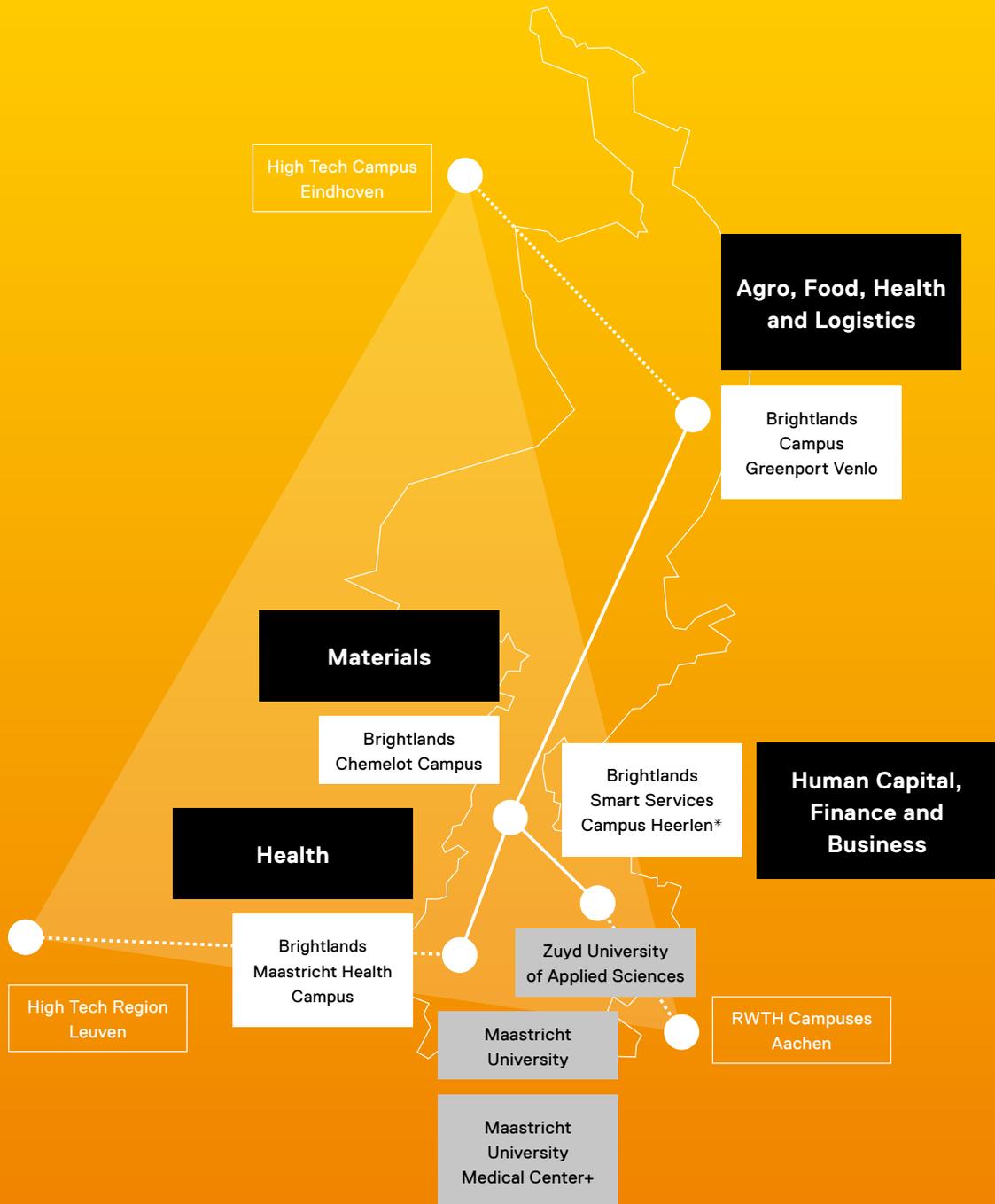

The community for high-tech market gardening

Brightlands
Campus Greenport Venlo



Knowledge crossing borders

Welcome to Brightlands



* under development

▲ TTR - ELAT
Top Technology Region
Eindhoven-Leuven-Aachen triangle

Knowledge crossing borders

There are only a few places in the world that focus entirely on achieving major, radical change. Regions where researchers and entrepreneurs jointly respond to global challenges in the fields of materials, health and nutrition. Where they work together on healthy, sustainable solutions. Cutting across scientific, geographical and organizational boundaries.

Brightlands is one such place.

Driven by the question ‘what if?’ researchers and entrepreneurs are focussing on innovative research. From fundamental research, via engineering (materials) and translational research (nutrition and health) to clinical research, marketable applications and new business activities.

The heart of Brightlands lies in the Dutch province of Limburg, which is located in the top technology triangle formed by Eindhoven, Leuven and Aachen. The region extends over the frontiers of Germany and Belgium. In this international zone, open-innovation campuses and knowledge institutions derive the maximum benefit from each other’s activities and from cross-border collaboration between fundamental and applied research, academics and business developers, (agrarian) manufacturing industry and healthcare, chemists and doctors, designers and programmers, engineers and biologists, service providers and producers, multinationals and start-ups, teachers and students.

In this international zone, open-innovation campuses and knowledge institutions derive the maximum benefit from each other’s activities and from cross-border collaboration.

Brightlands Campus Greenport Venlo

In the area around Venlo, where horticultural innovation and logistics play the lead role, the Brightlands Campus Greenport Venlo is developing into the third campus under the Brightlands umbrella. Alongside the Brightlands Chemelot Campus (Geleen), where the emphasis lies on materials, and the Brightlands Maastricht Health Campus, which focuses on health, the Brightlands Campus Greenport Venlo is doing its utmost to put the themes of food, nutrition and logistics firmly on the world stage.

Venlo is well on the way to achieving this. Situated in the middle of the second biggest single horticultural production area in Europe, Venlo is a breeding ground for new, high-tech market gardening. Entrepreneurs and researchers in food and logistics want to be where it's all happening. And that is here! With the extensive know-how available in the region, the agrarian, logistical mind-set, and the presence of companies and institutes that can take new ideas further, Brightlands Campus Greenport Venlo is contributing to the solution of global problems in the field of food safety, food security, and healthy, tasty food.

The campus links together regional companies and institutes for education, applied research and valorisation, such as Fontys Venlo, HAS University of Applied Sciences and Maastricht University (Venlo University College).

Education, research and entrepreneurship

The educational institutions in the city provide a total package of courses in food and health, logistics, economics and business administration, and technology with an extra accent on entrepreneurship. The campus itself – with the Innovatoren and Villa Flora as landmarks – offers state-of-the-art laboratories, trial sites, training and meeting facilities for students, teachers, researchers, start-ups and entrepreneurs from the region. Of course the campus also provides accommodation for growing companies and companies from elsewhere that would like to benefit from the unique strengths of the campus.



Networks

To sum up, the campus is an exceptional networking organization that links the demands of the business world, innovation activities, meetings, the development and implementation of new business concepts and earning models to the know-how and curricula of educational institutions.

**The campus focuses on
four programme lines:**

- propagating and growing
- food processing and health
- bio-based use of raw materials
- logistics and services.

Within these four programme lines, we are engaged in a variety of subjects, such as variety development (focussing on taste and health), purchasing and eating behaviour, upgrading agricultural land, new processing techniques, in-company logistics, active ingredients in food, light and power consumption, earning models and marketing & services, transport flows and agrarian raw materials for non-food applications.

Open for collaboration

Brightlands Campus Greenport Venlo is the best place to be for researchers and entrepreneurs in agribusiness, food and logistics for jointly tackling global challenges in the fields of health and food. For working together on healthy, sustainable solutions that cut across scientific, geographical and organizational boundaries. This is where local horticultural and logistical specialists meet each other – and meet the world.

Can you contribute to this? Do you also want to tackle global challenges and leave the world a better place? Can you see new earning models for your company? Let's meet up in Venlo, in Brightlands!

Innovations do not come to fruition in a single company. But we can tackle the challenges of the future by combining the strengths of knowledge institutions and companies. Together, we can realise the dreams and great ideas of entrepreneurs, and also ensure a financially healthy region at the same time.

Brightlands Campus Greenport Venlo is doing its utmost to put the themes of food, nutrition and logistics firmly on the world stage.



BrightBox: The first center of expertise at Brightlands Campus Greenport Venlo

A initiative of three top players in the agribusiness (HAS University of Applied Sciences, Botany and Philips) and the Province of Limburg

BrightBox is the first center of expertise and one of the first companies to start at Brightlands Campus Greenport Venlo. In this center, research is conducted into high-tech horticulture. With the closed propagation system that BrightBox uses, it's possible to grow plants in special, climate-controlled rooms on a large scale, independent of natural factors. In these rooms, plants get just the right dosage of what they need to grow. All of the factors can be controlled: the colour of the light, the amount of light, the day length, the temperature, the humidity, the CO₂, water and nutrients. And because the climate-controlled rooms do not use daylight but LED lighting, plants can be grown in several layers, one above the other.

The facilities that we've now opened will allow us to further assist advancements in the global horticulture sector. Producing food independent of natural conditions close to major population centers where that food is consumed. This has benefits on so many fronts!

Frans van Leijden

Firm foundations for cross-overs

In BrightBox, the convergence of expertise - such as propagation, technology, plant, health and food - provide firm foundations for cross-overs with business and education. The research and education center for controlled growing systems in Venlo is unique. In fact, it puts Venlo ahead, worldwide, in the development of modern horticulture and in the number one position as a center for education and research in conditioned growing. For the campus, it is also a prototype of the sort of clustering of entrepreneurs and knowledge institutions that is being aimed at, in which innovation and sharing knowledge is the order of the day.

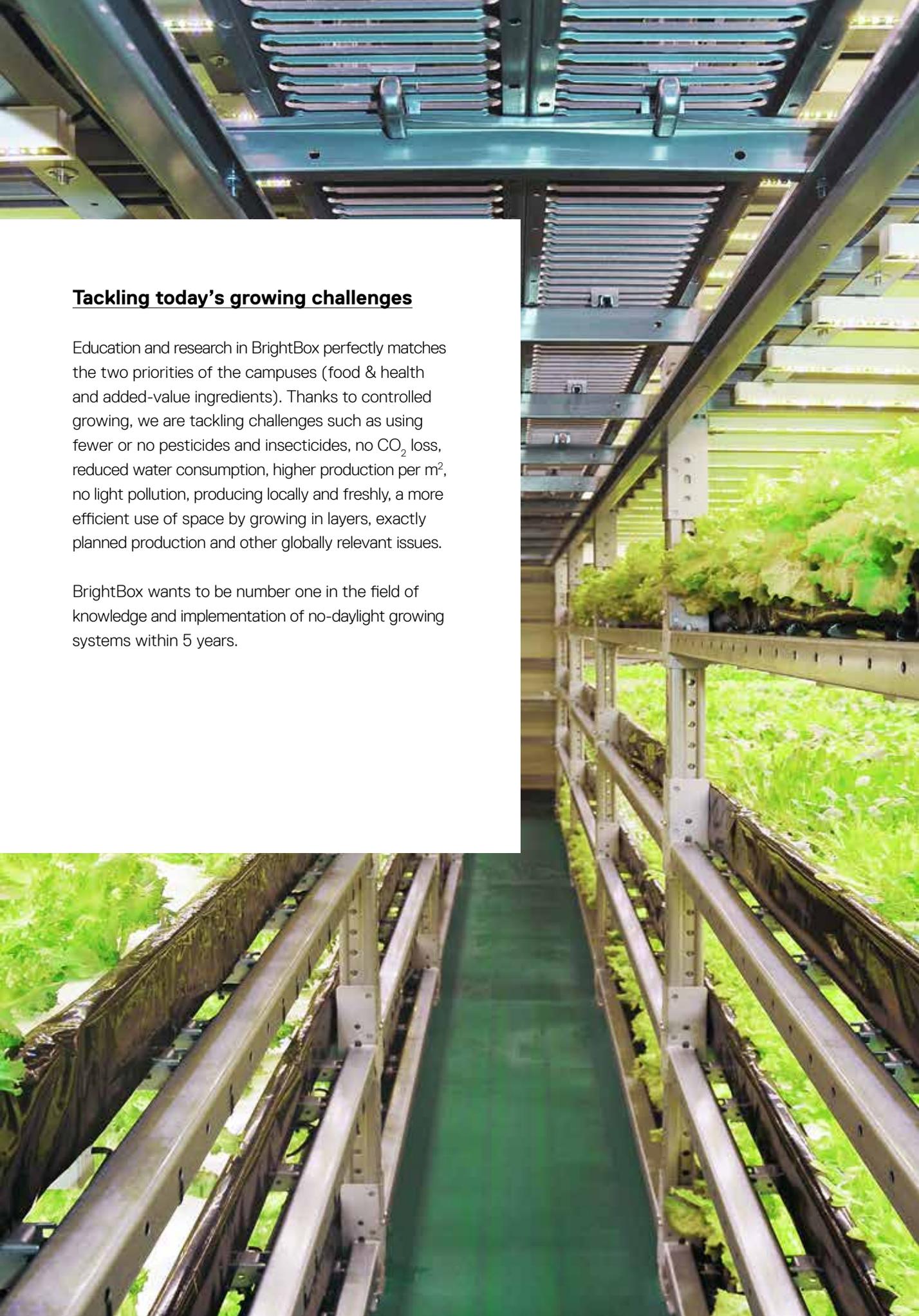
The center is an initiative of three top players in the agribusiness: HAS University of Applied Sciences, Botany and Philips, and is supported by the Province of Limburg. It's a joint venture between education/ know-how and the market – exactly what Brightlands stands for.

Making expertise immediately applicable

BrightBox comprises a production facility that makes it possible to validate business cases for non daylight growing systems on a large scale. In addition, there are two units where research is carried out for companies. In the production area, students grow and process proven innovative products on an industrial scale. The center is open to companies and other interested parties that want to benefit from BrightBox's know-how. They can use the knowledge and expertise acquired through research to further develop education and learning experiments and can immediately capitalise on the market without any intermediate steps.

The step between research and practice is often too big to enable implementation on the basis of the results obtained. With 300 m² of research facilities, BrightBox finally bridges that gap!

Roel Janssen – Project Manager City Farming
Philips Horticulture LED Solutions



Tackling today's growing challenges

Education and research in BrightBox perfectly matches the two priorities of the campuses (food & health and added-value ingredients). Thanks to controlled growing, we are tackling challenges such as using fewer or no pesticides and insecticides, no CO₂ loss, reduced water consumption, higher production per m², no light pollution, producing locally and freshly, a more efficient use of space by growing in layers, exactly planned production and other globally relevant issues.

BrightBox wants to be number one in the field of knowledge and implementation of no-daylight growing systems within 5 years.

The campus is a fertile breeding ground for so many great cooperative ventures. The spirit of BrightBox allows space for many more high-end research facilities. This is a place where research results will actually be tested in practical situations and really come to life.

Frans van Leijden

The participating parties in BrightBox are:

HAS University of Applied Sciences (location Venlo)

As a regional supplier of well-qualified middle management personnel in the agribusiness.

Philips Lighting

For a number of years, this world player has been the leading initiator behind sustainable lighting systems in the horticultural industry. Moreover, Philips also has extensive market knowledge and the connections and experience needed with controlled growing/City Farming.

Botany

Botany is a leading European player/adviser in the field of product development in the capital-intensive agribusiness sector. It is also a top-three player in the field of controlled growing.

Collaboration focuses on knowledge creation, transfer and valorisation. In the future, the parties involved expect innovations in the fields of food and health, sustainability, new stimuli for City Farming and constantly high, efficient production.



Brightlands

Knowledge crossing borders

Brightlands
Campus Greenport Venlo

has
hogeschool

PHILIPS



Biotany
Agro R&D Facilities

provincie limburg



More information
www.brightlands.com
www.brightbox-venlo.nl

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