Advancing Innovation, Science NBS Technology

Making Naftali building energy neutral

Get Real!

VERTICAL FIELD

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Vertical Field, an ag-tech leading company, develops and markets NBS for food and landscaping in the urban ecosystem. Our mission is to create healthier, prettier environments that improve the quality of urban life.

ABOUT US

VERTICAL FIELD

https://www.verticalfield.com/vertical-urban-landscaping/

Review

This lecture details a review of NBS with reference to VFs' NBS case studies, includes recommendations for actions in order to increase the potential of NBS technologies in environmental standards.

Definition

NBS: nature-based solutions

innovative solutions that use natural elements

to achieve environmental and social goals

(Solomon et al., 2008).

Global challenge: CNC

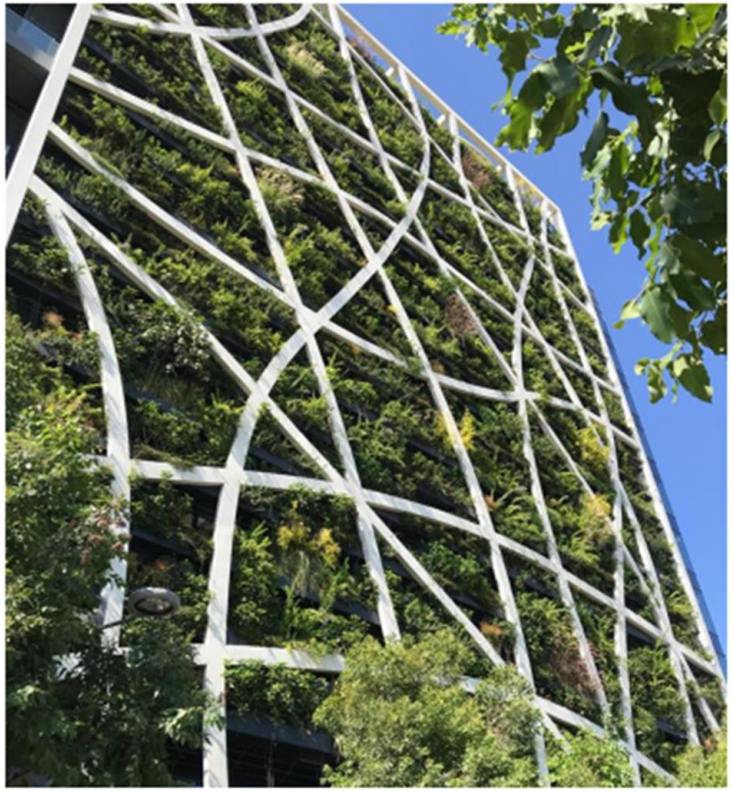
NBS can address global challenges from climate change and urbanization in a sustainable way.

By using ecosystem services, NBS are innovative solutions, offer significant potential, to provide energy and responses to climate change, to enhance our natural capital.

Innovative NBS for carbon neutral cities and improved air quality

Global challenge: CNC

Vertical Field clearly demonstrates the importance of taking a systemic approach to combine knowledge from different fields, such as urban planning, urban engineering, and public health to address complex issues in a sustainable way.



VERTICAL FIELD

Advancing Innovative Science NBS globally

NBS pilot experiment

NBS pilot experiment

Led by prof. Itamar Lensky, BIU

We are proud to be part of the first of its kind and the largest known NBS pilot experiment led by Prof. Itamar Lensky, in Bar-Ilan University, Israel.

BIU site: b-national RP. Funded by the Israeli Ministry of Science & Technology, and the Israel Science Foundation

Indoor pilot experiment

Led by prof. Itamar Lensky, BIU

האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

Together with key players from the research and industry arenas, we are collaborating to assess the direct and indirect impact of the proposed NBS on indoor and outdoor urban environments.

Our goal is to provide NBS solutions
in line with the goals of The global challenge: Carbon Neutral Cities,
and in turn, improve air quality within cities.
indoor and outdoor.

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Case Study

Check Point®
SOFTWARE TECHNOLOGIES LTD.

A famous supporting case study, using NBS for a sustainable site, is the building of the giant Check Point security software:

you can see how the retrofit process was carried out, in which buildings are upgraded, expanded and renovated, and at the same time turned green.

The classic example of this is the vertical forest like you see in the picture. This forest is vegetation walls, with a large roof garden at the building.

The large roof garden on the eighth floor

Beyond the natural and beautiful landscape we create, the green purpose of the forest of the vertical structure is the regulation of the temperature in the building, by natural means.

The large roof garden on the eighth floor provides green areas and regulates the temperatures below.

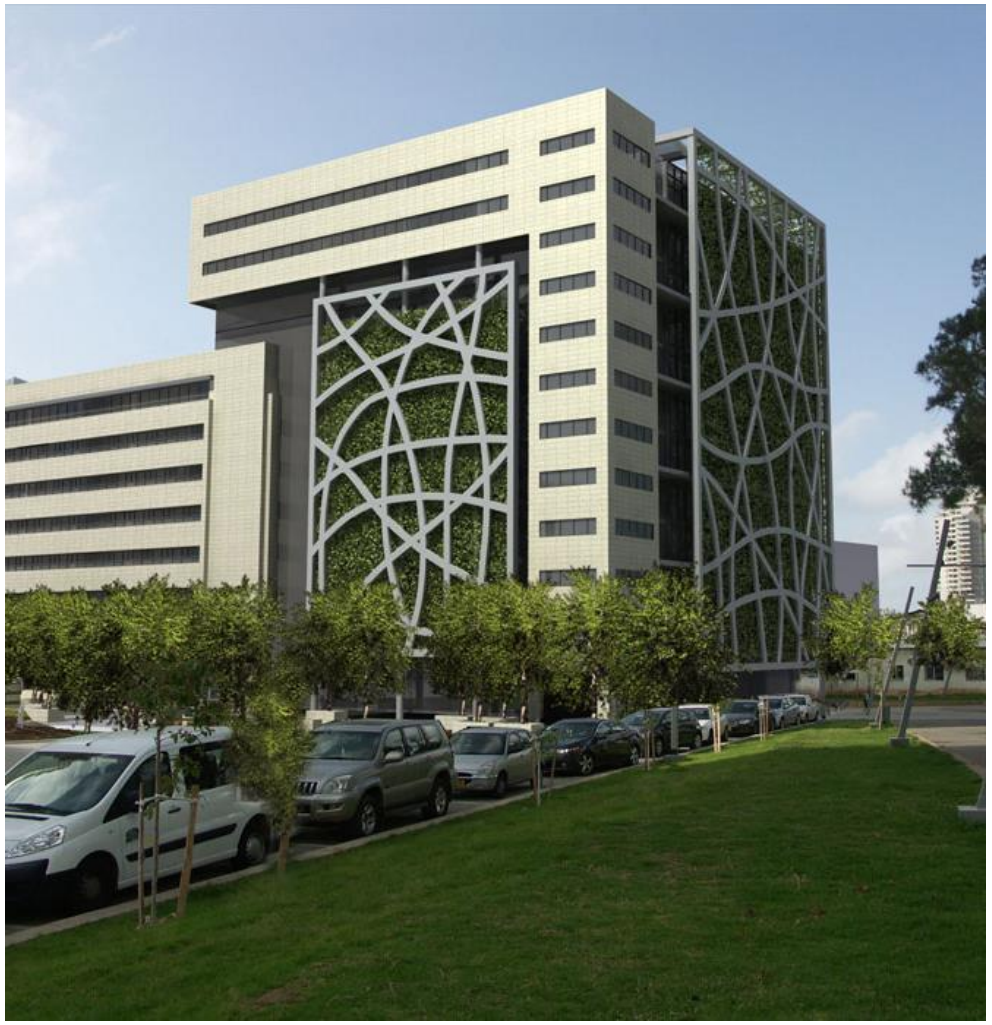
Everything here is environmental.

Check Point
SOFTWARE TECHNOLOGIES LTD.

There is a combination of shading from the sun to reduce energy consumption in the building and to regulate the temperature inside.

	Water Efficiency	
Compliance	Credit	Description
Both green walls and roofs contribute towards this credit 	WE Prerequisite& Credit: Outdoor Water Use Reduction	Contribute to reducing the project's landscape water requirement by at least 30% from the calculated baseline. Reduction is achieved through plant species selection and irrigation system efficiency.

	Energy and Atmosphere	
Both green walls and roofs contribute towards this credit	EA Credit: Optimize Energy Performance	Green walls and roofs count towards reducing heat load and air conditioning requirements which saves electricity.



The building has a greywater recycling system that waters the forest areas

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Case Study

L28 CULINARY PLATFORM

Vertical Farming , **L28 Culinary Platform, Tel-Aviv**

Start-Up Nation Central has an established and well-maintained rooftop urban farm, and L28 uses its products, for every dish on the menu; contributing to a more sustainable and livable Tel Aviv.

Fewer food trucks for transport from farms centers means less traffic, pollution, and lower food costs

Photographs: Amit Geron

2018 by Kimmel Eshkolot Architects

Vertical Farming , **L28 Culinary Platform, Tel-Aviv**

Growing understanding about the dependent relationship between our buildings, the environment, and our health, helps us create spaces that enhance, our health and well-being.

Designing buildings with evidence-based strategies, implementing nature-oriented products and methodologies can create spaces that have improved environmental impact, keep us moving, inspired, and make us thrive.

Photographs: Amit Geron

2018 by Kimmel Eshkolot Architects


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HOTEL ROTHSCHILD

Shuafat refugee camp: Urban community Farm

Case Study

Gefen Team

This project involves designing and building
of a vertical vegetation system on an outdoor wall
in the Shuafat refugee camp in East-Jerusalem.

Urban community Farm

Shuafat refugee camp RP, Jerusalem 2019

science-based solutions technologies

The overall objective of this project is to identify and estimate benefits that such NBS can provide to low-income students.
Our technology is simple to operate. The children and school staff operate the farm with great success.

We make it simple.

we now translate these benefits into measurable outcomes, such as increased wellbeing, decreased in-school violence, improvement in learning achievements, and behavioral performance.

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Indoor Urban Farm

https://www.verticalfield.com/crops-video/

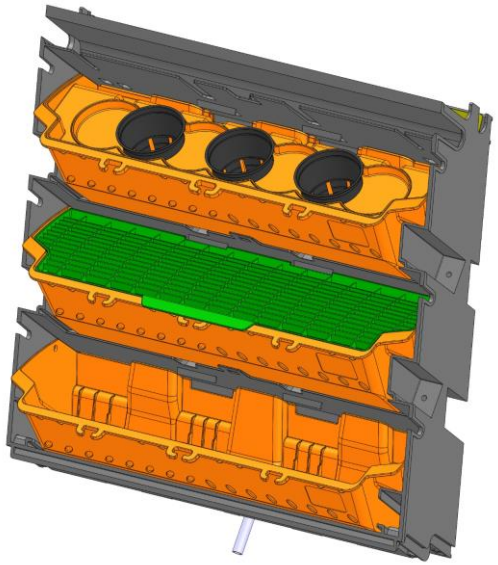
Vertical Field's Indoor Urban Farming:

Results: Harvesting Fresh Greens Year-Round On-Demand. 365 Days of Perfect Growing Conditions

Technology

Proprietary Soil-Based Growing Platform

- Smart soil-based platform
- Effective irrigation and fertilization mechanism, saving water and increase growing efficiency
- Portable platform to enable fast and easy planting and harvesting
- Effective growing density
- Versatile platform to grow different types of crops



Technology IOT SYSTEM

Proprietary IoT SW

Monitor And Manage Farm Parameters (Temp, parameters (Temp, moisture, CO2, PH, EC, wind cycle etc.) to maximize)

Integrate Agronomical Protocols

Plant Physiological Conditions

Improve Lightening Performance

Friendly UX Platform

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Recommendations

In order to achieve a sustainable site, we recommend on choosing NBS by following parameters

Want To Learn More?

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Vertical Field Ltd

2020's Award's winner

One of the 50 most innovative companies for 2020

One of the top 10 Hot Brands of 2020

2020's Israel Urban innovation

The Tenth Session of the World Urban Forum

2019's Awards' winners

One of the 30 top global valuable companies in 2019

One of the 50 best global companies to watch in 2019

Agri-Tech company of the year – Middle East

NGBS (U.S.A Green Building) certified in few categories

CUSTOMERS

Thank You