





#### Colophon

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Science & Innovation Parks and Campuses, Oost NL

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# Table of content

Preface	
Our Science & Innovation Parks and Campuses	6
Facts & Figures	7
Parks & Campuses	
Arnhems Buiten   Electricity Innovation Campus	8
Campus Nijmegen	12
High Tech Systems Park	18
Industriepark Kleefse Waard	24
Kennispark Twente	30
Knowledge and Innovation Campus Zonneoord	36
Technology Base	40
Wageningen Campus	44
World Food Center	50



## Preface

#### Welcome to the East Netherlands!

The Netherlands is worldwide one of the best locations for research and development. The unique asset of the Netherlands is that universities, research institutes and private companies are used to collaborate intensively. Stimulated by the government. Together, they develop sustainable food of the future, enough for everyone. And they develop medical technology that keeps us healthy. And innovations for the energy transition, for a smart industry, and for a world without waste.

East Netherlands offers a high concentration of world-class Science & Innovation Parks and Campuses for innovative companies in agri-food, life sciences & health, high-tech and smart energy.

We are Oost NL, the development agency for East Netherlands. And we will be happy to introduce you to the technology partners and R&D facilities that are relevant for your organisation. We provide our services free of charge.

Fons de Zeeuw

Director International



# **Our Science & Innovation** Parks and Campuses Q Duiven Science & Innovation Parks and Campuses in East Netherlands

# Science & Innovation Parks and Campuses in East Netherlands

#### Health

Kennispark Twente, Enschede (1)

Campus Nijmegen (3)

- Mercator Science Park, Nijmegen
- Noviotech Campus, Nijmegen

Knowledge Campus Zonneoord, Ede (4)

#### Food

Wageningen Campus, Wageningen (7) World Food Center, Ede (5)

#### Tech

Kennispark Twente, Enschede (1) Campus Nijmegen (3)

- Mercator Science Park, Nijmegen
- Noviotech Campus, Nijmegen
   Kien Knowledge Campus, Deventer (6)
   High Tech Systems Park, Hengelo (8)

Technology Base, Enschede (2)

#### **Energy**

IPKW / Connect, Arnhem (9)

Arnhems Buiten | Electricity Innovation Campus, Arnhem (10)

Innofase, Duiven (11)

Kenniscampus Regio Arnhem, Arnhem (12)

H2 Hub Twente, Almelo (13)

# **Facts & Figures**

3.31 million inhabitants
18,6% of the Dutch population (CBS, 2023)

Research Universities

**11** Universities of Applied Sciences

25 Vocational schools

**No. of students > 240,000** (CBS, 2023)

In 2022 more than



Randstad

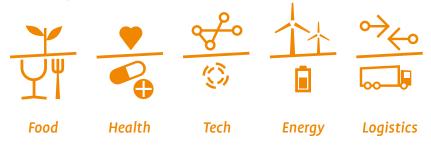
4,300

companies from East Netherlands use a Dutch financial R&D incentive called WBSO (22% of all Dutch companies using the WBSO) with a total value of over € 1.4 billion. This amount benefits R&D activities.

- → East Netherlands is right in between Dutch Randstad and German Ruhr Area economic powerhouses
- → World leading Agrifood University of Wageningen as core of Foodvalley region
- → University of Twente with leading institutes such as MESA+, the core of MedTech research

Ruhr Area

#### **Primary sectors:**

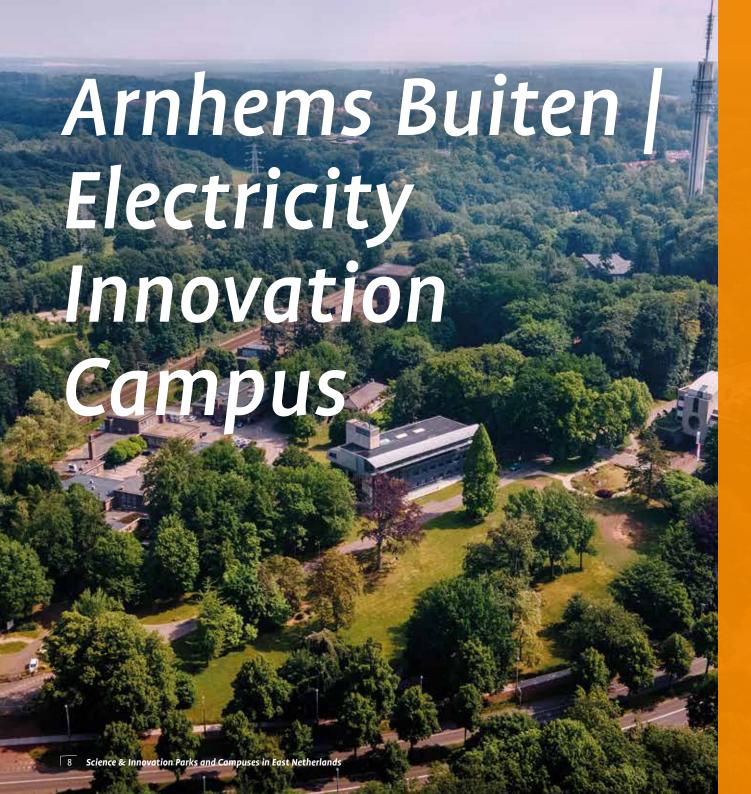


**Number of Companies** 

335,000

Number of top knowledge institutes

>30



#### **Profile**

At Arnhems Buiten | Electricity Innovation Campus, often better known as the former KEMA site, the energy transition has been a central theme for almost 100 years. It is a beautifully landscaped park with several monumental buildings which house prominent companies and institutions such as the Dutch electricity transmission manager TenneT, the high-quality test labs of Kema, Hyosung Heavy Industries (focuses on renewable energy with industrial energy storage systems and transformers) and the international consultancy firm DNV. The captivating park is a contemporary and inspiring work location

energy transition. Many campus facilities can be found in the park and its immediate vicinity, including meeting & conference facilities, a

for (knowledge) institutions and knowledgeintensive companies that work on the current

brasserie, a start-up center, flex spaces, sports

facilities, and short-stay housing.

#### Infrastructure

#### **Railway stations**

- Arnhem Centraal (ICE)2 km 10 min by bus
- Oosterbeek2.4 km 15 min by car

#### **Airports**

- > Weeze 66 km - 1 hr by car
- > Eindhoven Airport 83 km - 1 hr by car
- Schiphol106 km 1 hr 15 min by car

#### **Motorways**

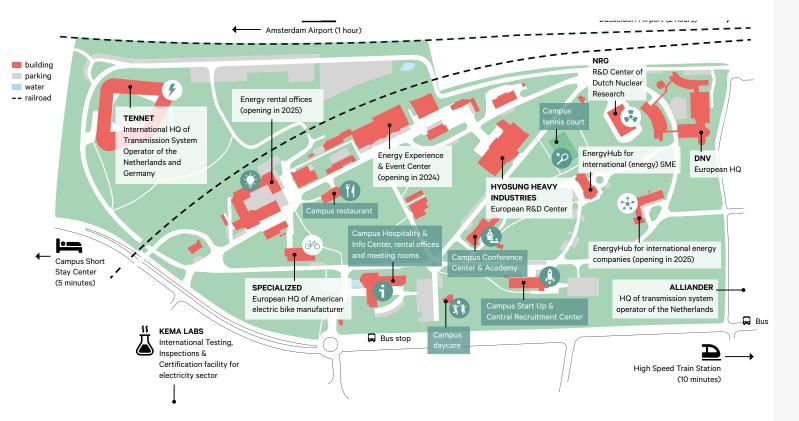
- > A12 8.3 km - 10 min by car
- > A50 8.5 km - 10 min by car
- > A15 16.3 km - 15 min by car

#### **Digital infrastructure**

> Fiber, Wi-Fi and fully broadband

#### **City Centre**

- Arnhem10 min by bus 5 min by car -10 min by bicycle
- Nijmegen38 min by bus 30 min by car -1 hr 10 min by bicycle
- > Wageningen31 min by bus 20 min by car -50 min by bicycle





Area 170,000 m<sup>2</sup>

Building capacity

23,000 m<sup>2</sup>

Development space

20,000 m<sup>2</sup>

#### Companies

## building up to 50

Jobs

250

#### Arnhems Buiten | **Electricity Innovation Campus**

#### **Long-term Vision**

Arnhems Buiten is a national monument park near Arnhem Central Station. The emphasis is on accessibility via sustainable (shared) transportation. Constant investments are made to further strengthen the high-quality green environment and its resilience. The park will be made more sustainable in the coming years with its own energy generation, sustainable installations, and intelligent exchange and balancing systems. The historic buildings will be made more sustainable in phases.





The park will be made more sustainable in the coming years with its own energy generation, sustainable installations, and intelligent exchange and balancing systems.

#### Arnhems Buiten | Electricity Innovation Campus



# **∧RNHEMS** BUITEN

#### Contact

Arnhems Buiten | Electricity Innovation Campus Thijs van Dieren and Bram Trip

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#### **Community Services & Facilities**

The central theme is excellence in reliability, service, safety, and appearance. We have the best of both worlds at Arnhems Buiten: interaction between excellent international parties and inspiring new ideas. And all this in an amazing, green environment.

Arnhems Buiten has a significant legacy in R&D, thanks to its KEMA past. The park will be further developed in the coming years, further strengthening the R&D landscape. The R&D focuses on digitizing the components on highand medium-voltage grids, substations, and the use of open data and AI for, among other things, predictive maintenance, energy exchange, and grid optimization. Investments are made to develop shared facilities. Three buildings in the heart of the campus have been selected for this purpose.

Arnhems Buiten is part of the Arnhem Energy Hotspot ecosystem. This includes knowledge institutions Van Hall Larenstein and the Han University of Applied Sciences, as well as Connectr and IPKW. These parties offer several facilities and programs for start-ups. The start-up facilities on Arnhems Buiten are housed in the prominent heart of the park.

#### Leisure (sports, congress)

Fitness facilities, tennis courts, conference & meeting centers, various biking, hiking, and mountain bike trails.

#### Parking

Around 450 parking spaces spread over the park, including loading infrastructure on request.

#### Park management

- Site-related services
   National monument park, hospitality center, childcare, brasserie/lunchroom,
- Building-related services
   High-speed internet, Wi-Fi, meeting rooms,
   pantry facilities

#### Governance

The public-private partnership between Oost NL and City Developer-S owns Arnhems Buiten. The joint focus is to further strengthen a high-quality and knowledge-intensive environment with a key position in the current energy transition. Stimulating and driving the regional sustainable economy is central to this, which is done by strengthening cooperation in a high-quality, unique, green environment.

#### Commitment

Various companies, international headquarters, and institutions have relocated to Arnhems Buiten in recent years or have always been located here. This community is constantly changing and rapidly growing. Redeveloping 50 to 100-year-old energy labs leads to constantly emerging new inspiring environments to work, discover and innovate in.

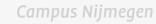
#### **Buildings**

Education and Research Ca 1-5
Company buildings Ca 25
Housing (students) 15 studios



#### **Profile**

Campus Nijmegen is the Capital of Health & High Tech innovation. A modern and vibrant environment that facilitates leading researchers and scientists of the seventeen research institutes of Radboud University, Radboud university medical center (Radboudumc) and The HAN University of Applied Sciences (Hogeschool van Arnhem en Nijmegen). The perfect ecosystem for entrepreneurs in Health & High Tech to develop their groundbreaking innovations. The excellent high-end research facilities on campus provide great opportunities for future entrepreneurs and researchers in fields ranging from life sciences and neurology to semiconductors, data sciences, psycholinguistics, and sustainability sciences. From the next generation of chip technology to the latest innovations in Health & High Tech. It's happening on Campus Nijmegen.



#### Infrastructure

#### **Railway stations**

- Nijmegen HeyendaalOn campus
- Nijmegen GoffertOn campus

#### **Airports**

- > Weeze 52 km - 45 min by car
- > Düsseldorf Airport 120 km - 1 hr 15 min by car
- Schiphol Amsterdam
   120 km 1 hr 30 min by car and train

#### Motorway

> A73 7 km – 10 min by car

#### **Digital infrastructure**

- > Fiber and Wi-Fi
- > Campus fully broadband and Wi-Fi serviced

#### **Nijmegen City Centre**

> 15 min by bus / 15 min by train / 10 min by car / 10 min by bicycle



Noviotech Campus



Nijmegen ©

Area

1,370,000 m<sup>2</sup>

Building capacity

270,000 m<sup>2</sup>

Development Space

100,000 m<sup>2</sup>

Companies

290

Jobs

25,000

Students

60,000

#### Campus Nijmegen

#### **Unique Companies**

- > Ampleon
- > Byondis
- > Chip Integration Technology Center
- > Enzyre
- > Nexperia & ITEC
- > NXP
- > Symeres
- > TropiQ
- > Vaxxinova

#### **Long-term Vision**

A number of long-term objectives have been set to further develop Campus Nijmegen:

- > To provide accessible, stable and user-friendly facilities to create a strong research ecosystem. This allows highquality science and research to have a significant impact and maintain its international status;
- To remain an inspiring and hospitable environment in which (local) start-ups and SMEs can turn innovative ideas into products that are suitable for the market;
- > To be an attractive meeting place for entrepreneurs, researchers, scientists, and business angels to discuss the latest scientific developments and to stimulate cocreation through excellent facilities and our academic and business networks;
- > To offer the best housing and living environment for companies and its employees in all stages of growth;
- > To facilitate the personal growth of students, researchers, and scientists.

#### **Open Innovation Strategy**

On Campus Nijmegen, innovation is an important stimulus for our activities. The main purpose of innovation is to convert the results of scientific research into social, cultural, and economic value of research, and to anticipate consumer needs. The excellent research facilities and the inspiring environment enable researchers to collaborate with industry and governmental bodies that can generate benefits for society in impactful domains, such as personal healthcare, sustainability, and human-centred Al technology. Furthermore, we are committed to aiding nascent entrepreneurs in reducing the time-to-market through our innovative start-up facilities and programmes in which we assist entrepreneurs in setting up viable businesses. Campus Nijmegen is an excellent place to make a significant impact on society and to develop innovative products that matter.



RIMLS Moleculair Biology
(@Dick van Aalst)



High Field Magnet Laboratory and Free Electron Laser for Infrared Experiments (@ Dick van Aalst)

#### **World-class Research Institutes**

- > Radboud University: hosts 14 research institutes on campus, many of which are world leading in their field.
- > Radboud University Medical Centre: research into current scientific health challenges: Radboud Institute for Molecular Life Sciences; Radboud Institute for Health Sciences; Donders Institute for Brain, Cognition and Behaviour; Radboud Center for Language and Speech Technology.
- > Chip Integration Technology Center: innovation center for chip technologies.
- Max Planck Institute for Psycholinguistics: the only institute in the world entirely devoted to psycholinguistics.
- Radboud Center of Artificial Intelligence: a global forerunner on research into human-centred AI technology.
- > OnePlanet Research Center: research for a healthy and sustainable society using the latest chip and digital technologies.
- Sint Maartensclinic: specialised in orthopedics, rheumatology, rehabilitation and pain management in the field of posture and movement.

Research & Business developments: Robot Lab,
 Neurovate, RF Knowledge Lab, Digital Health Challenge
 Lab, AI/Data Lab-Oost.

#### **R&D Focus**

Research with societal impact in the fields of:

- > Neuroscience / Healthy Brain;
- > Digital Health;
- > Drug Discovery & Development;
- > Radio Frequence (RF) Technology;
- > Chip Integration.

#### **Radboud Research Facilities**

Companies, research institutions, researchers, and startups can take advantage of the facilities and knowledge of Radboud University, Radboudumc, and the Donders Institute. Radboud Research Facilities (RRF) offers a wide range of services and expertise within eight research areas: medical research, decision making, space, language and speech, neurology and motion, data science, plant and animal models, and molecules and materials. Furthermore, RRF helps to enhance the existing facilities and always aims to purchase the latest equipment aiming to create an optimal research environment.

# Tailor-made R&D Facilities at Noviotech Campus

Noviotech Campus offers tailor-made housing solutions for your R&D operations. Together with professional partners, we can develop, build, and manage offices, laboratory and cleanroom spaces for knowledge-intensive businesses and institutes. We are familiar with technical, chemical, medical, and microbiological laboratories, on various safety levels. When setting up your R&D operations at Noviotech Campus, you become part of a community of entrepreneurs with a growth mind-set, enabling collaboration with ambitious Health & High Tech companies like yourself. This way you can take the next step – both as a business, and as a person.



The perfect ecosystem for entrepreneurs in Health & High Tech to develop their groundbreaking innovations. From the next generation of chip & RF technology to the neurotech development, it's happening on Campus Nijmegen.

Noviotech Campus

#### Campus Nijmegen

#### **Start-up Facilities and Programmes**

Divers programms for start- & scale-ups are available:

- > Mercator Launch stimulates entrepreneurship and innovation in the early phase. The Centre of Entrepreneurship of HAN university also stimulates entrepreneurship. The start-up facilities and programme help entrepreneurs showcase and further develop their business ideas, and they support the start-ups that emerge from these ideas. Based on their in-house expertise, the staff of Mercator Launch helps entrepreneurs to develop business cases. Moreover, with their extensive academic and business networks that transcend the region, Mercator Launch can put you in contact with national and international businesses, partners, and potential clients. Hundreds of innovative scientists and students have been successfully supported by Mercator Launch.
- > Briskr supports and stimulates entrepreneurship in Health & High Tech. Through various acceleration programs and other activities – like Briskr Validate!. NextOEM and the Business Angels Network Nijmegen - they stimulate and support entrepreneurs in taking the next step with their innovation.
- > Orion supports and stimulates entrepreneurship in other sectors besides Health & High Tech. There is also a fund for preseed financing by Startup Fonds Gelderland (SFG).
- > Startup Nijmegen is a network of starting entrepreneurs, located right across the Central Station of Nijmegen. Aside from top notch work facilities - with coffee, internet and a place to relax – they offer professional support by various partners of the entrepreneurial network in Nijmegen.
- > Entrepreneurs, organizations, investors, and knowledge institutes work together in Rijk van Nijmegen (RvNa)). By crossing the borders of the city and sector, they boost connection and development in new and existing initiatives.

> Starters4communities offers training programs and a community in social entrepreneurship. They are the place to be for starting entrepreneurs and professionals who are choosing for a career with impact.

#### **A Significant Impact**

#### Our policy

Campus Nijmegen is committed to making a significant societal impact and contributing to a healthy, sustainable, and free world with equal opportunities for all. We aspire towards a green and healthy campus with a positive impact in terms of climate and creating a circular economy. Making the best possible use of existing facilities, Campus Nijmegen is a leader in this field. Modern tools make our smart campus a 'living lab': a place where we experiment and encourage innovation on themes such as sustainability and social safety. The campus is an inviting place to study, meet, and collaborate and all activities on campus are supported by state-of-the-art technical and infrastructure facilities to provide optimum support for researchers, students, and entrepreneurs.

#### Our main objectives

- > To create a green, healthy, and inclusive campus with a positive impact on climate and circularity;
- > To contribute to the promotion of sustainable development in education, research, and in the operational management of Radboud University, Radboudumc, and the research institutes:
- > To develop a sustainable work and research environment in which the environmental impact is increasingly reduced and social coherence is promoted.



Living Lab Learning for the Future (@ Dick van Aalst)

#### Remarkable high-tech achievements

- > The Radboud Radio Lab successfully invented the radio antenna, the Netherlands-China Low- Frequency Explorer (NCLE), which is placed on the Chinese Queqiao satellite behind the moon and successfully provides data;
- > The new revolutionary Robot Lab that combines chemistry, robotics, and artificial intelligence (creating a lab where all processes are automated and connected to each other), led by Wilhelm Huck (Robot lab io).
- > The Event Horizon Telescope Collaboration team of astronomers revealed the first image of the Black Hole at the heart of our own Milky Way led by Mark Klein Wolt.



Campus Nijmegen consists of:

- > University campus including Donders Institute and Max Planck institute;
- > Radboudumc including the hospital and IMLS;
- > HAN University of Applied Sciences;
- Mercator Science Park including various start-ups, SMEs, and other companies working closely with the university and Radboudumc;
- Noviotech Campus including various companies
   operating in state-of-the-art, health & high-tech fields.

#### Other facilities include:

- Radboud Sports Centre providing over 80 different sport options for students, alumni, employees, and citizens of Nijmegen and surroundings;
- Facilities & Services including several restaurants and cafés/pubs on campus;
- > Student housing organisation SSH&, which also manages several housing facilities on campus. This includes dedicated accommodation for international students and permanent and temporary employees.



Noviotech Campus - The vibe of the Future Festival

#### Leisure

There are several facilities for leisure available in Nijmegen. Outdoor activities include the Nijmeegse Vierdaagse and the Zevenheuvelenloop. Cultural activities include InScience Film Festival, Go Short, the vibe of the Future Festival and Music Meeting.

#### Governance

The campus is governed by the individual organisations mentioned above which have multiple interactive collaborations and hold joint board meetings. Furthermore, the campus has a particularly close relationship with the Municipality of Nijmegen, the Province of Gelderland, and several non-profit organisations in the Rhine-Waal Euroregion, both nationally and internationally. An example is the collaboration between Radboud University and the University of Duisburg-Essen (UDE), which cofounded the Erwin L. Hahn Institute for Magnetic Resonance Imaging (ELH) in 2005.

Within this region The Economic Board is joining forces within the Energy, Health & High Tech and Food sector under the brand name Lifeport <a href="https://www.lifeport.nl">www.lifeport.nl</a>.

#### Campus Nijmegen

### Radboud Universiteit



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# High Tech Systems Park



#### **Profile**

The High Tech Systems Park (HTSP) is located right next to one of the largest business parks in the north-east of the Netherlands (Twente Canal business park). Located multimodally along the Twentekanaal and the A35 motorway, close to the urban development Hart van Zuid and Hengelo Central Station, and in the urban development area Spoorzone Hengelo-Enschede.

The concentration of high-tech companies and high-tech employment is unique for eastern Netherlands and a driver for the ambitions of the Twente Board to grow into a green technology top region.

The companies at the HTSP are all part of Twente's high-tech ecosystem of companies, educational institutions and governments.



#### Infrastructure

#### **Railway stations**

- > Hengelo 5 km - 10 min by bus
- > Enschede 12 km - 12 min by car

#### Airport

- > Münster-Osnabrück89 km 1 hr 10 min by car
- > Düsseldorf Airport 135 km - 1 hr 30 min by car
- > Schiphol 163 km - 1 hr 45 min by car

#### Motorway

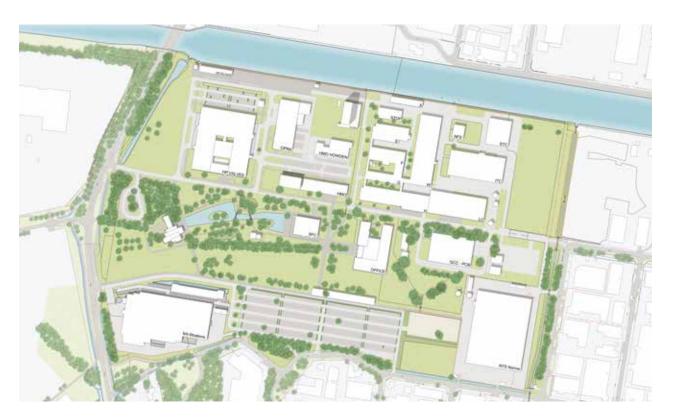
> A35 1.5 km - 3 min by car

#### **Digital infrastructure**

> Fiber and Wi-Fi. Park fully broadband and Wi-Fi serviced.

#### **City Centre**

- > Hengelo: 10 min by bus 10 min by car 12 min by bicycle
- > Enschede: 6 min by train 40 min by bus 18 min by car 40 min by bicycle
- > University of Twente: 7.6 km





Area **216,000 m**<sup>2</sup>

Development Space **20,000 m**<sup>2</sup>

Companies

46

Jobs

3,400

#### High Tech Systems Park

#### **Long-term Vision**

Accelerate growth through collaboration between high tech systems scale-up and grown-up companies by offering effective business support at a high quality, inspiring campus. The HTSP is a showcase for other high-tech parks and a frontrunner for the industry in Twente. The HTSP creates a sustainable competitive advantage by knowledge sharing between entrepreneurs and sharing of R&D equipment. Most companies at the HTSP have a profile in the area of Critical Systems, and are part of the Defense and security, Public Infrastructure or Environment industry.

The HTSP has a sustainability policy that entails the creation of a green, healthy and inclusive campus with a positive impact in terms of climate and creating a circular economy. In addition, this policy has led to the mobility hub, good public transport access and charging points.

#### **Open Innovation Strategy**

Turn ideas and cooperation into products and competitive advantage:

- > An inspiring and hospitable environment in which (local) start-ups can turn innovative ideas into products, reducing the time-to-market and setting up viable businesses:
- > An attractive meeting place to share latest technological developments and to stimulate co-creation through excellent facilities and academic and business networks:
- > The best housing and living environment for companies and its employees in all stages of growth;
- > Stimulate entrepreneurship and innovation; shortening the time to market:

- > A flourishing entrepreneur community where new ideas and initiatives originate;
- > Facilitates entrepreneurs with flexible housing opportunities;
- > Comprehensive environmental test facilities / "First time right" design validation.

We act as a bridge between companies, disciplines and markets to create a perfect place to innovate and establish new business opportunities. Multinationals as well as small and medium-sized high-tech companies, research institutes, service companies, scale-ups and startups are working together, since sharing knowledge is as important as developing knowledge.

#### **World-class Research Institutes**

High Tech Systems park is connected to the four other top business parks in Twente (Technology Base, XL Businesspark, Stadscampus Connect-U and Kennispark Twente). The HTSP companies work with the following knowledge institutes, among others:

- > University of Twente;
- > Saxion University of Applied Sciences;
- > Delft University of Technology;
- > Eindhoven University of Technology.



#### **R&D Focus**

The R&D focus areas within the HTSP are within the following themes:

- > Defense and Security;
- > Public Infrastructure;
- > Environmental solutions;
- > Advanced manufacturing.

#### **Shared R&D Facilities**

Several shared R&D facilities are available within the companies at the HTSP, giving companies the opportunity to develop and test products or systems:

- > Environmental Competence Center;
- > Digital smart factory;
- > Ambient intelligence;
  - o Sensor technology, artificial Intelligence and augmented reality.

#### **Start-up Facilities**

At Gebouw N, entrepreneurs and companies meet easily and with low barriers to strengthen their business operations. Over 30 innovative companies are renting office space in Gebouw N.





#### High Tech Systems Park

#### **Sustainability**

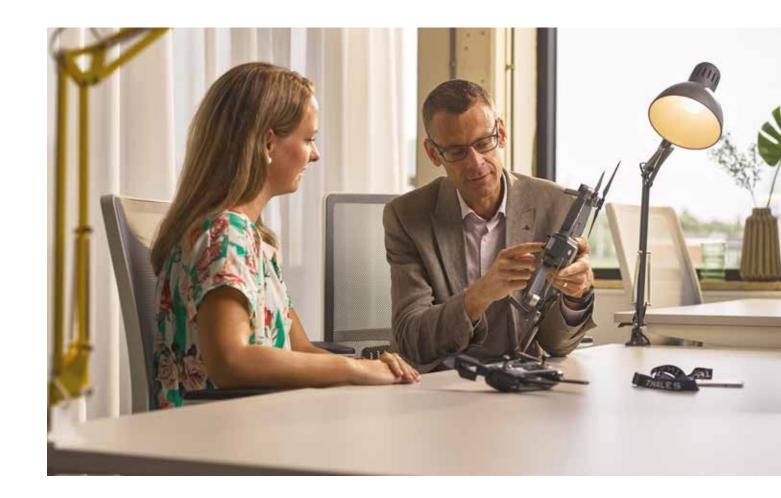
The HTSP has a unique form of heat supply for the companies, the so-called Bronnet. Bronnet is a sustainable energy network using smart technologies to manage energy distribution efficiently. Combining heat pump technology, cooling water from the Twentekanaal, residual heat from the Hengelo district heating and complex ITinfrastructure to cool and heat offices and factories with minimum energy consumption. This makes the companies' gas consumption (much) lower than that of companies that are only gas-fired.

Through Bronnet, the companies' CO2 emissions are reduced by at least 50 percent and energy savings exceed 20 percent. In addition to direct savings, the Bronnet field lab also offers opportunities for innovation, such as with big data, energy storage or other developments on a live network.

Part of the Bronnet is the opportunity for companies and start-ups to develop and test new applications directly on a live network.

Companies at the HTSP gain an operational sustainability advantage as well as a business advantage from the Bronnet.

The HTSP is a showcase for other high-tech parks and a frontrunner for the industry in Twente. The HTSP creates a sustainable competitive advantage by knowledge sharing between entrepreneurs and sharing of R&D equipment.



#### High Tech Systems Park

#### **Community Services & Facilities**

The HTSP offers a broad range of services and facilities, such as:

#### Park management

- > Charging sockets for EV
- > Bus stop; High Tech Systems Park
- > 24/7 security
- > Waste management
- > Technical services
- > Landscape services

#### Shared facilities

- > Community Management
- > Meeting rooms
- > Shared workplaces
- > Demo rooms
- > Restaurants and catering
- > Social facilities
- > Sport/leisure facilities
- > Walking routes
- > Events, meetings and product launches







#### Contact

High Tech Systems Park Debbie Brands

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#### **Profile**

Industriepark Kleefse Waard (IPKW) in Arnhem is a unique 90 hectare work location that houses, facilitates and connects sustainable energy and circular related companies and test facilities. The cleantech campus of the future is being worked on together with the government, education and the business community.

As the former site of AkzoNobel, sustainability is in our veins. This is expressed in various ways: it is in the theme of the parties that settle here (the tenants) and in how the place itself is arranged (the built environment and the programming).







Area 900,000 m<sup>2</sup>

Building capacity

25,000 m<sup>2</sup>

Development space 100,000 m<sup>2</sup>

Companies

125

Jobs

2,000

Students

200 per day on average

#### Infrastructure

#### **Railway stations**

- > Arnhem Centraal4.2 km 22 min by bus
- > Westervoort 3.2 km - 20 min by bus

#### **Airports**

- > Weeze 65 km - 1 hr by car
- > Eindhoven Airport 87 km - 55 min by car
- > Schiphol 116 km - 1 hr 15 min by car

#### Motorways

- > A12 3.5 km - 5 min by car
- > A50 10.5 km - 10 min by car
- > A15 14.5 km - 19 min by car

#### **Digital infrastructure**

> Fiber, Wi-Fi and fully broadband

#### **City Centre**

- > Arnhem21 min by bus 3 min by car -5 min by bicycle
- Nijmegen
   1 hr 19 min by bus 25 min by car 1 hr by bicycle
- Wageningen
   1 hr 12 min by bus 33 min by car 1 hr 10 min by bicycle

#### **Long-term Vision**

We aim to develop the park into a campus where companies related to the energy transition or circular economy can establish and thrive. We provide ideal conditions for these companies to effectively and seamlessly bring their products to market.

The energy transition requires significant leaps in scale, necessitating the accelerated adoption and scaling of innovations. That's why Connectr Energy Innovation is situated on our campus. Connectr caters to this demand by focusing on electrical grid enhancements, storage solutions, and mobility innovations.

#### **Open Innovation Strategy**

Everything developed within the Connectr ecosystem is open access. Involving education is crucial as educational institutions must play a role in every program initiated within Connectr. To achieve the necessary scale for the energy transition, open access is highly desirable. We make greater progress by sharing knowledge and experiences.



Students in the HAN H2Lab



Cleantech community on Industry Park Kleefse Waard, where Connectr is housed.

The Shared Facilities are available to anyone in need of acceleration and scale-up support.

Parties aligned with Connectr (but not located in the Innovation Lab) can pursue their own commercial activities privately, following their respective intellectual property guidelines.

#### **World-class Research Institutes**

- > HAN University of Applied Sciences
- > Radboud University
- > Intensive cooperation with the technical universities in the Netherlands; principally with the TU Delft
- > Also, world-class commercial research institutes such as KEMA Laboratories, and the European test facilities of Flaad NI are located at IPKW.

Industriepark Kleefse Waard is a unique 90 hectare work location that houses, facilitates and connects sustainable energy and circular related companies and test facilities. The cleantech campus of the future is being worked on together with the government, education and the business community.

#### **R&D Focus**

To accelerate the energy transition, we have established a hub at IPKW where research, education, startups, and established companies can leverage shared facilities to collectively advance. This hub is known as Connectr.

Connectr focuses on 3 program areas:

- The electrical grid as connector, ensuring that it can effectively fulfill its crucial role in sustainability by integrating sustainable sources and accommodating new uses, including sector coupling;
- Energy storage as a flexible buffer, involving the development and implementation of efficient electrochemical energy storage systems within a sustainable energy framework;
- 3. Smart and green drive technology, which seeks to provide innovative drive technology solutions based on sustainable fuels, possibly in conjunction with electric drive components, to address the challenges of the energy transition.

#### **Start-up Facilities and Programmes**

The region has chosen to centralize all energy startup facilities at Connectr. Housing, shared facilities, guidance, finance and investment programs and port programs will all be situated in and around the Innovation Lab. Furthermore, other startups, such as those related to the circular economy, are also encouraged to join the campus.

#### Sustainability

Industriepark Kleefse Waard serves an important sustainability testbed. We are dedicated to enhancing the sustainability of energy in this location. Our research focuses on circular energy solutions and the utilization of local raw materials and fuels. We prioritize minimizing waste through thorough separation for subsequent

collection and recycling into new products and raw materials. Additionally, the park has been a key location for charging solutions and hydrogen solutions for many years. Furthermore, both the park and its buildings are designed or redesigned with sustainability in mind. Our ambition is to maintain our status as the most sustainable business park in the Netherlands.

The objective is to rely solely on locally generated sustainable energy by 2050.

- > At the moment we generate renewable electricity locally on campus through a wind turbine (8,500 MWh per year), 24,000 solar panels (6,700 MWh per year) and a small biomass boiler (5,500 MWh). In 2023 about 48,5% of the electricity used on campus is generated in a renewable way.
- > To get to 100% renewable energy in 2050 we will:
- Provide efficient and large-scale storage of sustainably generated electricity (to resolve fluctuation in supply and demand) using hydrogen, batteries and car batteries:
- Generate and utilize heat and steam in a variety of ways (or exploring opportunities to do so), such as through wastewater treatment, cooling water, waste heat, PVT panels, hydrogen and geothermal energy;
- Continuously work on new ideas and innovations in the sustainable energy sector.



King Willem-Alexander visits the hydrogen cluster at IPKW

#### **Community Services & Facilities**

With its diverse array of facilities, the IPKW campus actively fosters and supports a dynamic cleantech community. The principles of collaboration and knowledge-sharing are central, as demonstrated by De Waard restaurant, in-house Technical Services, and free boot camps. Furthermore, the park regularly hosts events, meetings, and product launches, all contributing to the creation of a unique space steeped in history.

#### Leisure

- > Parkrestaurant and catering
- > Free boot camp twice a week
- > 100+ events each year
- > Walking routes

#### Parking

- > 1,310 free parking spaces for cars, including 84 charging points for EV and hydrogen vehicles.
- > 432 parking spaces for bicycles.

#### Park management

- > Site related services:
- > Shared electric cars
- > Shared electric bikes
- > H2 backbone
- > EV charging plaza
- > Hydrogen fueling station
- > Test facilities for EV
- > Test facilities for hydrogen
- > Various utilities, including steam at various pressure levels up to 100 tons p/h, natural gas, network management, various grades of water, compressed air and wastewater treatment



Connectr Shared Office

- > 24/7 security
- > Central reception
- > Park management
- > Waste management
- > Technical services
- > Weighing bridge
- > Landscape maintenance
- > Meeting rooms
- > Event locations, including studio
- > Recruitment program IPKW

#### > Building related services:

When renting a building or space, we provide utilities (through Veolia), technical services and park management. If your business is connected to the energy transition, you have the opportunity to become a part of the Connectr ecosystem. You can rent a business unit or something just as little as one desk, gaining access to all of its facilities and networking opportunities. The requirement is that your business is actively involved in one of the key technologies and has a strong commitment to advancing the energy transition.

- > Shared office
- > Meeting rooms
- > Demo rooms
- > Demo field
- > Offices
- > Lab space

#### Governance

Campus ownership

Industriepark Kleefse Waard is a private company and is being developed by Schipper Bosch holding.

#### Commitment & support

Industriepark Kleefse Waard is supported by Gemeente
Arnhem, Provincie Gelderland, Oost NL and The Economic

Board Regio Arnhem Nijmegen.

#### Buildings

The entire campus comprises 125 different companies.

Many of these companies work on clean technologies.

There is still space for a few businesses to set up within the existing buildings and there is still space for development in some areas of the campus.

#### Students

Student housing is a future plan. Because there is sufficient student housing in the area, this won't be included in the plans for the coming five years.



#### Charging plaza at IPKW



# Industriepark Kleefse Waard

#### Contact

Industriepark Kleefse Waard (IPKW) Kevin Rijke CEO

Westervoortsedijk 73 6827 AV Arnhem T +31 26 384 46 46 hallo@ipkw.nl | ipkw.nl



#### **Profile**

The innovation campus Kennispark Twente in Enschede is one of the top 3 of most important science parks of The Netherlands.

It is a dynamic location, where over 450 companies work on developments and innovations that make a difference. It is a location with a hospitable and established climate for entrepreneurs, which provides development and growth opportunities for companies active in the high-tech sector with a strong focus on Medical Technology, Advanced Manufacturing, Chip Design, Smart materials Robotica, Organ-on-a-chip, and Smart IT & Secure Systems. The campus is the second largest in the Netherlands in terms of commercial jobs, with 6,100 people working at Kennispark Twente in Enschede, excluding the 4,000 academic staff members at the University of Twente and the 3,000 employees of Saxion, university of applied sciences.

#### Infrastructure

#### **Railway stations**

- > Enschede Central 3 km - 15 min by bus
- Enschede KennisparkOn campus

#### **Airports**

- > Münster-Osnabrück87 km 1 hr 30 min by car
- > Schiphol Amsterdam 170 km - 1 hr 35 by car / 2 hr 15 min by train

#### Motorway

A355 km - 5 min by car

#### **Digital infrastructure**

- > Fiber and Wi-Fi
- > Park fully broadband and Wi-Fi serviced

#### **Enschede City Centre**

> 5 min by train / 10 min by bus 10 min by car / 14 min by bicycle





Area

2,300,000 m<sup>2</sup>

**Building capacity** 

> 400,000 m<sup>2</sup>

Development space

> 100,000 m<sup>2</sup>

Companies

450

Jobs

10,646

Students

58,717

#### Kennispark Twente

#### **Unique Companies**

- > Demcon (headquarters)
- > NX Filtration
- > Movella | Xsens
- > Eurofins | MASER
- > Ecare
- > Medspray | Resyca
- > Micronit
- > LioniX International
- > Ouix Ouantum
- > Phix Photonics Assembly
- > Bosch | ItoM

#### **Long-term Vision**

Kennispark Twente is a knowledge-based campus with a unique mix of knowledge-intensive economic functions and academic networks, focusing on personal development, challenge and growth. Knowledge is a mainstay of the University of Twente, which is currently further strengthening its profile as an entrepreneurial university. The region of Twente continues to be an attractive location for innovative businesses. Kennispark Twente aims to be a meeting point for top-class European knowledge, technology and innovative businesses.

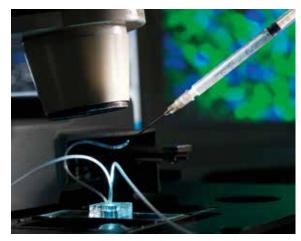
#### **Open Innovation Strategy**

In Twente, sharing expertise and cooperative innovation speaks for itself. It springs from the conviction that this will lead to new possibilities, concepts and products. It helps companies to find their competitive advantage and to stay ahead of the competition. Innovating together means arriving at an intended result more quickly, and being able to focus on the demands and desires of the end-user and/or customer. At the end of the day, the metrics that really matter are shortening the time to market introduction and increasing profit on a particular product. Both companies

and knowledge institutes in Twente play a strong role in this regard. Together with industrial partners, Kennispark Twente is working on roadmaps: in the coming years, what should Twente invest in, in terms of technology and knowledge development?

#### **World-class Research Institutes**

- > MESA+: One of the largest nanotechnology institutes in the world.
- > Technical Medical Center: leading Innovation Hub impacting healthcare.
- > CTIT: Institute for ICT research in context.
- > TPRC: Research Center for Advancing Thermoplastic Composites Technologies.
- > Fraunhofer Innovation Platform for Advanced Manufacturing: One of the largest non-profit organisations of applied research in Europe.
- > Max Planck: Center for Complex Fluid Dynamics.
- > European Membrane Institute: Performs confidential contract research directly with industry.



Fraunhofer Innovation Platform opens soon their new Advanced Manufacturing Center.



TechMed Center is leading Innovation Hub impacting healthcare.

#### **R&D Focus**

The focus is on technological developments with a high social relevance: High Tech – Human Touch.

- > Smart Materials

  Thermoplastic composites, membranes, smart &
  functional materials, (bio)polymers, surface treatment.
- > Software & Security
  Sensors, embedded systems, architectures, ICT.
- > Medical technology
  Lab-on-a-chip (micro fluids), photonics, nano electronics.
- Chip Technology
   Analogue chip design (a.o. RF, mixed signal), photonics,
   quantum, nano, packaging, equipment, micro-electronics
- Advanced manufacturing
   Additive manufacturing, mechatronics & robotics,
   semiconductors.

These technological developments hold relevance in a number of domains where they may be applied, such as energy & battery, safety, health, water management and infrastructure.

#### **Shared R&D Facilities**

Kennispark Twente has several open innovation centres and platforms to develop and share knowledge related to high-tech systems and materials, such as OICAM (Open Innovation Center Advanced Materials), TPRC (ThermoPlastic Composites Research Centre), Texperium (recycling textiles), Laser Application Centre, Pioneering (construction technology), Technical Medical Center, BioNanoLab, Virtual Reality Lab, DataLab, SmartXp. In addition, several R&D facilities are available that are open to both companies and universities, for example High Tech Factory, Design Lab, Fablab, Nanolab, T-XChange and Twente Safety Campus.

- High Tech Factory
   Production facility for companies in micro- and nanotechnology.
- > Thermoplastic Composites Research Centre

  Open innovation around thermoplastic composites.
- Fablab Enschede
   Special equipment such as a 3D printer for prototyping.
- > OICAM

  Applied sustainable innovations in advanced materials.
- > Pioneering
  Platform for innovation in the construction industry.
- Design lab
   Creative and cross-disciplinary lab connecting science and society.
- Robotics
   Robot technology for various service applications.

#### **Start-up Facilities and Programmes**

The business climate in Twente has traditionally been based on daring, a pioneering spirit and vision. The organisation Novel-T is building an environment in which entrepreneurs can seize new opportunities to stay or become a frontrunner in their league. By connecting and activating talent, knowledge, capital, network and infrastructure, opportunities will lead to new, innovative businesses. Several facilities and programmes are available to encourage those starting their own business:

- > The TOP programme offers coaching and financing for start-ups;
- > The Legal Advice Center offers advice on the legal aspects of starting a new business;
- > There are options for a number of financing possibilities, such as the Innovation Fund Overijssel, istart.nl Seed Fund, Cottonwood, and a network of informal investors;
- There is workspace available close to innovative companies;
- Many events for sharing knowledge and skills on entrepreneurship are organised, such as the Start-up Fest, Create Tomorrow, InnovateGO and Campus Café.



Former State Secretary for Economic Affairs and Climate Policy Mona Keijzer visits TechMed Center at Kennispark Twente and University of Twente.

#### Kennispark Twente

#### **Sustainability**

#### Our policy

In addition to innovation, sustainability is one of the core criteria for every development on campus. Sustainability must lead to environmental and economic benefits. With its high-tech and research-related companies and institutions, Kennispark Twente is suitable for the application of innovative, sustainable solutions. It comprises a realistic laboratory where new techniques can be tested and implemented, including energy minimisation, climate and ventilation, day lighting, green roofs, sustainable materials, etc. Sustainable real estate, common areas and events are used as a statement to make knowledge and solutions visible to the public.

#### **BREAAM Certification**

We are in the process of securing a 3-star rating. The ultimate ambition is to obtain a BREEAM rating of 4 stars ('Excellent') for the entire area.



Kennispark Twente invests in a vibrant and dynamic community.

Kennispark Twente is one of the three main science parks in The Netherlands and set to grow further into a knowledge-based campus with a unique mix of knowledge-intensive economic functions and academic networks, focusing on personal development, challenge and growth.

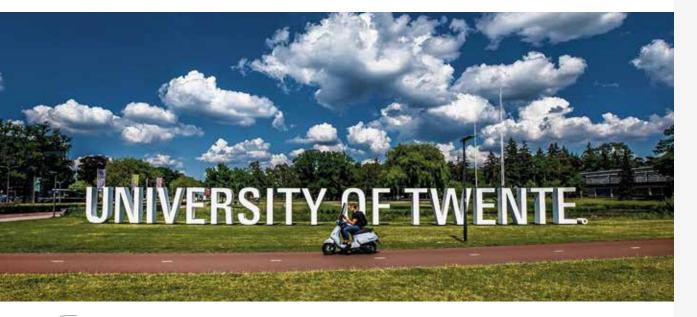
#### Our main objectives

#### **Environmental benefits**

- > Reduced energy use: energy positive reduced material inputs;
- > Increased recycling and re-use of materials, components and products;
- > Reduced environmental waste and emissions.

#### Economic benefits

- > Generation of additional revenue for economic players, cost benefits (energy, materials, waste management, compliance with environmental legislation);
- > Reduced market dependence on non-renewable and imported resources;
- > Businesses gain a competitive edge on the growing green
- > Improved public image of each company and of the park as a whole.



#### Remarkable sustainability objects/achievements

- > The Living Lab Smart Grid provides rich information about devices and building energy use as input for development and optimisation of new concepts, services and products for smart-grid solutions;
- > A heat exchange system (located in the pond) is in use.
- > Solar panels have been widely installed;
- > There is an energy-neutral road.

#### **Community Services & Facilities**

Kennispark Twente offers:

- > a full package of facilities, like Broodbode, The Gallery, Waaier, various restaurants, shops, meeting places, etc.;
- > a full programme for all inhabitants (cultural, sports, business) and 250+ events annually for innovation & entrepreneurship, partner of Start-up Fest.
- > 2 hotels.

#### Leisure (sports, congress)

Soccerstadion FC Twente, movie theatre, sports facilities, cultural performances, ice skating area, concerts and exhibitions, conference facilities, hotel.

#### Parking

4,500 free parking spaces

#### Park management

> Site-related services Kennispark Twente is working with the Association for Property Owners and Entrepreneurs at Kennispark on establishing park management. This will include issues such as energy, waste, safety, sustainability and parking. Building-related services
 There are eight serviced incubators, all with facility
 management, reception, cleaning/waste services, copy

& print facilities, etc. These are operated by various partners.

#### Governance

- Campus ownership
   Municipality of Enschede, University of Twente, private parties.
- Decision makers & decision-making process These include the municipality of Enschede, University of Twente, private parties and NFIA/Oost NL for initial contact with interested companies and contracts. Kennispark Twente conducts a profile assessment of any interested companies.
- > Management Stichting Gebiedsorganisatie Kennispark.

#### Commitment

University of Twente, the municipality of Enschede, the Province of Overijssel, Twente Board and Saxion University of Applied Sciences.

#### Buildings

Education and Research	200,000 m <sup>2</sup>
Company buildings	> 400,000 m <sup>2</sup>
Housing (students)	2,095 units
> On campus (incl. BSPW)	2,000 units
> Off campus (excl. private market)	10,000 units





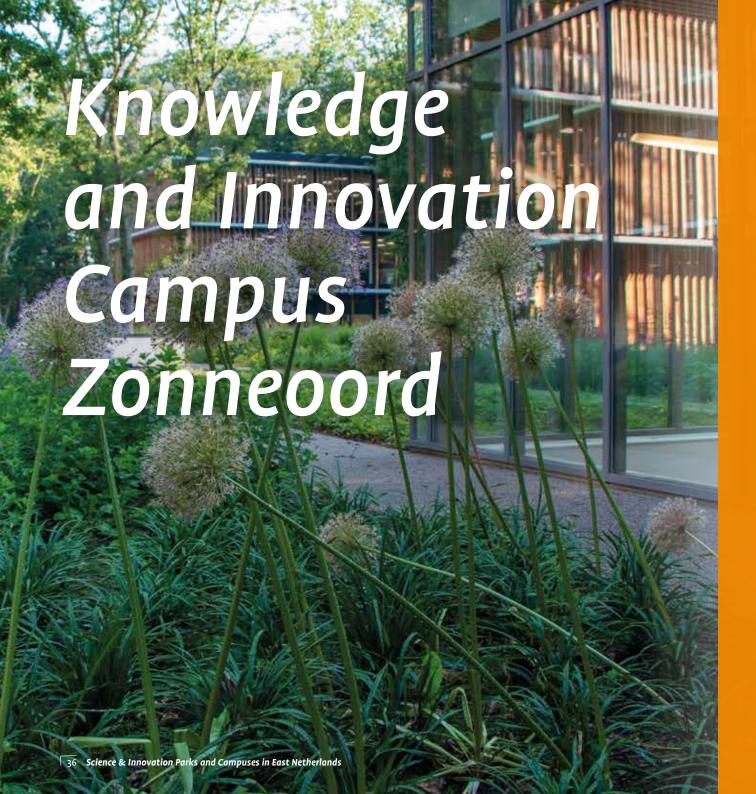
#### Contact

Kennispark Twente

Marieke Vizee

Communications advisor

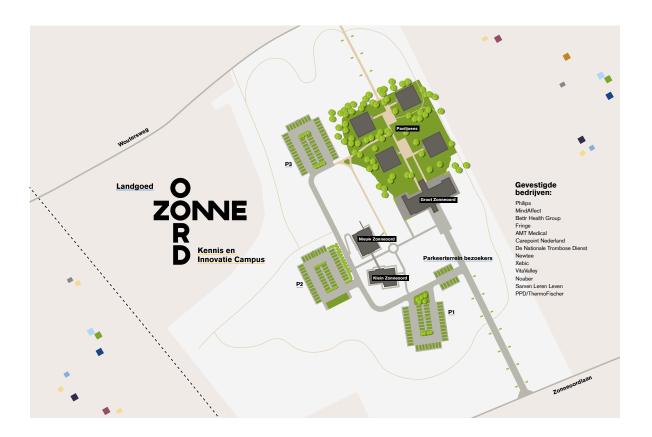
Hengelosestraat 500 7521 AN Enschede +31 53 483 6800 info@kennispark.nl | kennispark.nl



#### **Profile**

Knowledge and Innovation Campus
Zonneoord is a country estate in Ede
where health, knowledge, innovation and
nature come together. This combination
makes us a unique place to work and
meet. For meetings, events or just the
daily business.







Area
60,000 m<sup>2</sup>
Building capacity
6,000 m<sup>2</sup>

Companies

15

Jobs

250

# Knowledge and Innovation Campus Zonneoord

#### Infrastructure

#### **Railway stations**

- > Ede-Wageningen 5.3 km - 10 min by car
- > Lunteren 3.5 km - 5 min by car

#### **Airports**

- > Schiphol 85 km - 58 min by car
- > Dusseldorf Flughafen 143 km - 1 hr 30 min by car

#### Motorways

- > A1 15.6 km - 15 min by car
- > A12 10,6 km - 12 min by car
- > A30 3.9 km - 6 min by car

## **Digital infrastructure**

Glass fiber, Wi-Fi are present.
 Broadband on request.

## **City Centre**

- > Ede: 15 min by bus 7 min by car 10 min by bicycle
- Arnhem: 32 min by train 77 min by bus -28 min by car - 65 min by bicycle
- Amersfoort: 32 min by train 60 min by bus- 30 min by car 88 min by bicycle

# Knowledge and Innovation Campus Zonneoord

#### **Long-term Vision**

Contributing to a positive healthy society. We house and facilitate companies and organizations that, like us, are working towards a natural and healthier society. Because they are active in the healthcare sector, develop new technologies in the field of health, or simply value innovation, cooperation and vitality.

#### **Open Innovation Strategy**

We work together on innovation strategies and facilitate exchange of knowledge and experiences.

#### **World-class Research Institutes**

> Philips

#### **Shared R&D Facilities**

The Estate has a fully equiped cleanroom of 55 square meters with 6 workstations.





### **Start-up Facilities**

There are no service organisation available, but one of the organisations at the estate is an investor in early stage initiatives. They do not only fund initiatives, but also contribute in knowledge, experience and network.

#### **Sustainability**

The campus aims to make a valuable contribution to the formulated climate objective. We aim to be circular wherever possible.

The Pavilions are WELL Building Certified (Platinum).

At Well Building, the well-being of people is paramount.

The WELL philosophy, where possible, is used as a starting point for (policy) choices made on campus. Whereby climate and the environment take precedence over a financial result.

Contributing to a healthy society. We house and facilitate companies and organizations that, like us, are working towards a natural and healthier society.

#### **Community Services & Facilities**

Landgoed Zonneoord is a country estate in Ede where health, knowledge, innovation and nature come together. This combination makes us a unique place to work and meet. For meetings, events or just the daily business.

#### Facilities

Several indoor and outdoor sports facilities. The estate offers a variety of meeting and conference rooms.

#### Parking

180 free parking space.

#### Park management

- > Charging points for EV
- > 24/7 security
- > Central reception
- > Park management
- > Waste management

- > Technical services
- > Landscape maintenance
- > Shared mountainbikes

#### Site- and building related services

- > Campus catering
- > High quality green maintenance

#### Governance

The campus is governed by a board of directors.

#### Company buildings

- > Groot Zonneoord
- > Nieuw Zonneoord
- > Klein Zonneoord
- > Paviljoen A, B, C, D
- > Tijdelijk Zonneoord



## Knowledge and Innovation Campus Zonneoord



## ZONE R Mennis en Innovatie Campus

#### Contact

Knowledge and Innovation Campus Zonneoord Mirjam Kramer

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## **Profile**

Technology Base is situated on the former military airbase in green surroundings in the centre of the triangle Enschede, Hengelo and Oldenzaal – and close to the German border. Technology Base is one of Twente's innovation hotspots. Together, we are helping to position Twente as a region with 'smart impact'. Technology Base is an experimentation hub for innovative companies who want to develop, test and simulate new concepts and ideas. The civil airport Twente Airport is situated on Technology Base. The organisations at Technology Base form part of an ecosystem of hightech companies, academic institutions and public-sector organisations. It is an expansive site offering unlimited opportunities for testing manned and unmanned aircraft, autonomous systems and concepts related to advanced materials & manufacturing and safety & security.



#### Infrastructure

#### **Railway stations**

- > Enschede Central Station 8.7 km - 15 min by car - 26 min by bicycle
- > Hengelo Central Station 9 km - 15 min by car - 22 min by bicycle

#### **Airports**

- > Twente Airport o km - o min by car
- > Münster-Osnabrück 88 km - 1 hr by car
- > Schiphol 166 km - 1 hr 50 min by car - 2 hrs by train

#### Motorway

> A1

2 km - 3 min by car

#### **Digital infrastructure**

> Fiber, Wi-Fi and Park fully broadband

#### **City Centre**

- > Enschede 13 min by car - 26 min by bicycle
- > Hengelo







Area

2,200,000 m<sup>2</sup>

Building capacity

124,000 m<sup>2</sup>

Development space 250,000 m<sup>2</sup> Companies

11

Jobs

in development

Students

58,717

## Technology Base

#### **Open Innovation Strategy**

The site has various facilities for testing and training related to manned and unmanned aerial systems or concepts and scenarios related to safety & security. It also offers plenty of scope for prototyping, production trials and industrial research. The companies at Technology Base collaborate on the development of Technology Base in Twente in conjunction with the following strategic partners: University of Twente (UT), TPRC, Fraunhofer, Saxion University of Applied Sciences and ROC of Twente.

Technology base is the ideal location for businesses that are looking for a hub for development, testing, training and experimentation.

#### **R&D Focus**

Technology Base offers you the opportunity to develop and test your products or systems in the privacy of a secluded environment. The site comprises various indoor and outdoor areas for exercises and drills, training and scenario simulations. Technology Base is a unique location for performing high-risk activities. It gives you all the space you need for large-scale tests, training and simulations. Safety and security are guaranteed in the privacy of the secluded surroundings. The various types of outdoor spaces are used to test technology under extreme weather conditions, to test unmanned systems or to train large groups of people, for example.

#### **Sustainability**

The former F16 shelters include sustainable solutions for climate control and waste water. The heating system is based on an air-to-water heat pump. An on-site sewage facility (OSSF) has been installed to treat the waste water.



Twente Safety Campus

The OSSF purifies the waste water and then allows it to dissipate into the soil.

#### Shared R&D Facilities

Technology Base is a secluded area with various indoor and outdoor testing facilities where privacy, safety and security are guaranteed. It is the ideal location for business that are looking for a development, testing, training and preproduction site.

- > Various outdoor test areas;
- > 10,000m2 of indoor test facilities available right next door:
- > Secluded environment;
- > 3 km-long runway.

Battery Safety Lab (Safety Centre)

- > Living labs where smart ideas can be tried out in real life;
- > Opportunities to test experimental drones.

Technology Base is an experimentation hub for innovative companies who want to develop, test and simulate new concepts and ideas.



Artist Impression of new construction development

## Twente Airport: Living Lab for Sustainable Aviation

Twente Airport is part of Technology Base and the ideal and unique location for testing any new development or technology in future aviation. Its almost 3Km long runway, capacious airspace and secure facilities surrounding the airfield accommodate already several organizations in the field of transformational research in the aeronautical, defense and civil aviation sector.

#### **Environment for testing**

The airport's ambition is to grow and become an environment for testing of experimental and newly developed aircraft or procedures and related (digital) technology both in manned and unmanned applications such as eVTOL. In Addition, it hosts Business Aviation and provides a place for temporarily parking narrow body aircraft with parking maintenance. The absence of busy scheduled passenger traffic allows the management of the airport to rent its facilities out for testing, making it unique for its size in The Netherlands.

#### New devices and prototypes

Twente Airport is also home to several new aircraft and prototypes. It hosted a modified Pipistrel used by the foundation "Wings for Aid" that develop systems to drop relief goods in remote areas. The foundation performed many taxi and test flights at the airport. The aircraft is now being altered to prepare it for unmanned flights. Twente Airport also hosts high speed taxi and other tests for the PAL-V Liberty groundbreaking world's first flying car.

#### Unmanned and manned airspace integration

New drone techniques are being tested at the airport. In the long run manned and unmanned air travel will be integrated. Drone surveillance at the airport for both airfield and surrounding base illustrates nicely how far this technology is already common ground. Together with the drone innovation cluster Space53 based at Technology Base, Twente Airport is the front-runner in the Netherlands for the integration of unmanned and manned airspace.



Watertest PH-LAB NLR Twente Airport - Copyright Remco de Wit



# TECHNOLOGY BASE BEYOND THE IMPOSSIBLE

#### Contact

Technology Base Jan Schuring Director

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## **Profile**

Wageningen Campus is designed to be a vibrant meeting place for scientists and researchers from 12 research institutes,
Wageningen University, start-ups, SMEs,
R&D centers of national and international companies, and more than 16,000 students. All working in the fields of nutrition, agro-and food production, lifeand health sciences, biobased products, Al and the living environment.



## Wageningen Campus

#### Infrastructure

#### **Railway stations**

- > Ede-Wageningen 5.5 km - 10 min by bus
- > Arnhem (ICE train) 30 min by public transport

#### **Airports**

- > Amsterdam Airport Schiphol 90 km - 1 hr by car, 1 hr 30 min by bus/train
- > Eindhoven Airport 83 km - 1 hr by car
- > Düsseldorf Weeze 81 km - 1 hr by car
- > Düsseldorf Int. Airport 141 km - 1 hr 30 min by car

#### Motorway

> A12

3.2 km - 5 min by car

## **Digital infrastructure**

> World-class, located in one of the best fiber optic networks in the world, SURFnet, with SURFnet POP. Prepared for 5G, with high capacity redun-dant electricity infrastructure up to 10 MVA

#### **Wageningen City Centre**

> 1.5 km - 5 min by bicycle



1,050,000 m<sup>2</sup>

**Building capacity** 

710,000 m<sup>2</sup>

Development space

Wageningen •

100,000 m<sup>2</sup>

Jobs

8,000

Students

>16,000

## Wageningen Campus

#### **Long-term Vision**

The following strategic goals have been defined in order to take the next step in campus development and to remain the world-leading campus in our domain:

- > maintain the number one position in Europe and a topthree position worldwide in the food and agro domains;
- > provide an optimal and inspiring infrastructure for excellent science and research;
- > create a balanced mix of research institutes, NGOs, startups, SMEs, and national and international corporations;
- attract leading industry players in the food, agro(tech),
   biobased and environmental sectors as well as in health
   and AI, encouraging them to conduct their R&D activities
   and to collaborate at Wageningen Campus;
- > To stimulate and facilitate the dialogue and collaboration among the stakeholders regarding the global challenges in our domain.



Wageningen University with over 16,000 students from over 100 nationalities. Worldwide, the number 1 university in Agriculture & Forestry (QS World University Rankings 2023).



Wageningen Unifarm, with advanced NPEC phenotyping- and greenhouse facilities and experimental fields for crop research.

#### **Open Innovation Strategy**

On Wageningen Campus, we know that sharing knowledge is as important as developing knowledge, convinced as we are that this is the key to truly innovative solutions to the global challenges of our time. This is why Wageningen Campus is designed to be a meeting place for researchers, students, entrepreneurs, SMEs, and research centers of corporates in the fields of nutrition, health, AI, food production and the living environment. On Wageningen Campus, the academic world, the business sector and the government collaborate to address today's major social issues: the world food need, the growing pressure on blue and green spaces, the demand for sustainable production, the desperate need for alternatives to fossil fuels and the impact of climate change.

These issues are interrelated and must be addressed in conjunction with each other. As a result, these issues are ideally suited to be studied on Wageningen Campus.

Wageningen Campus is designed to be a vibrant meeting place for scientists and researchers from 12 research institutes, Wageningen University, start-ups, SMEs, R&D centers of national and international companies, and more than 16,000 students.

#### **World-class Research Institutes**

- > Wageningen University
- > Wageningen Research
  - Wageningen Bioveterinary Research
  - Wageningen Livestock Research
  - Wageningen Marine Research
  - Wageningen Centre for Development Innovation
  - Wageningen Economic Research
  - Wageningen Environmental Research
  - Wageningen Food & Biobased Research
  - Wageningen Food Safety Research
  - Wageningen Plant Research
- > NIOO-KNAW
- > MARIN
- > OnePlanet Research Center

#### **R&D Focus**

#### Healthy and Sustainable Food

Food, feed & biobased production (incl. food processing, food safety, circular economy, green materials), Nutrition (incl. healthy life style, life sciences, society & well-being).

#### **Healthy Living Environment**

Natural resources & healthy living environment (incl. Green Climate Solutions & Green Cities).

#### **Shared R&D Facilities**

Shared Research Facilities, part of Wageningen University & Research (WUR), allows researchers from all organisations, whether from universities, research institutes or companies, to use advanced research equipment housed by WUR and other R&D organisations on Wageningen Campus.Research facilities range from advanced research facilities at laboratory scale to state-of-the-art facilities for high performance computing, pilot-scale biorefinery, food conversion, climate rooms, greenhouses, aquatic research facilities and experimental fields for crop research at, for example, Unifarm, Phenomea, AlgaePARC, and the Wageningen Data Competence Center.

#### **Start-up Facilities and Programmes**

Wageningen Campus has a flourishing entrepreneur community where new ideas and initiatives in the field of food & agrotechnology originate. The campus facilitates entrepreneurs with flexible housing opportunities, support, coaching, and pre-seed capital. Forms of support vary from educational activities for university students in the StartHub, a complete range of network contacts and experts for Ag-Tech entrepreneurs or seed capital via Startlife, to location options in an incubator at, for instance, Plus Ultra or in one of the private incubators, such as BOX (Blue Ocean XLerator).



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## Wageningen Campus

#### **Sustainability**

#### Our policy

Mission: 'To explore the potential of nature to improve the quality of life' and remain a leader in terms of sustainable operational management. Policies are aimed at creating a circular economy and climate neutrality. Our campus features numerous examples of sustainable construction, energy efficiency and innovations in a green environment.

#### Our main objectives

- > Construct and furnish buildings as sustainably and circular as possible;
- > Use green electricity and refrain from using natural gas;
- > Generate renewable energy: augment the heat exchange system and increase use of solar energy on campus.

#### Remarkable sustainability achievements

- > The Netherlands Institute of Ecology Royal Dutch Academy of Sciences (NIOO-KNAW) building is based on the cradle to cradle philosophy and has won many awards. It includes an award-winning green roof 2.0, plants providing power, and water treatment technology;
- Plus Ultra building I: won the architectural ARC16 Detail Award in 2016. Plus Ultra II has been rewarded with the BREEAM-NL EXCELLENT certificate;
- Unilever Global Foods Innovation Centre: Building Research Establishment Environmental Assessment Method (BREEAM) Global Design Award and the Global Public Award in 2019;
- > The Upfield Food Science Center has been certified as BREEAM Outstanding;
- Wageningen University & Research uses an aquifer thermal energy storage (ATES) beneath Wageningen Campus;



Aquatic research

In december 2022, Wageningen University & Research ranked first in the worldwide GreenMetric ranking for the sixth consecutive year (most sustainable university in the world).

#### **Community Services & Facilities**

Wageningen Campus has several facility buildings incorporated in Campus Plaza (1,000 m²) including restaurant and catering facilities, a bookshop, coffee bar and bakery, as well as six restaurants and some kiosks in Wageningen University & Research buildings that are accessible to the public. The restaurants of Aeres University of Applied Sciences and Unilever are open for everyone too.

Wageningen Campus organises a number of programmes for local residents (the Wageningen Dialogues, business & science cafes, Campus connect meetings, as well as cultural programmes with lunch concerts, theatre, dance and sportactivities) and facilitates events such as F&A Next. For meetings, Wageningen Campus can provide formal and informal meeting and/or debating locations, such as dialogue centre Omnia, meeting centre Impulse and the outdoor amphitheatre.

#### Leisure

Indoor & outdoor sports facilities, ca. 10,000 m<sup>2</sup>. Weekly cultural programme, exhibitions, pop-up activities.

#### Parking

Main parking route, 4 green parking garages.

#### Park management

- > Site- and building-related services.
- > Campus catering, high quality green maintenance, waste management.

#### Governance

#### Campus ownership

> Wageningen University & Research /multiple private owners.

#### Decision makers/decision-making process & management

- University site: Wageningen University & Research (both initial point of contact for interested companies, contracts and management).
- > Business & Science Park Wageningen: multiple private owners, BSPW organisation.

#### Commitment & support

Wageningen University & Research, Municipality of Wageningen, Province of Gelderland, Oost NL, NIOO-KNAW, Aeres University of Applied Sciences, Business & Science Park Wageningen (BSPW), Kadans Science Partner, Foodvalley 2030.

#### **Buildings**

Education and Research	ca. 320,000 m²
Company buildings	ca. 210,000 m <sup>2</sup>
Housing (students)	ca. 80,000 m²
> On campus (incl. BSPW)	2,100 units
> Off campus (excl. private market)	6,000 units



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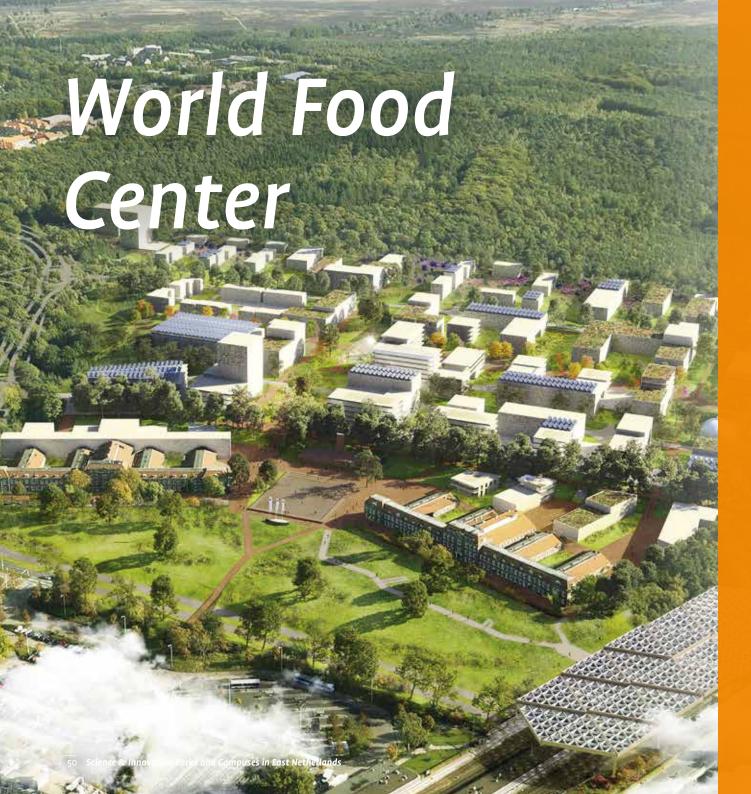
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Wageningen Campus

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## Profile

Everything revolves around food at the World Food Center: the ultimate food meeting place in the Netherlands. On the edge of the Veluwe, a dynamic new urban district is emerging at the former barracks site in Ede, where people live, work and experience. It is where we are creating an optimal and high-potential business climate for innovative (agri)food businesses, organizations and knowledge institutions who strive to work together on a healthy future for people, planet and profit: We Work Food.







Area 280,000 m<sup>2</sup>

Building capacity

15,400 m<sup>2</sup>

Development space **50,000 m**<sup>2</sup>

Companies

60

Jobs

500

#### **World Food Center**

#### Infrastructure

#### **Railway station**

Ede-Wageningeno km

#### **Airports**

- Schiphol90 km 60 min by car
- > Rotterdam The Hague 100 km - 1 hr 15 min by car
- > Eindhoven 86 km - 1 hr 5 min by car
- > Weeze 85 km - 1 hr 10 min by car

#### Motorways

- > A12 5 km - 10 min by car
- > A30 7.5 km - 13 min by car

#### **Digital infrastructure**

> Glass fiber, Wi-Fi and Park fully broadband

#### **City Centre**

- > Ede: 2 min by car 7 min by bus 5 min by car - 15 min by bicycle
- > Wageningen: 20 min by bus 20 min by car 30 min by bicycle
- > Arnhem: 35 min by bus 25 min by car
- > Utrecht: 30 min by train 50 min by bus 41 min by car
- > Amsterdam: 58 min by train 75 min by bus 41 min by car
- > The Hague: 75 min by train 90 min by bus 72 min by car

#### World Food Center

#### **Long-term Vision**

The former Maurits Zuid barracks in Ede are transformed into the ultimate food meeting place in the Netherlands – the heart of the Foodvalley region, with Wageningen University & Research just a stone's throw away. This area will be a hotbed of interaction between businesses and consumers, with the crowd-pulling World Food Experience. The World Food Center is where new products, concepts and services are developed, tested and marketed. As a result, the efforts related to solving our food problems also bring plenty of economic opportunities.

#### **Open Innovation Strategy**

We strive for profit on all fronts. We work together to achieve financially healthy businesses as well as a sustainable future for food. Anyone who (in)directly contributes to a healthier and more sustainable food system is welcome to establish themselves here. The World Food Center is the perfect microclimate for businesses and organizations from any segment of the food industry. From start- this inspiring environment connects businesses, business service providers, trade associations, knowledge institutions and educational institutes.

There are short lines to various renowned educational and research institutes, so that businesses at the World Food Center can count on a hive of young talent and experienced professionals. The World Food Center offers talents an amazing environment to grow. Who wouldn't want to work in a place as inspiring as this? The Veluwe's expansive nature as a backdrop and the former barracks as a reminder of a rich past.

#### **Start-up Facilities**

ROOTS Innovation Hub offers affordable business premises and flexible terms. Already 25 start-ups and scales-ups have settled in the former barracks of ROOTS. With the presence of various renowned educational and research institutes, and the connection with the World Food Center community network, ROOTS offers a great environment for start-ups to grow their dreams and businesses.

#### FoodX

FoodX is the gateway to connect with new ideas, solutions and partnerships from the Dutch agri-food sector.
FoodX organizes and facilitates meetings between parties in search of partnerships focused on food system transitions. They do this from our inspiring venue at the World Food Center in Ede, where they connect innovators from all over the Netherlands and far beyond.

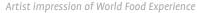
#### **Sustainability**

World Food Center has a durability vision policy.

The location encourage new-mobility solutions; shared cars, public transportation, electrical vehicles and charging-points.

The new developed buildings are made mostly in wood (co<sup>2</sup> storage) and are powered with renewable energy (solar panels and heat pumps). The new buildings have a high sustainability label (BREEAM).

The area is developed with great care for nature. The location is adjacent to the biggest national park of The Netherlands called the Veluwe.





#### **Community Services & Facilities**

The World Food Center offers a unique surrounding with the Veluwe's expansive nature as a backdrop and the former barracks as a reminder of a rich past. All this serves to create an appealing, vibrant work environment that attracts new generations like Millennials & Gen Z. the green surroundings are embraced in the architecture and interwoven with public spaces.

#### Leisure

Several indoor and outdoor event locations for congresses, meetings or festivals.

#### Parking

Wide range of free parking spaces.

#### Park management

In the near future there is the following planned: Park restaurant, Hotel/congress, Gym, Child daycare, Convenience store, outdoor activities.

Creating an optimal and high-potential business climate for innovative (agri)food businesses, organizations and knowledge institutions who strive to work together on a healthy future for people, planet and profit: We Work Food.

#### Building related services

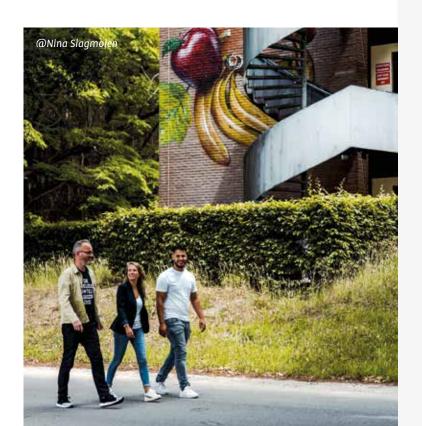
- > Cleaning
- > Maintenance

#### Governance

The World Food Center area is being developed by the Ede municipality and WFC Development B.V., a collaboration between BPD (Bouwfonds Property Development), Green Real Estate B.V. and Van Wijnen Groep N.V.

#### Company buildings

> The Friso building	6,000 m <sup>2</sup>
> The Maurits building	6,000 m <sup>2</sup>
> The new office development on lot C	7,000 m <sup>2</sup>
> ROOTS Innovation Hub	3,400 m <sup>2</sup>





# WORLD FOOD CENTER We feed each other

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