Roadmap
Campus Groningen
Driver of Growth
Welcome to Campus Groningen, part of the City of Talent, the driver of innovation in the Northern Netherlands. Here, businesses and organisations with a passion for research, education and entrepreneurship work closely together on achieving real impact. Together we focus on the impact fields of Healthy Ageing, Sustainable Society and Energy transition.

As Campus Groningen, we emphasize on collaboration. Collaboration with a regional accent; collaboration in public-private partnerships; collaboration aimed at growth. Active network creation, hand-in-hand with our down-to-earth mentality and enterprising attitude, results in both social and economic impact. The interconnections are actively reinforced so that everyone gets the most out of their presence at the Campus.

Campus Groningen is a strong business environment. We link access to ground-breaking researchers, top-level education, future talent, innovative entrepreneurship, state-of-the-art facilities and accessible financing resources. Thanks to the great connections both inside and outside the region, new innovations that originate at Campus Groningen quickly find their way onto the market.

With this brochure we give you an introduction to our Campus. This is the first step; we are curious at what level we can strengthen each other in the future.

Peter (P.E.J.) den Oudsten
Mayor of Groningen
Welcome to Campus Groningen

Reading guide
1 Welcome to Campus Groningen
2 What makes us a strong Campus?
3 What is our strategy?
4 What we do
Why does one person get ill, and another doesn’t? Does an illness develop because of genetic predisposition, is it a result of environmental factors, or a mix of both? The UMCG uses an enormous, constantly growing volume of data from a large-scale population study in the Northern Netherlands to search for answers to these questions: LifeLines.

An inexhaustible source of information. More than 165,000 participants have been extensively tested, measured, and interviewed. With the help of the constantly growing volume of data, researchers are attempting to unravel the most profound mysteries of the human being. Such as the answer to the question: why does one person get ill, and another doesn’t?

Normally, people only visit the hospital for examination when they are already ill. But the large majority of the LifeLines participants is healthy. Through regular screening, LifeLines can monitor the process that precedes an illness.

At the end of 2016, “LifeLines NEXT” was added: a large-scale and unique study in 1,500 pregnant women and their babies, during and after pregnancy.

1.1. Campus Groningen

You find yourself in the midst of students, entrepreneurs and researchers, all proud of this meeting place. The Campus is the Northern Netherlands’ driver of innovation and has two neighbouring locations; the Healthy Ageing Campus and the Zernike Campus Groningen. It is part of a region of natural cohesion and sectors that reinforce one another; it is a hub within an elaborate network both in the Netherlands and across the borders.

One of the best-known and oldest campuses in the Netherlands is the Zernike Campus in Groningen. The Zernike Campus originated at the end of the 1960s along the northern edge of the city of Groningen. The first campus buildings were for research and education of natural sciences and engineering and technology for Groningen University (RUG). Then, knowledge intensive companies and university spin-offs started settling on Zernike Campus. The Hanz University of Applied Sciences Groningen (HG) also settled on the site. It has created an ecosystem for intensive public-private collaboration with knowledge centres, numerous companies and facilities such as the Innolab Chemie Groningen, the Zernike NanoLab Groningen, the Energy Transition Centre EnTrance, the Energy Academy Europe, incubator CubeO50 and the Zernike Advanced Processing facility. This has, by now, sharpened the profile of the Zernike Campus location, with a focus on energy, chemistry, life sciences and big data.

In the meantime, the Healthy Ageing Campus with an R&D focus on healthy ageing has evolved on the east-side of the city around the Academic Hospital (UMCG) and the medical faculty. The intensive public-private collaboration between knowledge centres, public authorities, and companies in the field of medical technology, imaging, medicines and also life sciences and big data is present here too. Noteworthy facilities here are the R&D Hotel, the incubator MeditechCenter, LifeLines (a programme that monitors the health of 166,000 inhabitants of the Northern Netherlands over a period of 30 years), and the development of the Competence Center for Personalised Health.

Two locations, managed as one ecosystem for public-private collaboration. This makes Campus Groningen one of the larger significant campuses in the Netherlands with currently 190 companies, 3 knowledge centres (RUG, UMCG and HG) and more than 45,000 students. More focus, expansion of scale, professional development of park management, directional acquisition of companies and the attraction of large investment funds ensure the natural growth of our Campus Groningen.
1.2. Target group

The Campus is focused on industry, specifically:

- first-class knowledge industry, compatible with the nature of the knowledge centres;
- companies that wish to utilise (or are linked with) the knowledge centres (cross-pollination);
- start-ups by (ex-)students;
- R&D outlets and business establishment;

1.3. Success factors

<table>
<thead>
<tr>
<th>Knowledge position</th>
<th>Knowledge institutions</th>
<th>University of Groningen, Hanze University of Applied Sciences, University Medical Center Groningen, NHL University of Applied Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Thematic) institutes</td>
<td>European Research Institute for the Biology of Ageing (ERIBA), Carbohydrate Competence Center (CCC), Energy Academy Europe (EAE), Zernike Institute Advanced Materials (ZIAM), Data Science &amp; Systems Complexity (DSSc)</td>
<td></td>
</tr>
<tr>
<td>Unique companies on campus</td>
<td>Siemens, AVEBE, Target Holding, Diagnoptics, Syncom, TNO, BioBTX, CH Energy, Lode</td>
<td></td>
</tr>
<tr>
<td>Unique companies around the campus</td>
<td>Voys, Hackerone, IBM, Google, Catawiki</td>
<td></td>
</tr>
</tbody>
</table>

| Open innovation | Clinic and lab facilities (RUG/UMCG), Innolab Chemie, EnTranCe, Zernike Advanced Processing, Lifelines, BuildiNG, Digital Society Hub |

| Knowledge transfer | Technology Transfer | Center for Development & Innovation, Northern Knowledge Boosters | Value050, VentureLab, Energy Valley, HANNN, Greenlincs, IT Academy |

<table>
<thead>
<tr>
<th>Community</th>
<th>Business community</th>
<th>190 companies (Lifesciences, Pharma, MedTech / (Biobased) Chemicals, Food, (Biobased) Materials / Agribusiness / Energy technology, green energy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster</td>
<td>Life Cooperative, Bio Cooperative, Noordelijke Online Ondernemers, BERNN</td>
<td></td>
</tr>
</tbody>
</table>

| High quality location | Urban visions location Zernike Campus and developments northern tip Healthy Ageing Campus |

| Meet up | Access to knowledge institutions, (Energy)Barn, Pop-up facilities, Monthly cafes, Substantive events |

| Talent pool | Science, Engineering, Medical, Business, Entrepreneurship, Social Sciences |

| Financing | NOM, Triade, Groefonds, Carduso Capital, NextGen, Technovent loan, Investerings Fonds Groningen, Proof of Concept fund, Innovatiefonds Noord Nederland, SNN, Gemeente, Provincie, EBF, EBG |

| Hotspots | 27 ha plots, Start-up city, Cube050, HNK, Biotech Center, Meditech Center, Triade building, R&D Hotel, Center for Personalized Healthy Ageing, Launch café, Big Building |

| Marketing & Acquisition | Campus Groningen, NOM, City of Talent, City of Groningen |

| Vision & support | Campus Groningen; Formal cooperation between UMC/ RUG / Hanze University / Industry / Province / City of Groningen |

| Organization & Management | Management Campus Groningen |
What makes us a strong Campus
2. A city of talent

Imagine finding yourself in a city with 200,000 inhabitants, half of whom are younger than 35, one of the youngest cities, with all the innovation, creativity, talent and bustle it entails. No less than 44% of all inhabitants have a higher education, which is 10% more than the national average.

Various (inter)national studies confirm the high level of satisfaction Groningers feel about their city: Groningen is one of the happiest cities in. This is not just because of excellent facilities and living conditions, it is also a matter of giving space to those who are talented, to do what they are good at.

Groningen is crammed with start-ups and scale-ups who are afforded all the room and opportunities to do what they are good at, thanks to the partnerships between public authorities, the business community, Hanze University of Applied Sciences, University of Groningen, and other initiatives.

This is proving successful: the Deloitte Fast50, a list of the fastest growing companies, consists for 10% of businesses from Groningen, whilst the city has 12% of the Dutch population. And that makes Groningen a City of Talent.

2.1. The smart start

A city that is large enough to - just about - not get lost in and small enough for close relationships, quick communication and friendly faces. Important ingredients of this innovative city are its cooperative companies and broad knowledge centres; leading to the presence of highly and broadly skilled human capital. A total student population of around 60,000 students and roughly 11,000 graduates every year, Hanze University of Applied Sciences, UMCG and RUG all ensure that Groningen is the city with in proportion the largest population of young people in the Netherlands.

No other Campus in the Netherlands can combine technological knowledge with the societal element as well as we do. Next to the pure science & engineering our broad university also focuses on social sciences, humanities, medicine, business and law. Using this multidisciplinary knowledge we are able to bridge the gap between fundamental technical sciences and the needs of society. A unique combination in the Netherlands.

In short: knowledge and demands from society and corporate life are approached from different viewpoints, so that a better-founded response can be formulated. Combining and giving space to this broad knowledge means that we can make the smart start here in Groningen. Pioneering is part of the Groningen mentality. We offer room for living labs and facilitate experiments – with the goal to give the start of innovation and the first pilot the platform they deserve. From beer coaster to lab table, from proof of concept to start-up.
2.2. A multidisciplinary attitude

The available human capital, with broad knowledge, the focus on wanting to learn and experiment, suitable facilities and infrastructure, all join to take on global challenges. This cooperative attitude makes the municipality of Groningen and the province of Groningen, the knowledge centres and the (resulting) companies work together on the three spearheads in which they want to make a difference: Healthy Ageing, Sustainable Society and Energy. If you peel away the layers and take a closer look at the innovations that originate in Groningen, it shows that Groningen holds a unique position, with impact on all three spearheads. Groningen excels in the field of Advanced Materials and Smart Data.

Mice in Groningen live longer, stay healthy, slim and fit up to a more advanced age, and are at lower risk of cancer, liver disease and diabetes. All thanks to professor Cor Calkhoven and his team. The microbiologist from the European Research Institute for the Biology of Ageing (ERIBA) in Groningen carried out a small intervention in the genetic material of the little animals.

“We have the animals run across a roll, faster and faster, to see when they fall off. Our old lab mice managed to last almost as long as young mice. That is unheard of”, says Calkhoven. It is a momentous discovery. The genetically manipulated mice continuously burn more fat and carbohydrates. They live longer, but also stay slimmer and stronger.

ERIBA, European Institute for the Biology of Ageing, is carrying out research into the biological side of ageing. What are its core processes? What happens? Dozens of researchers from the Netherlands and abroad are specifically zooming in on this. It is logical that the institute is located in Groningen. Groningen has a pioneering role globally when it comes to research into Healthy Ageing.
2.3. Excellence in Advanced Materials and Smart Data

Advanced materials

Advanced materials are purposefully designed materials that show novel or enhanced structural and/or functional properties, such as improved material strength, increased electronic conductivity, anti-infectious properties or biodegradability. These advanced materials are key to society, as they enable new technological innovations and hereby help in solving worldwide challenges.

On Campus Groningen we focus on developing advanced materials within the impact fields of Healthy Ageing, Sustainable Society and Energy. We understand how materials work at the molecular scale and are even able to build a 4-wheel drive nanocar. This in-depth knowledge of materials allows researchers and entrepreneurs to construct new devices and products.

Smart Data

The amount of digital information keeps growing exponentially. However, this so called ‘big data’ is just a whole pile of data. On Campus Groningen we turn big data into smart data. This means getting actionable and valuable insights from the data. We do this by filtering noise, structuring the data, employing artificial intelligence and performing advanced analytics.

On Campus we gather and process huge amounts of data, such as measurements from our world-leading astronomy projects, customer data from large multinationals, genetic material from our biobanking cohorts and diagnostics data from smart factories. Companies, including our outstanding IT start-up scene, work on new business models, products and services based on such data streams. Through our Data Science and Systems Complexity Center, 5G Fieldlab, Internet-of-Things Network, Center for Information Technologies and the European Research Center for Exascale Technology we mean to stay at the forefront of smart data research and business.
2.4 What makes us a strong Campus

Campus Groningen in figures (2015)
compared to the eight full-grown campuses in the Netherlands

- **Campus Groningen**
  - 130 Companies
  - 3,875 Jobs
  - 6,345 Students

- **Campus Leiden**
  - 130 Companies
  - 18,283 Jobs
  - 24,695 Students

- **High Tech Campus Eindhoven**
  - 219 Companies
  - 16,000 Jobs
  - 24,080 Students

- **Brightlands**
  - 150 Companies
  - 10,000 Jobs

- **UTrecht SCIENCE PARK**
  - 77 Companies
  - 1,700 Jobs
  - 660 Students

- **wageningen campus**
  - 196 Companies
  - 6,800 Jobs
  - 10,800 Students

- **Kennispark Twente**
  - 430 Companies
  - 9,300 Jobs
  - 24,300 Students

- **Kennispark Amsterdam Science Park**
  - 190 Companies
  - 19,444 Jobs
  - 45,692 Students

* Of a total of 56,287 students in Groningen
What is our strategy?
3. What is our strategy?

The Campus constantly sees new connections and establishes new links with the objective of a smart start for achieving sustainable developments that have an impact on the regional economy. The Campus achieves impact at a global level through entrepreneurship, with world-famous research institutes and a powerful, open culture of collaboration.

3.1 Nothing without Industry

Entrepreneurship is key: the Campus fizzes with both young and experienced entrepreneurs, with many start-ups and small/medium-sized businesses, all with the same demand-led and collaboration-focused mentality.

The Campus helps this broad group of young and experienced entrepreneurs to collaborate more effectively, together and with other Campus stakeholders. To this end, there is particular emphasis on implementing the cooperative structure: collaboration by and for entrepreneurs. The economies of scale become apparent in many ways, for both the members of the cooperations and the stakeholders involved. The Campus concentrates on regional economic development from and for this entrepreneurship: to bring innovations to the market, to offer employment to more than 95% of the regional population and where students find a place to live during and after their studies.

3.2 Will to collaborate

Groningers have been reliant on each other through the centuries. And although the links with the rest of the world are excellent now, this mentality has prevailed. Research and entrepreneurship in Groningen is characterised by collaboration and searching for practical solutions.

This is why the ‘triple helix’ model of collaboration between companies, local government and knowledge institutes is commonplace at Campus Groningen. The current valorisation environment is a result of joining forces. This ensures new innovation within the knowledge fields. Campus Groningen has amassed plenty of experience with setting up partnerships, both in the public and private sectors.

Organisations wishing to join this campus are required to join this collaborative mentality and culture. They should also offer added value to the other organisations for the stimulation of collaboration and natural growth. If found suitable, the campus will facilitate these organisations with regard to location services and financing, for instance. This requires a strict admission policy and quite some patience.

3.3 Global Impact

We are facing some considerable social challenges, both in European and in global terms. To tackle these challenges effectively and efficiently, national collaboration is required.

Using the local strength and identity of Campus Groningen we will look for links and connections at a national level with the aim of generating international impact.

Go for joint action
With aligned strategies
Based on common values
We align objectives with partner campuses in the Netherlands

We proudly present our local strength and identity
What we do?

‘We quench the data hunger of large companies’

Christian Branbergen, Dataprovider

“We are all from Groningen originally, this is where it all started”, says Branbergen proudly. ‘We work mainly for customers abroad. There are just not that many large companies with head offices in the Northern Netherlands; and those are exactly the type of customers we work for.’

But not to worry. Branbergen settled in Groningen for a reason. ‘We still operate from Groningen and we will not be leaving here anytime soon. This region is perfect for IT companies. Many highly-educated people live here, there is a university and the infrastructure is second to none. Dataprovider very much needs this IT knowledge.

‘This is because our company collects all possible data on companies via the Internet. We then structure those data so that they are easily searchable. We are really a kind of super-Google! With one difference: Google always shows the best result only. Companies want all available results and we can provide those.’
4.1. Campus activities

Management
The Campus has many existing initiatives and partnerships. The role of the campus management is in direction and support. The strategy is to provide space for the parties present in Groningen to take their roles and run with them.

Vision
With a sustainable Campus being the aim for the coming years, a strong vision is required on the development, the niches, the links that are still missing, and the provisions. The strategic framework, the "core team", is an active link in defining a strategic vision for the Campus.

Community building
The Campus facilitates and gives shape to the development of the requirements and ambitions of small and medium-sized businesses and the knowledge centre. Its strength here is in making the connection. For instance, the recently developed Life Cooperative and the developments surrounding Bio economy.

Acquisition
The Campus functions as identifier, developer and optimal energiser of existing (model) projects. Also, it acts as a catalyst of new collaboration and innovation projects, product-market combinations and start-ups, from science and business. All in harmonisation with or carried out by the current players in this field.

Property development
Basic principles for property development are generally defined within the Campus master plans and the accommodation plans of the knowledge centres. An important focus for Campus management is the creation of independent meeting places/public campus spaces, shared facilities for the purpose of open innovation and finally, pop-up business accommodation.

Marketing
Competition and opportunities are available all over the world. Putting the Campus on the radar of companies that are interesting to us is of crucial importance to creating critical mass.

Vision
Marketing the Campus is essential. The primary approach is to help the relevant company land in the region and to facilitate and encourage collaboration with the knowledge centres. By creating good facilities, the Campus will become a logical landing place for many parties.

Community-building
The Campus generates new ideas and start-ups continuously. The large majority requires funding for the various stages of development. This is why the Campus works on attracting capital for companies. This could include starting capital, risk capital, loans and if desired, various regional, national and European funding sources.