

Wageningen Campus Strategy

Gateway to smart food in a green world



Contents

Summary	3
1 Introduction	5
2 Ambition	8
2.1 Mission	8
2.2 Strengths, weaknesses, opportunities and threats	8
2.3 Strategic goals	9
3 Strategy and structure	10
3.1 Strategy	10
3.2 Structure	14
4 External requirements and surroundings of Wageningen Campus	14
5 Campus description	16
6 Financials	17
Appendix I	20

Summary

The education, science and research at Wageningen UR have earned it an outstanding international reputation. Wageningen UR continuously invests in this high quality by hiring highly educated and qualified staff and by investing in outstanding infrastructure, housing and facilities. As described in the 2011-2014 Strategic Plan, Wageningen UR wants to foster further interaction with other R&D intensive organisations and businesses on Wageningen Campus and create a hotspot for successful innovation in the domains of food and food production, living environment and health, and lifestyle and livelihood.

The origin of the campus dates back to the 1950s, when the first research institutes were located there. In 2002, development began on what is now called Wageningen Campus. It is the main location for Wageningen UR's education and research activities, with a total investment of approximately €700 million in campus buildings and facilities. The campus also houses other organisations, such as the Netherlands Institute of Ecology (NIOO-KNAW), Stoas | Vilentum University of Applied Sciences (StoasVilentum), FrieslandCampina, NVWA¹ and a variety of start-ups. In total, over 15,000 people employed by different organisations work and study every day in the green and open setting of Wageningen Campus.

The mission statement of Wageningen Campus is *Gateway to smart food in a green world*. Key ingredients in fulfilling this mission include the presence of the high-class university, top-quality contract research institutes and the strong global 'Wageningen' brand in food, agro, bio-based and environmental and social sciences. Wageningen UR's knowledge and experience of food security and food safety also contribute to the top quality and to this strong brand. Working together, Wageningen UR and industry are very well equipped to contribute to the innovative solutions that these domains require.

The following strategic goals have been defined to make the next step in the campus's development and become the world-leading campus in our domain:

- Maintain the number one position in Europe and a top-three position worldwide in the food and agro domains;
- Provide an optimal and inspiring infrastructure around excellent science and research;
- Create a balanced mix of start-ups, incubators, small and medium-sized enterprises and national and international corporations;
- Attract leading industry players in the food, agro and bio-based sector to perform their research and development (R&D) activities at Wageningen Campus.

These goals will be realised by:

- Ensuring access to outstanding research facilities and equipment;
- Creating an inspiring, central interaction and meeting area: IMPULSE!; and
- Offering dedicated services for companies and institutes at every stage in their life cycles.

A swift decision-making process is required to implement this strategy. A dedicated campus organisational structure will be established with responsibility for attracting new

¹ Netherlands Food and Consumer Product Safety Authority (Nederlandse Voedsel- en Warenautoriteit).

organisations to the campus and connecting with external organisations on development-related activities.

A total investment of €330 million by 2025, including an accelerated investment program of €270 million in the next seven years, is required to achieve this ambition. The investment programme for the next seven years includes both campus investments totalling €220 million and €50 million of investments in the surrounding area. Campus investments will include an incubator building with a campus front office, a techno-hall, R&D facilities and meeting and interaction points in the IMPULSE! Area. Investments in a number of basic elements are also required, such as a good and close connection to the authorities in the direct environment of the campus, an improved traffic plan for effective, green and safe access to Wageningen Campus, good access to an international school and child care, and housing for and a close interaction with the World Food Center in Ede. Finally, dedicated buildings for national and international corporations are part of the total expected investment. Investments are expected to be made by Wageningen UR (€48 million over the next seven years) and external parties such as the province of Gelderland, the cities of Wageningen and Ede, investors and corporations (€222 million over the next seven years).

With the current plan, the ambitions for Wageningen Campus can be achieved by soundly anchoring Wageningen UR and its research domains in the area. This will result in increased economic activity because more employees will be working and living in the area and the number of students will be higher. *A gateway to smart food in a green world* will be created.

Wageningen, June 2013

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Schematic presentation of Wageningen Campus as of 2013



1 Introduction

The Netherlands is one of the most competitive economies in the world. Its highly ranked business climate makes it an attractive location for companies looking for a strategic European base. Additionally, the Netherlands is among the world's largest exporters of food and agricultural products; with annual exports of nearly €50 billion, the Agro & Food top sector represents 25% of the Dutch export market.² The country's open and international outlook, strategic location in Europe, well-educated, multilingual, flexible workforce and the high level of work productivity are important factors for this favourable position. The competitive fiscal climate, top-level physical and technological infrastructure and overall quality of life are additional key contributors to the country's success.

Wageningen University and Research Centre (Wageningen UR) is the combination of the Wageningen University and the contract research institutes of DLO³ (Figure 1). A staff of 6,000 and 8,000 students (BSc and MSc, respectively) and 1,000 PhD candidates⁴ from over 100 countries work and study toward creating a healthy food and living environment. The collective approach of the various technological, biological and social fields results in scientific breakthroughs that can quickly be put into practical applications and be incorporated into education, also known as 'the Wageningen Approach'. The scientific quality of Wageningen UR is affirmed by the prominent position it occupies in international rankings and citation indexes.⁵

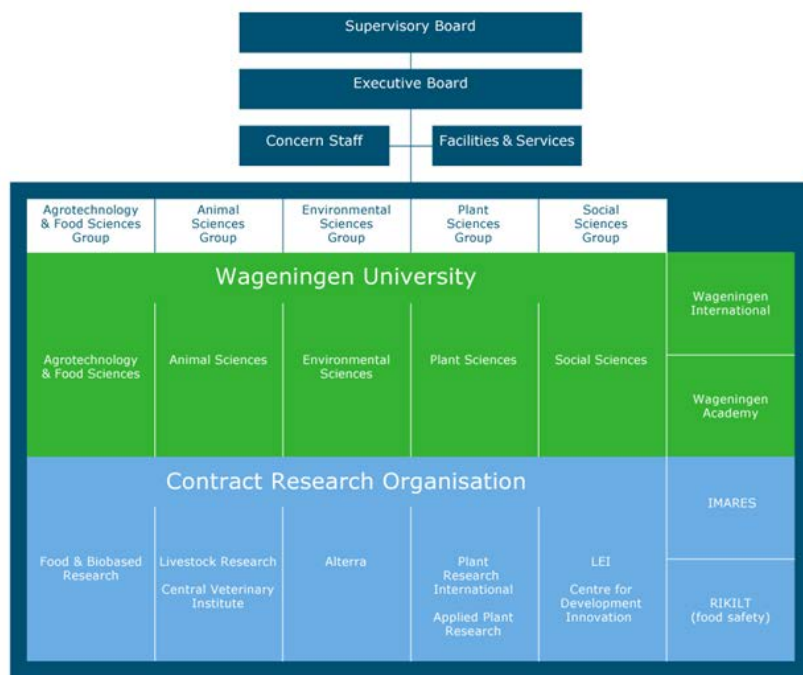


Figure 1 Schematic overview of the Wageningen UR organisation

² Letter to the Minister of Economic Affairs from 22 March 2012 regarding innovation contract top sector Agro & Food.

³ The research institutes of the DLO Foundation carry out application-oriented and field-based research. They are commissioned by the government, commercial businesses and non-profit organisations. In this document they are referred to as *contract research institutes*.

⁴ Approximately 50% of the 1,900 PhD candidates have a position at Wageningen University. These students are included in the number of 6,000 staff.

⁵ Based on the position of Wageningen University in 2012 world rankings (e.g. Shanghai-ARWU, #40 for Life and agriculture sciences; Times Higher Education, #70; Taiwan Ranking Agriculture, #2; Leiden CWTS, #69) it can be stated that Wageningen University has the #1 position in Europe and a top 3 position worldwide in the food and agro domain.

Moreover, Wageningen UR's strength lies in its ability to join the forces of its specialised contract research institutes and the university, enabling the translation of fundamental knowledge from the university into practical applications for industry or government.

The domain of Wageningen UR consists of three related main areas:

- Food and food production
- Living environment
- Health, lifestyle and livelihood

Wageningen UR has branches all over the Netherlands that act as satellites of the central location at Wageningen Campus. It also has activities all over the world, including its own offices in Chile, China, Ethiopia, Saudi Arabia and Brazil (Figure 2). The majority of its lecturers, researchers and other employees are based at its main location, Wageningen Campus.

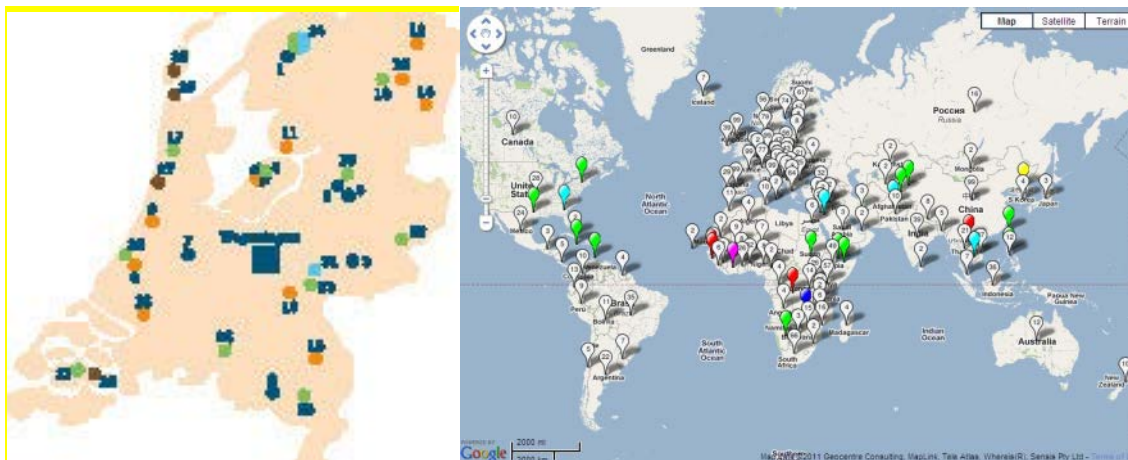


Figure 2 Schematic overview of Wageningen UR locations in the Netherlands and activities worldwide

Originally, the various contract research institutes and university groups were spread all over Wageningen. In 2002, it was decided that the sciences groups should be housed together on the site which we now call 'Wageningen Campus' and a master plan was adopted for the campus. Nowadays, the university chair groups and research institutes of Wageningen UR's sciences groups are housed in the buildings that have been constructed since 2002. After completion of the Helix building in 2015, the last sciences group (AFSG) will be completely accommodated at Wageningen Campus and Phase 1 of the campus development will be completed.

However, the master plan was also developed to make Wageningen Campus an attractive location for other companies and organisations and thus make it a hotspot of education, science, research, creativity, entrepreneurship and innovation activity. The first external organisations to settle at Wageningen Campus were NIOO-KNAW, the Innovation Centre of FrieslandCampina, NVWA and StoasVilentum. The current plan describes this second phase of the master plan, which aims to attract additional organisations.

2 Ambition

2.1 Mission

The overall goal of Wageningen Campus has been formulated in a mission statement, which is related to that of Wageningen UR. It clarifies the context of the campus and is the basis of the stated vision for 2025.

The mission statements:

Wageningen UR: to explore the potential of nature to improve the quality of life.

Wageningen Campus: Gateway to smart food in a green world.

The *vision 2025* of Wageningen Campus:

A vibrant place where students, entrepreneurs and scientists meet. Where one experiences cutting edge innovation with high-end facilities and equipment for all. Where new ideas are born, nurtured and will prosper. You love to *bee* and *buzz* at Wageningen Campus.

2.2 Strengths, weaknesses, opportunities and threats

The outcome of the external and internal environmental analysis (SWOT) of Wageningen Campus is shown in Figure 3.

Strengths	Weaknesses
<p>High-class university and top-quality institutes on campus; Wageningen is a strong global brand in food, agro and bio-based; Central location with ample opportunities for growth; Good campus facilities and infrastructure; Highly educated, pluralist, international labour force (students and employees).</p>	<p>Internal decision-making process is dependent on multiple stakeholders (slow process); Lack of support and infrastructure for start-ups; Current campus traffic plan is insufficient for good informal meeting, interaction and networking; Lack of internal cooperation amongst campus stakeholders; Current campus 'inhabitants' insufficiently reflect global issues.</p>
Opportunities	Threats
<p>Increasing world population demands innovative solutions in the food and agro domain; Increasing awareness of the importance of good national and international networks and cooperation; Potential revenue stream via further campus development; Optimal innovative ecosystem could be achieved by attracting new companies and institutes; Strong momentum as a result of local, regional, national and international political debates.</p>	<p>Increased international competition from other campuses. Losing the window of opportunity by a slow external decision-making process; Traffic situation in direct campus surroundings; Loss of control over campus / stakeholders with wrong focus; Changing world balance of upcoming economies versus Europe and USA.</p>

Figure 3 SWOT analysis of Wageningen Campus (April 2013)

Strengths

The most important strengths of the Wageningen Campus are the presence of a high-class university and top-quality institutes; 'Wageningen' as a strong global brand in food, agro and bio-based and its central location with ample opportunities for growth. Moreover, the excellent campus facilities and infrastructure and the highly educated, international and diverse labour force (students and employees) are strong assets of the campus.

Weaknesses

The support and infrastructure for start-ups requires further professionalisation and the existing campus traffic plan and meeting areas are insufficient for good informal meeting, interaction and networking. Additionally, cooperation amongst campus stakeholders is suboptimal and global issues could be reflected more proactively by the current 'inhabitants' of the campus.

Opportunities

The increasing world population requires innovative solutions in the food and agro domain; the fact that Wageningen UR and the industry can contribute to these solutions and the local, regional, national and international political debate about innovative solutions to feed the world's population underwrites the strong momentum. There is an increasing awareness about the relevance of good national and international networks and cooperation. An innovative ecosystem with effective interaction between various parties can be achieved at the campus by attracting new companies and institutes. Moreover, further development of Wageningen Campus may deliver revenues from which Wageningen UR can benefit.

Threats

The window of opportunity may be lost due to the slow decision-making processes of the multiple stakeholders. It has to be taken into account that the economic world balance is changing by upcoming economies. Also international competition from other campuses is increasing. Although located centrally in the Netherlands, the traffic situation in the direct campus surroundings needs improvement, stressing the urgency to execute the existing plans. Wageningen UR needs to choose the right strategy and partners for further campus development to maintain control.

Conclusion

The result of the SWOT confrontation matrix (Appendix I) clearly demonstrates that the strengths and opportunities of Wageningen Campus outweigh the threats and weaknesses. In conclusion, it can be confidently stated that the campus offers great opportunities for creating an inspiring and successful Wageningen Campus that is a '*gateway to smart food in a green world*'.

2.3 Strategic goals

Strategic goals define the ambitions of Wageningen Campus:

1. Maintain the number one position in Europe and a top-three position in the world for innovations in the food and agro domain.
2. Provide optimal and inspiring infrastructure around excellent science and research for its inhabitants, where new cutting edge innovations can be born and nurtured in an open environment.
3. Create a balanced mix of start-ups, incubators, small and medium-sized enterprises (SME) and R&D activities of national and international corporations.
4. Attract leading industry players in the food, agro and bio-based sector to perform their R&D activities at Wageningen Campus.

The most important strategic goals are visualised as clear objectives. Table 1 shows the key performance indicators (KPI's) for the coming years.

Table 1 KPI's of Wageningen Campus (2013-2025)

	key performance indicators		
	2015	2020	2025
Access to excellent research facilities	<ul style="list-style-type: none"> Continue facility sharing (30% of Wageningen UR facilities used by/for external parties) Continuous focus on new research facilities (annual value of €4 million) Business plan for a multi-purpose, flexible pilot facility (techno-hall; €9 million) 	<ul style="list-style-type: none"> Continue facility sharing (40% of Wageningen UR facilities used by/for external parties) Continuous focus on new research facilities (annual value of €10 million) Implementation of a multi-purpose, flexible pilot facility (techno-hall; €9 million) 	<ul style="list-style-type: none"> Continue facility sharing (40% of Wageningen UR facilities used by/for external parties) Continuous focus on new research facilities (annual value of €10 million)
Central interaction & meeting	IMPULSE! Area finished	Continuous focus on interaction and meeting requirements	Continuous focus on interaction and meeting requirements
Number of spin-offs / SME's	18	40	50
Number of R&D labs of international corporations	1	3	4

3 Strategy and structure

3.1 Strategy

The following strategy has been formulated to achieve the strategic goals and the related KPI's:

- I. Ensure access to outstanding research facilities and equipment;
- II. Create an inspiring, central interaction and meeting area: IMPULSE!; and
- III. Offer dedicated services for companies and institutes at every stage in their life cycles.

I. Ensure access to outstanding research facilities and equipment

For Wageningen Campus to remain a breeding place where talent grows, new ideas are born and innovation is stimulated, it is critical to continuously invest in excellent facilities and provide access to those facilities (facility sharing). Wageningen Campus already has an excellent, state-of-the-art portfolio of the relevant facilities and equipment for its core research domains (Table 2), with a total value of almost €190 million. The facilities are open for external users (facility sharing): CAT-AgroFood is part of Wageningen UR and is especially set up to facilitate access of external parties to the advanced lab facilities and related expertise of Wageningen UR.

Plans for further investments in the core areas are under continuous development and annual investments of approximately €10 million ensure the continuation of the high standards in its core research domain. Facility sharing and extending the group of facility users ultimately provides the majority of the financial means for these investments. Gaps in the current facility portfolio are flexible, multi-purpose pilot facilities ('techno-hall'), for which investment is planned (see Chapter 6).



Table 2 Overview of research facilities and equipment at Wageningen UR

Overview of research facilities and equipment (investments since 2004)	Total (mEuro)	Food	Agro	Bio-based	Ecology	Health
		processing ; after gate	primary production ; on farm	circular economy	nature	
Research Facilities Campus						
Genomics facilities (transcriptomics, proteomics, metabolomics)	14.2					
Genomics and sequencing facility (including bioinformatics and high performance computing and systems biology)	8.2					
Molecular structure and content analytical facilities (advanced mass spectroscopy, NMR)	14.8					
Imaging systems (microscopy, laser optics, data analysis, 3T MRI)	15.6					
Pheromone and MCA production facility	0.9					
Fermentation and downstream processing facility	2.1					
Water reuse, water quality and ballast water test facility	1.1					
Algae production test facility	1.5					
Biorefinery test and bio-based product development facility (incl. Modutech)	5.4					
Bioprocess engineering facility	1.9					
Food product development & analysis facilities	4.8					
Restaurant of the future and consumer test facility	4.2					
Human physiology / metabolic test facilities	2.6					
CKP (small animal test facility)	4.9					
Livestock facilities (nutrition, health, production, physiology, animal metabolic wards)	12.6					
Fishery facilities	3.8					
Green houses (fully controlled, GMO test facility, stress environments)	20.9					
Post-harvest and supply chain facilities	3.7					
Soil chemical, biological, environmental facilities	5.6					
GEO-desk (Geo information maps and data)	0.5					
Ecosystems, habitat and meteo software systems	5.3					
Total on Campus	134.4					
Research Facilities outside Campus						
high containment unit (for contagious animal diseases)	14.6					
Zoonose facilities	7.4					
Test locations and innovation centres:						
- for livestock research	8.5					
- for applied plant research	15.3					
Marine ecological research facilities	4.9					
Total outside Campus	51.4					

II. Create an inspiring, central interaction and meeting area: IMPULSE!

Wageningen Campus is synonymous with meeting, connecting and interacting in a formal and less formal way. IMPULSE! Area is a recognisable central meeting area on the campus; its lively and sparkling atmosphere forms the heart of Wageningen Campus, combining all available campus facilities aimed at meeting, connecting and interacting. It is an appealing and therefore logical place for people to meet, have a drink or have dinner. It is close to sport facilities and a day care centre, and its informal appearance stimulates connection and interaction.

The IMPULSE! Area builds on existing facilities (e.g. *Impulse*, Sports Centre de Bongerd) and new facilities, including a range of different functions such as:

- Restaurant(s) with terraces
- Meeting rooms (formal and informal)
- Student cafeteria
- Dedicated shops
- Sport facilities
- Entertainment

III. Offer dedicated services for companies and research institutes at every stage in their life cycles.

Offering dedicated services to organisations will enable maximisation of the know-how and infrastructure available on the campus. Services will be tailored to specific needs, as shown in the overview in Table 3.

Table 3 Overview of services available for businesses at different stages of their life cycles

Segment	Required function of building/location		
	Office/workspace	Advisory/support services	R&D facilities
Start-ups	incubator/corporate building	Special desk for legal, tax and financial services. Exposure to venture capitalists and banks. Coaching	Subsidized use of shared R&D facilities
Incubators	incubator/corporate building	Special desk for legal, tax and financial services. Exposure to venture capitalists and banks. Coaching	Subsidized use of shared R&D facilities
SME's	incubator/corporate building		Use of shared R&D facilities
National Corporations	incubator/corporate building or separate building		Use of shared R&D facilities/own facilities
International Corporations	incubator/corporate building or separate building		Use of shared R&D facilities/own facilities
Research Institutes	Separate building		Use of shared R&D facilities/own facilities

The current StartLife organisation should be used as a basis for start-up and incubator services on the campus, and capital should be attracted from venture capitalists and banks. A centrally located building, close to the facilities as mentioned in numbers II and/or III⁶ of this paragraph, will host start-ups, incubators, SME's and corporations that do not require a complete building. This building will also host special entrepreneurial courses for the BSc / MSc curriculum of Wageningen University. By combining this function in the incubator building, lectures from entrepreneurs and CEO's can effectively be incorporated into the courses and will create interaction between students, entrepreneurs and CEO's, all aimed at stimulating innovation and encouraging students and researchers to start their own businesses. With Wageningen Academy⁷, which offers trainings and courses for professionals from business ('lifelong learning'), education for professionals is also available. Moreover, the incubator building contains a front office that is equipped for sourcing and scouting purposes and that is also the central contact point for campus development-related activities, including acquisition of new organisations for locations on the campus.

⁶ Chapter 6 includes an overview of investments that will be required in the coming years to realise these goals.

⁷ Wageningen Academy is part of Wageningen UR and organises courses and trainings for professionals who work in business or government.

3.2 Structure

This next step in the development of Wageningen Campus requires an improved, more professional and service-oriented campus organisation. Acquisition of new organisations to locate on the campus will become one of the most important activities. This will be organised in an effective and dedicated campus organisation with the following attributes:

- I. It will be headed by one person who is fully dedicated to Wageningen Campus and has mandate and authority. This person will report to the Wageningen UR Executive Board, which has ultimate responsibility. This person will have a support team (see II) allocated from the various sciences groups and staff departments of Wageningen UR. This person will also act as the contact person for campus-related items with the municipality, province, Oost NV, Food Valley and so forth.
- II. The separate campus organisation will have clear tasks, targets and responsibilities, with a central desk ('front office') for new organisations that would like to come to the campus. If desired, this organisation will also coordinate all legal and legislation procedures, marketing/communication, finance, facilities, etc.
- III. An appropriate budget will be assigned to the campus organisation for organisation, acquisition, etc. (see details in Chapter 6).

4 External requirements and surroundings of Wageningen Campus

Wageningen Campus is located in the Food Valley, an area in the Netherlands with a concentration of food-related activity. Many public and private organisations perform food and agro-related R&D activities in Wageningen and its direct surroundings. The continued growth of Wageningen Campus by attracting more national and international corporations and further focusing on nurturing start-ups and incubators will be a clear asset to the economic development of the Food Valley region.

To successfully execute the strategy and growth of Wageningen Campus, a number of basic requirements need to be addressed.

1. Excellent and effective relationships with the authorities in the direct environment of the campus;
2. An improved traffic plan that provides effective access to the Wageningen Campus;
3. Good access to an international school and child care;
4. Good access to hotel facilities and congress facilities in the direct surroundings;
5. Housing for employees in the surrounding area;
6. The World Food Center, which is expected to be a centre with global reach and a landmark with unique and iconic architecture. It will become the centre for presenting Agro & Food and Horticulture in the Netherlands and will offer visitors inspiring experiences that will reach all their senses.

BLGG AGROXPERTUS

stoas | Vilentum
WAGENINGEN | HOGESCHOOL

Ziekenhuis
Gelderse
Vallei



Noldus
Information Technology



FrieslandCampina [nl](http://www.frieslandcampina.nl)



StartLife

FOSTERING ENTREPRENEURSHIP



regiofood
valley

 NEDERLANDS INSTITUUT VOOR ECOLOGIE (NIOO-KNAW)
NETHERLANDS INSTITUTE OF ECOLOGY (NIOO-KNAW)



 **WAGENINGENUR**
For quality of life.

5 Campus description

Wageningen Campus is located northeast of Wageningen, near the access road to the A12 motorway. Wageningen UR is the owner and main user of the campus site. Their activities focus on the 'healthy food and living conditions' domain, developing top-quality expertise and translating its knowledge into practice worldwide. Moreover, Wageningen UR educates professionals who will discover breakthroughs in science and technology in relevant areas such as food security, bio-based economy and ecologically sustainable food production. Wageningen UR owns almost all the buildings and terrains on the campus site. In the past decades approximately €800 million⁸ has been invested in buildings and research facilities including laboratories.

Facilities

An excellent infrastructure of research facilities and equipment is available for research and education purposes. Chapter 3, paragraph 1, provides further details about these facilities. The campus provides room for research collaboration initiatives such as the protein and carbohydrate competence centres or Wetsus. These virtual centres are usually part of multiple sciences groups and are often combined with Wageningen UR's contract research institutes and Wageningen University, as well as other public and private national and international research organisations. Moreover, there are several test facilities outside Wageningen, such as the high containment unit, zoonosis facilities, and experimental animal, plant and sea production facilities (see Table 2, page 12).

Wageningen UR Library is a network of several specialised, discipline-oriented libraries at the sciences groups, coordinated by the Forum Library. Library services are open to the public. The library has a large collection of scientific literature, especially in the fields of agrotechnology, food sciences, plant and animal sciences, soil science, geo-information, landscape and spatial planning, water and climate, ecosystem studies and social sciences.

Sports Centre de Bongerd offers extensive workout and sports opportunities for students and employees of Wageningen UR. The high standard of these facilities has been confirmed by the Dutch students, who have rated them as 'excellent' for almost ten years in a row in the yearly student survey.

Student housing

Wageningen is a university town with about 8,000 students, which is quite an amount for a city with a total population of 38,000. As a result, Wageningen has a young, inspiring atmosphere and a real student-centric feeling with the associated facilities and events one usually expects only in larger cities. Students are housed by the student accommodation provider Idealis or rent private housing.

Other campus residents

Several parts of the campus offer opportunities to house new organisations. NIOO-KNAW and StoasVilentum have recently relocated to the campus and FrieslandCampina will begin relocating its entire R&D staff to the campus in mid-2013. There is ample room to house more organisations on or near Wageningen Campus.

⁸ Total of investments of Wageningen UR and other parties on the campus.

6 Financials

Wageningen UR has made extensive investments toward the development of Wageningen Campus. The current value of its investments in campus buildings and research facilities (excluding ground) is more than €700 million. In total (including research facilities outside Wageningen), Wageningen UR has invested nearly €800 million. Other organisations (e.g. FrieslandCampina, NIOO-KNAW and StoasVilentum) have also invested in the campus. The total invested value on Wageningen Campus (excluding ground) since 1999⁹ is estimated to be more than €800 million.

Table 4 shows an overview of planned investments related to the Wageningen Campus strategy. Besides operational costs, the total amount of planned investments on Wageningen Campus until 2025 are approximately €280 million plus Helix, of which €220 million will be made within the next seven years (by 2020). In addition, over €50 million of investment is planned within the next five years for the direct surroundings (improvements in infrastructure and the World Food Center).

Returns on these investments are extremely important to both Wageningen UR and the region's general economic development. Sound developments in areas such as economic activity related to additional employment and an increasing number of students will result from the implementation of the strategy for Wageningen Campus.

Return on investment by 2025 can be summarised as follows:

1. Anchoring the basis of Wageningen UR and its research domains in the area:
 - Be an excellent source of employees by increasing the number of students (BSc, MSc) and PhD candidates.
 - Increase the number of students. The expected student population in 2017 is approximately 11,000; the ambition is to maintain this number of students in 2025, despite demographic developments.
 - Increase the number of PhD candidates, thereby enabling the continuation of granting a high number of PhD graduations per year (300).
2. Additional employment in the area:
 - On campus, an additional 1000 FTE's by 2025:
 - Incubator building, including front office: $50 \times 2 = 100$ FTE's
 - Corporate Building: $10 \times 10 = 100$ FTE's
 - R&D labs of national and international corporations: $4 \times 200 = 800$ FTE's
 - Additional indirect employment is estimated to be approximately 240 FTE's¹⁰, related to the direct increased number of FTE's

⁹ Value excluding value surface; value of buildings including investments from 1999; value of research facilities and equipment including investments from 2004.

¹⁰ Estimation based on TNO Report Kennis als economische motor, Onderzoek naar het ruimtelijk-economisch effect van hoger onderwijs, W.J.J. Manshanden, 2009, and personal communication (W.J.J. Manshanden)

3. Additional annual turnover at Wageningen UR is important for anchoring its basis (1.)
 - From projects out of:
 - Incubator building, including front office: $50 \times 0.02 = \text{€}1$ million
 - Corporate Building: $10 \times 0.1 = \text{€}1$ million
 - R&D labs of national and international corporations: $4 \times 0.5 = \text{€}2$ million
4. Additional expenditures in the region
 - As a result of the increased (direct and indirect) employment the expenditure in the region will grow significantly.
 - In addition, as a result of the increase number of students and PhD candidates an additional $\text{€}25$ million¹¹ will be spent in Wageningen and surroundings.

¹¹ Based on report Feiten & Trends Studentenhuisvesting, KENCES, december 2012; TNO Report Kennis als economische motor, Onderzoek naar het ruimtelijk-economisch effect van hoger onderwijs, W.J.J. Manshanden, 2009, and personal communication (W.J.J. Manshanden)

SWOT Confrontation matrix

		Opportunities					Threats						
		Increasing world population demands innovative solutions in the food and agri domain	Increasing awareness for importance of good (international) networks and cooperation	Potential revenue stream via further Campus development	Optimal innovative ecosystem could be achieved by attracting new companies and institutes	Strong momentum as result of local, regional, national and international political debate	Losing window of opportunity by slow external decision making process	Traffic situation in direct Campus surroundings	Loss of control over Campus / stakeholders with wrong focus	Increased international competition from other campuses	Changing world balance of upcoming economies versus Europe and USA.		
Strengths	High class university and top quality institutes on Campus	18	14	16	16	13	9	11	7	16	18		138
	Wageningen: strong global brand in food, agri and biobased	17	14	15	17	15	10	9	9	16	18		140
	Central location with ample opportunities for growth	11	12	15	15	12	8	11	5	12	9		110
	Good facilities and infrastructure on Campus	15	15	15	18	13	10	13	8	14	13		134
	Highly educated, pluriform, international labour force (students and employees)	18	13	13	18	11	6	5	6	14	15		119
							369						272
Weaknesses	Internal decision-making process dependent on multiple stakeholders (slow process)	11	10	15	13	17	14	8	10	15	6		119
	Lack of support and infrastructure for start-ups	11	9	15	17	12	6	6	4	13	8		101
	Current Campus traffic plan insufficient for good (informal) meeting, interaction and netw	8	8	13	13	9	8	12	5	12	8		96
	Lack of internal cooperation amongst Campus stakeholders	9	9	11	13	14	13	2	5	11	8		95
	Current 'inhabitants' of Campus insufficiently reflect global issues	6	5	4	4	4	5	0	3	8	15		54
							260						205
		124	109	132	144	120	89	77	62	131	118		