# Agri-tech, meet our community

We invite you to meet our community and discover its success story!



Based on a history of over 100 years of Agrifood innovation, Brabant is the location for validation and upscaling of Agri-tech concepts due to the ideal crossover of strong knowledge in agricultural farming and the High-Tech sector in Eindhoven. This means the province will be the frontrunner in developing solutions to the sustainable food challenges we face heading towards 2030 and later. It has the expertise, the locations, the worldwide contracts and the disruptors required to challenge the establishment. Activities range from autonomous robots, datafication and pesticide control via stable and greenhouse automation to agricultural machines, harvesters and handling systems for sorting and packing.



# Why Brabant excels in Agri-tech

#### KEY LOCATIONS



**Key locations in Agri-tech**, such as Campus Almkerk, Agro & Food Cluster Nieuw Prinsenland, GrowWise Research Center by Signify, PlantLab, AppsforAgri and Byflow.

## EXCELLENT RESEARCH INFRASTRUCTURE



Research & development in Agri-tech by institutes such as HAS Expertise & Research Centres, Technical University Eindhoven, JADS Applied Research lab data & agrifood. Al Innovation Center, 5G Hub and the Precision Agriculture Center South.

### INTENSE COOPERATION AGRIFOOD AND HIGHTECH



Agrifood and Hightech are cooperating intensively and developing the solutions for global sustainable food production. More than 30% of the 1,600 hightech companies in Brabant are active in the Agrifood sector.

#### **BRABANT** IS BRIGHT



World Class Research

Within a radius of 150 km around Brabant, there are 22 universities in three countries: a total of 605,340 students, 255,680 of which in the field of nature, health or technology. These are the leading research institutes for Agri-tech.





Almkerk •







Reusel C

## **WORLD CLASS RESEARCH**

- 1. Avans Hogeschool (Den Bosch) offers bachelor programmes in the field of Agrifood and Environmental subjects.
- 2. HAS Data Lab Agrifood (Den Bosch) involves the development of a continuous learning path around data in agrifood, linked to an experimental environment for companies.
- 3. JADS Applied Research Lab Data & Agrifood (Den Bosch) offers data science bachelor and master programs, PDEng education, professional education and help organizations shape their data driven future. The Agrifood industry is a Priority Industry to JADS.
- 4. University of Technology (Eindhoven) is a research university specializing in engineering science & technology. The university helps development in precision farming.
- 5. Campus Almkerk (Almkerk) offers testing grounds for innovative agricultural activities.
- 6. The Precision Agriculture Center South (Reusel) is an open innovation centre focusing on growing crops more effectively in a living lab environment.





Brabant accounts for 13,912 Agrifood companies and 17.3% of all jobs of the total Agrifood sector in the Netherlands. These are the leading companies in the field of Agri-tech.









- ProPhyTIS, located on Campus Almkerk, contributes to World Food Security by supplying multiplication technologies worldwide in selected areas.
- 2. Hazera is a global leader in the seed industry, headquartered in Brabant, and breeds, develops, produces and markets varieties and seeds in a wide range of vegetable crops around the world.
- 3. Signify has the largest research facility (234m²) in the world focusing on optimising cultivation methods.
- **4. Plantlab** operates a 20,000m² facility focusing on indoor farming concepts.
- **5. VDL** is launching its first picking robot in 2021.

BRABANT IS BRIGHT

# Our Ecosystem

Within a radius of 40 kilometers (25 miles), the Agri-tech cluster alone comprises of:

**40,000** jobs €445 million R&D investment €4.3 3,600 billion companies Agrifood **Brabant** exports **27,000** employing over 27,000 More than people **30%** in the crossover Agrifood and of the High Tech 1,600+ hightech companies are active in the Agrifood sector

# BRABANT IS BRIGHT



# **Quality Research Institutes**

Jheronimus Academy of Data Science (JADS)

Data Science is essential to finding answers to today's challenges in the Agrifood sector. JADS offers data science bachelor and master programs, PDEng education, professional education and help organizations shape their data driven future.

#### **Jheronimus Academy of Data Science (JADS)**

At JADS, researchers and students work closely with the business community. In addition to education and research, JADS also offers space for innovative, data-driven entrepreneurship and public-private partnerships.

APPLIED RESEARCH LABS

3

**NATIONALITIES** 

**30** 

IN PDENG PROGRAM DATA SCIENCE

77 trainees

PROFESSIONAL EDUCATION CERTIFICATES

JOINT DEGREES DATA SCIENCE AND ENTREPRENEURSHIP



#### **OBJECTIVES**

- enhance the relevance of academic research to business and society.
- adding value with data science, such as data entrepreneurship and data innovation. It entails the fundamental question on how to create societal and economic value with data.



#### **APPLICATION AREAS**

- · Datafication in Agrifood
- Smart farming
- Food sustainability
- Reducing ecological footprint





## State-of-the-art facilities

#### Precision Agriculture Center South

**The Precision Agriculture Center South** is an open innovation centre founded by Van Den Borne Aardappelen, focusing on growing crops more effectively in a living lab environment.



#### **OBJECTIVES**

- Making data and measurement data accessible for (collective) use by agricultural companies, suppliers, the processing industry and knowledge institutions
- Developing joint technological applications, user-friendly interfaces and analysis methods
- Providing demonstration and test facilities for manufacturers and buyers
- Facilitating pilot projects in the experimental center and on location
- Creating further knowledge through applied research with research partners



#### **FACILITIES**

- Ag Center South has a licensed airport for agricultural drones – the Agri Drone Port Reusel. The airport is an RPAS airport with closed flight area under airspace class G.
- Farm of the Future is developed as an innovation place for agriculture and sustainability to accelerate the transition to circular agriculture.



#### **KEY CHARACTERISTICS**

The Center offers a middle ground where nature and landscape are given a place and emissions to the environment are reduced to zero as much as possible.



#### **APPLICATION AREAS**

New cultivation methods and technologies will be tested at this location.





#### **Campus Almkerk in numbers**

TESTING GROUNDS FOR INNOVATIVE AGRICULTURAL ACTIVITIES FOCUSED ON ORGANIC FOOD THAT IS GROWN USING BIODIVERSITY AND PIXEL FARMING CONCEPTS

50,000 m<sup>2</sup>

TESTING GROUNDS SUITABLE FOR INNOVATIVE CONSTRUCTIONS AND INSTALLATION TECHNOLOGY AND LIVING CONCEPTS

5,000 m<sup>2</sup>

TESTING GROUNDS FOR BIODIVERSITY BASED ON NATURE-INCLUSIVE AGRICULTURE

40,000 m<sup>2</sup>

WORKSPACES AND LABS

1,000 m<sup>2</sup>

# State-of-the-art facilities

## Campus Almkerk

At **Campus Almkerk**, ten hectares of land have been redeveloped into a regional innovation campus with workspaces, labs and testing grounds.



#### **OBJECTIVES**

To focus on an agricultural approach that is based on biodiversity, natureinclusive agriculture and sustainable construction and energy concepts.



#### **APPLICATION AREAS**

Agriculture and sustainability.



#### **KEY CHARACTERISTICS**

Innovation center for agriculture and sustainability, in which quality of life, small-scale food production, as well as sustainability and innovation play an important role. The Campus invests in activities with a high social relevance. Collective self-sufficiency plays an important role in this.





# Agri-tech showcases



#### **VDL** picking robot

VDL is developing the concept of a picking robot together with various technology providers. The robot is based on software with an algorithm rather than scanning of images.



#### **GrowWise**

In 2015, Signify (formerly Philips Lighting) opened a state-ofthe-art urban farming research centre on the High Tech Campus in Eindhoven, named GrowWise.

Research conducted by Philips provides custom LED lighting that enables farmers to improve yields and grow healthy and tasty vegetables throughout the year.



#### Hazera

Global leader in the seed industry, headquartered in Brabant, and breeds, develops, produces and markets varieties and seeds in a wide range of vegetable crops around the world.

