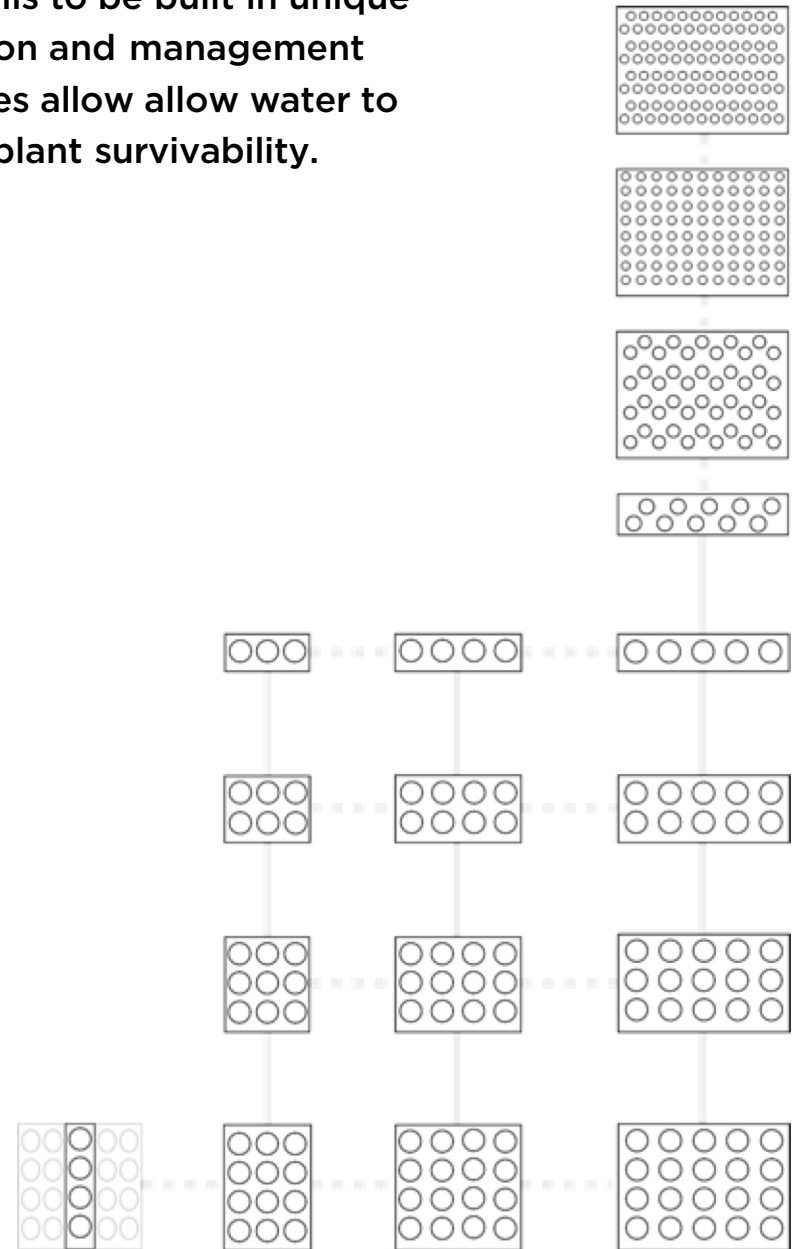
Rockwool has been used for the last 50yrs in hydroponic production greenhouses. It can be reused and recycled saving on costs. Rockwool is antimicrobial, pest-free and doesn't change size regardless of being wet dry, hot or cold.

Integrated System

The Biotile™ comes in a variety of sizes allowing for walls to be built in unique spaces and even wrap around corners. Water distribution and management are key features of our integrated system. These features allow water to circulate evenly throughout the entire wall and ensure plant survivability.



- 1 Support Framing
- 2 Waterproof Backing Board
- 3 Felt-Covered Drainage Mat
- 4 Support Batten
- 5 Snap-In Clips
- 6 Irrigation Drip Tubing
- 7 Biotile™
- 8 Attachment Hardware



VERDANTATM COLLECTION

The Verdanta™ Collection is a revolutionary living design product that exists in its own category. Elegantly designed, portable, easy to maintain and self-irrigated. Verdanta™ is the industry's only plug-in solution with built in LED grow lights. It is the perfect blend of form and function.



Third Party Comparison



Pros:

- 1) High resolution of plants per sq. ft. allows for freedom and flexibility in design.
- 2) Integrated irrigation system.
- 3) Full service system includes everything needed for greenwall including greenwall system plant specification.

Con:

Soil based system requires more maintenance due to soil erosion and increased usage.

Weight:

30lbs/sqft -Fully Saturated

Pros:

- 1) High resolution of plants per sq. ft. allows for freedom and flexibility in design.
- 2) Integrated irrigation system.
- 3) Full service system includes everything needed for greenwall including greenwall system plant specification.
- 4) Water efficient system.
- 5) Soilless based system uses rockwool instead of soil medium, rockwool will not erode over time like soil.
- 6) Fully integrated system requires less maintenance.
- 7) Proven to perform well in extreme climate conditions.

Neutral :

Hydroponic based system

Weight:

15lbs/sqft -Fully Saturated

Testimonials

For years, the design industry has tried to solve for the successful engagement of diverse plant life in interiors. For people who experience living walls – and, the design teams creating environments to support the expectations – Sagegreenlife has made the entire process easier to implement.”

Sheryl Schulze, Senior Project Director

Gensler

“Humans need the psychological and physical health benefits of being near plant life and Sagegreenlife creates products that bring this 'greenergy' into homes and into commercial spaces to make them more productive and more importantly, happier!”

Aaron Moulton, VP Creative Design



“The significance of this project requires greenwall system that functions both aesthetically and operationally at the highest level. The fully integrated modular panel system meet this criteria. The Sagegreenlife system and hydroponic technology creates a great value for it’s price point and delivers a fully integrated system that fits the environmental conditions while delivering a high level of design flexibility.”

OJB Architects for Westfield Valley Fair Mall



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