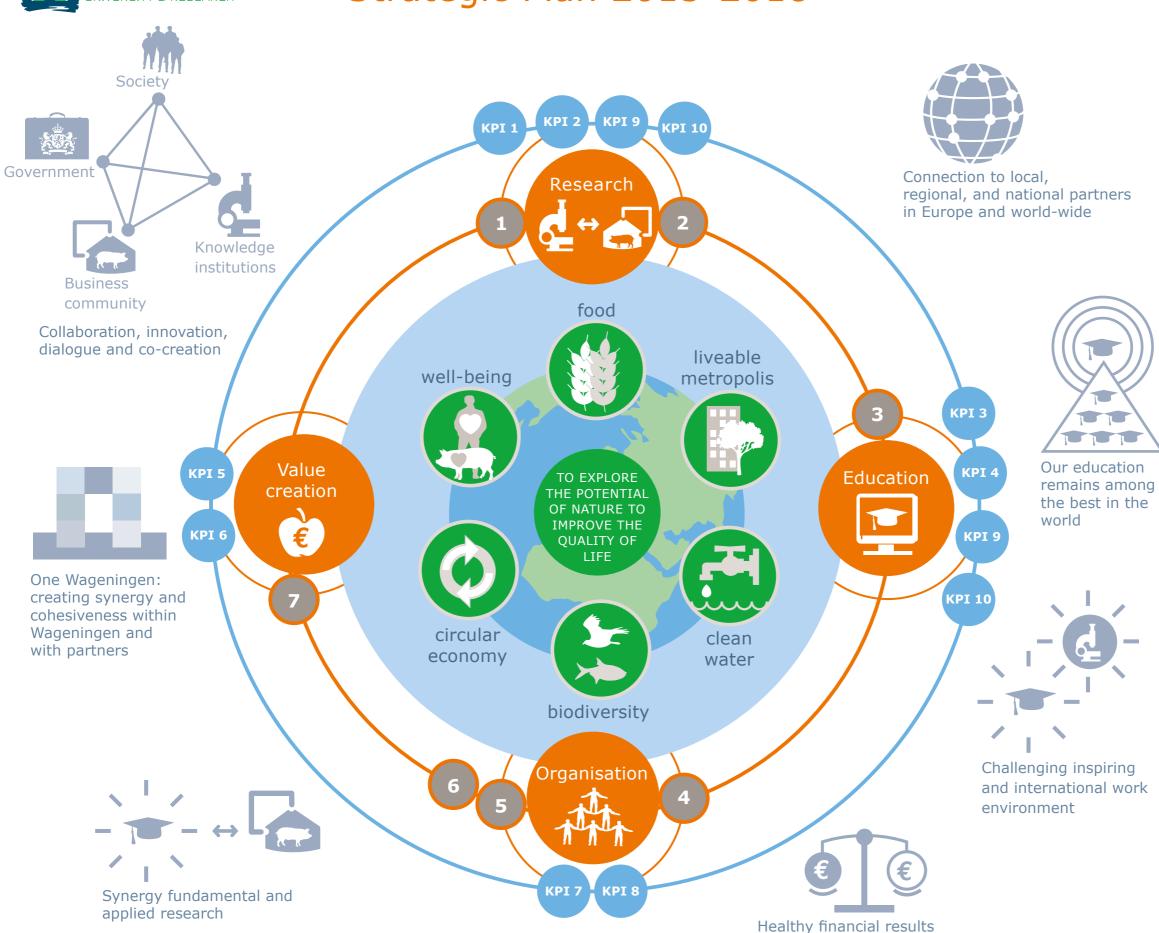
WAGENINGEN UNIVERSITY & RESEARCH

Strategic Plan 2015-2018



Motivation, vision and mission

International ambitions

5
Strategic investment themes

10 Key performance indicators

Priority areas 2017

Strategic Plan 2015-2018

Version 01/2017

Research



The world needs our knowledge to tackle the serious challenges we face. Knowledge about food, water, energy, climate, health and behaviour. Knowledge for people and nature, for our surroundings and our planet. We perform excellent research in the areas of society and well-being, natural resources and living environment and food, feed and biobased production. Society is challenging us to come up with solutions. Solutions that emerge from the overlap between individual fields of knowledge.

Read more in the Strategic Plan.









Organisation

- Motivation, vision and mission
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What

- three core areas: 'Society and Well-being', 'Food, Feed and Biobased Production', and 'Natural Resources and Living Environment'
- five strategic investment themes: A Global One Health, Resource Use Efficiency, Resilience, Metropolitan Solutions, Synthetic Biology
- maintaining a good rating in peer reviews and a high position in the rankings

How

- combining fundamental and applied research
- contributing to top sectors and other public-private partnerships
- collaborating more with institutes in the TO2 Federation and with universities and knowledge institutes in the Netherlands and abroad
- improving the quality of researchers and creating a better climate for the best scientific talent
- publishing peer-reviewed articles in Open Access journals for greater accessibility of knowledge
- enhancing the coherence in our international approach

KPIs Research

To all KPIs

Increase and anchor synergy in the organisation

- We aim for an annual increase of 5% in the number of paid projects involving not only multiple sciences groups but also the university and the research institutes.
- In 2018 the financial commitment in the five strategic investment themes should have at least doubled relative to our internal commitment by means of additional external funding.

Strengthening our international connections

- By 2018 we will have at least two strong partner institutions on each of the continents of Europe, America and Asia with which we collaborate at the institutional level in education and research. By 2018, we will have contributed significantly to two partner institutions in Africa.
- By 2018 we will have acquired a position in 10 or contributed to the formation of three international consortia, through which we have accessed new markets for education and research and have made an international impact.

Priority areas for 2017 | Research

To all priority areas



Investment themes



Strengthening interaction between the research of WU and WR

Education



Wageningen University & Research is attractive for Dutch and international students. We maintain our quality standards while working on an educational approach with which we can handle the rapid growth in enrolment. We are looking for students who want to get the most out of their studies, and we want to retain the coherence between education and research. To consolidate our international position as a top university, we are offering more online education, focusing emphatically on lifelong learning, and forming new alliances with universities abroad.

Read more in the Strategic Plan.









Education

Value creation

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What

numbers

 providing students with a strong academic foundation and social responsibility and teaching them to work in a multidisciplinary way

dealing with growing student

- focusing more on lifelong learning
- further improving PhD programmes
- responding to interesting developments by adapting or developing programmes

How

- developing a single coherent educational system with on-campus education (full-time), online education (distance, part-time) and personalised education, with partially digital components (Wageningen Inside, MOOCs)
- · encouraging balance between education and research
- promoting intercultural skills, internships and education abroad
- renewing our approach to education and annual innovation budget for drastic educational reform
- chair plan that promotes dynamics, innovation, stability, and resilience of chair groups
- developing the Master's programmes Metropolitan Solutions and Food Chains; exploring the option of offering an advanced teaching qualification programme
- researching ways to strengthen the international classroom and the option of offering English-taught Bachelor's programme
- international collaboration with excellent knowledge institutes

KPIs Education

To all KPIs

Developing a new educational approach for larger numbers of students and the One Education System

- Despite their growing numbers, on-campus students in 2018 rate WU education as positively as in 2014.
- Every year, for at least one field of study or course, we develop digital education materials that are used for more than one target group or type of education.

Strengthening international connections

- By 2018 we will have at least two strong partner institutions in Europe, America and Asia with which we collaborate at the institutional level in education and research. By 2018, we will have contributed significantly to two partner institutions in Africa.
- By 2018 we will have acquired a position in or contributed to the formation of three international consortia, through which we have accessed new markets for education and research and have made an international impact.

Priority areas for 2017 | Education

To all priority areas



Education ecosystem







Value creation



Wageningen University & Research is unique, as we combine fundamental and applied science, education and research. The 'Dutch Approach', in which knowledge has been organised into a golden triangle of government, business and expertise centres, supplemented by civic organisations and active citizens, is perceived as an outstanding basis for innovation. We amplify this powerful combo by committing even more deliberately to social and economic value creation, in our networks and with our stakeholders: Wageningen University & Research for impact.

Read more in the Strategic Plan.









creation

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What

- working with companies on co-creation and innovation
- working on societal challenges through dialogue with society
- contributing to government policy, legislation and enforcement
- sharing our knowledge infrastructure with businesses and organisations
- training experts to play a role in the development and application of our knowledge

How

- collaborating with the business community (through top sectors, networks and improving visibility of knowledge and skills)
- nurturing a culture based on value creation
- contributing to the public debate through the Wageningen Dialogues and setting agendas; bridging the gap between companies and consumers by offering objective information, based on scientific evidence
- carrying out legal research projects and policy-oriented research for government ministries, for which integrity and independence are prerequisites
- investing with partners in costly research equipment, opening up our own facilities, and partnering with StartLife and spinoffs
- making knowledge easily accessible through Green Helpdesk, Education Desk and Sciences Shop and by organising meetings for interaction and knowledge exchange
- providing regular degree programmes and training for professionals

KPIs Value creation

To all KPIs

Devote more attention to economic and social value creation, aimed at contributing to innovation in enterprises and strengthening the dialogue with society.



We hold at least two Wageningen Dialogues on relevant social topics each year, with a steadily increasing number of parties involved.



We aim for an annual growth of 5% in our contributions to innovation in business.

Priority areas for 2017 | Value creation

To all priority areas



The future of applied research







Organisation



We have the ambition to help solve important problems in the world. We focus outwardly and seek new markets. We invest energy in creating more synergy and flexibility within our organisation: One Wageningen. We cherish and enhance the culture of cooperation, knowledge sharing, entrepreneurship and customer orientation, and are an attractive organisation where talent reaches its full potential. We are investing in a socially responsible and efficient organisation.

Read more in the Strategic Plan.









creation

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What

- stronger outward orientation
- flexible: responding rapidly and effectively to changes, questions and needs
- focused, effective and efficient
- socially responsible

How

- opening up and further developing Wageningen Campus
- One Wageningen: strengthening culture of cooperation and presenting a united front
- transcending separate organisational units; market-oriented account teams
- strengthening public affairs, focusing on politics (local, national, EU), society and NGOs
- directing alumni policy towards international ambitions
- promoting shared responsibility between employees and managers in the areas of workability, vitality and employability
- promoting diversity in the organisation regarding nationalities and genders
- following socially responsible business practices and instituting efficiency processes in the area of finances, IT and information

KPIs Organisation

To all KPIs

Aim for a more collaborative approach to the market and increase the turnover of the research institutes



Between 2015 and 2018, we aim to achieve 5% annual growth in the turnover of the research institutes in public-private and private markets.



Every year, at least one new market team starts work focused on a new market; this team consists of members from at least three sciences groups.

Priority areas for 2017 | Organisation

To all priority areas





Breaking down barriers to strengthen internal collaboration



Overhead







Motivation, vision and mission

We contribute to solutions for major social issues such as the world food problem, climate change, the development of a circular economy, conservation of nature and biodiversity, and poverty reduction.

Our reputation, and more importantly, our relevance, is recognised world-wide. The aim of this Strategic Plan is to build upon and strengthen this position.

Read more in the Strategic Plan.

Trends and challenges

- There is insufficient safe and healthy food world-wide.
- The demand for food continues to increase as the population continues to grow and as global life expectancy continues to rise.
- The increasing level of prosperity is increasing the demand.
- There is an increasing need for control and enforcement.
- Urbanisation is accompanied by new challenges in food security, energy, transport and living environment.
- The growing world population is causing a heavier burden on the carrying capacity of the soil, water and atmosphere, leading to climate change and a loss in biodiversity.
- Increasing global prosperity must be done in a sustainable manner.

Mission

"To explore the potential of nature to improve the quality of life"

Ambitions

- to provide knowledge and expertise in the areas of food, water, biodiversity, climate, behaviour and health to help the world face serious challenges
- to achieve synergy by combining education with fundamental and applied research
- to focus on the world around us in order to identify important issues, to understand our stakeholders' concerns and to work together with partners on solutions and innovations
- to be one of the best education and research institutions

Global issues













Food

Focusing on the total system: careful production and processing of healthy food, sustainable use of soil, water and atmosphere, reduction of inputs of nutrients, auxiliary chemicals and pesticides, and reduction of greenhouse gas emissions, with special attention to sustainability and animal welfare.

Liveable metropolis

Generating metropolitan solutions in order to arrive at smart cities: cities and metropolitan regions that – in close relationship with the surrounding rural areas - are liveable, healthy, resilient and cyclical.

Clean water

Improving sustainable use and management of ground and surface water, contributing to water purification and tackling salinisation.

Biodiversity

Acquiring insight into System Earth's capacity for recovery, and possibilities to improve that capacity locally and regionally.

Circular economy

Facilitating the transition to a circular economy founded on biobased raw materials, and studying the social and economic consequences of feed-food-fuel choices.

Well-being

Improving food products and production processes, enhancing healthy choice behaviour and acquiring insight into the role of cultural and behavioural factors.











Organisation

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International ambitions

We focus on the world around us to identify important issues, to understand our stakeholders concerns and to work together with partners towards generating solutions and innovations. With our knowledge we can contribute to education and research in these emerging countries, and in this way strengthen our international position. World-wide, the need for higher education is increasing, as is the need for professionals in our domain.

Read more in the Strategic Plan.

Research

- enhancing the coherence in our international approach
- scaling up current activities and actively exploring new markets and project opportunities
- investing in knowledge in international markets (EU, business and government)
- five investment themes with international scope
- transitioning to Open Access, where the author pays for publication in academic journals (Golden Route) for better accessibility of research findings, for everyone, worldwide

Education

- maintaining quality while increasing online education such as Master's programmes and MOOCs, for which there is world-wide interest
- facilitating international mobility
- working together with excellent partners in Europe and beyond, together with whom we develop blended and online education, offer double and joint degrees and coordinate influx of international students
- researching the option of offering an English-taught Bachelor's programme
- improving and expanding course selection for academics, through increased requests for capacity building

Value creation

- We choose global partners of similar quality and of a similar position. We will intensify collaboration with UC Davis and Cornell (US) and INRA (France), CAU (China) and NTU (Singapore).
- We seek out cooperative partnerships in emerging countries. There we choose strong, rapidly developing partners that we can support locally with our expertise in research, education and capacity building.
- In developing countries, our contribution to the training of professionals is a sustainable way to help them build their economies.
- We ensure that the latest knowledge is always available to alumni and other experts (CDI, Wageningen Academy).

Organisation

- continuing to professionalise the market approach, sharing information and engaging in joint operations
- improving the situation for the non-Dutch employees
- directing alumni policy and fundraising towards international ambitions
- promoting diversity in the organisation regarding nationalities and genders
- improving support for employees who engage in international mobility



Research







creation

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Priority area 2017

To all priority areas



Education ecosystem



Future of Wageningen University







5 Strategic investment themes

The five investment themes are strategic topics with which we can emphasise specific aspects of our expertise development. These themes are the successors to the strategic themes from our previous plan. They have been chosen in areas where various scientific disciplines in our domain intersect. These areas encompass urgent and relevant challenges that could benefit greatly from our unique combinations of expertise. By combining various scientific disciplines, new insights are created that facilitate considerable progress.

Read more in the Strategic Plan.









Research

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A Global One Health

Controlling the risks of disease outbreaks and reducing endemic infectious diseases are crucial to food security, public health, climate change and biodiversity. We use the phrase 'A Global One Health', as it reflects the interconnectedness and global nature of health care for humans, animals, plants and the environment. Many health risks can be controlled through effective interventions consisting of an adequate and varied food supply, hygiene, medicines, vaccines, vector control and crop protection.

A sustainable and shared approach requires an integrated analysis of infectious diseases, with contributions from various knowledge domains. We perform research into infectious diseases, vectors, ecology, epidemiology, healthy agriculture (animal health and plant health), healthy nutrition and intestinal flora, food security and safety, and social health issues. Through a system approach, we provide an essential contribution to improving the health of people, animals and plants.

Resource Use Efficiency

A more intensive use of natural resources places increasing pressure on biological systems and on production and consumption systems in agriculture. Due to increasing global urbanisation, the distribution of the flow of energy, materials and waste is shifting on a large scale, and the quality of ecosystems (for example soil and water) is under pressure. The flow of nutrients, residue and waste is becoming concentrated in prosperous, densely populated urban areas, while elsewhere the soil is becoming depleted.

We are investing in the transition to a more sustainable and efficient system of production and consumption. We are developing new knowledge and technology to deal more efficiently with the available raw materials. We are changing primary production streams through new combinations of various sectors, product groups and raw materials.

We are working on the intelligent closure of previously separate cycles of energy, materials and nutrients through the optimal use of plant and animal sources. In addition, we are contributing to a highefficiency revolution in the use of raw biological materials through the efficient conversion and distribution of streams, raw materials and products, as well as the prevention of waste and disposal of nutrients. This transition is also accompanied by new business opportunities and risks, which were previously unknown. For the effective support of this transition, governance is crucial; new networks must be formed between the most important actors in production and consumption, innovations in institutions must be required and new practices must be developed. Socio-economic analyses show how this transition can be shaped.



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5 Strategic investment themes

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Resilience

Resilience is an important property not only of natural ecosystems, agro-ecosystems, and economic and social systems, but also of biological systems such as humans, animals, plants and microbes. The resilience of a system determines its response and adaptation to sudden, non-linear changes such as rapid technological progress, climate change and socio-economic changes. Likewise, the degree to which a system can adapt is also determined by its resilience. The reactions in the systems are complex and determined by interaction with other systems and reactions between different scales.

We are already working on resilience in various scientific areas. Many of the underlying principles, such as mathematical and experimental approaches, are universally applicable. As a result, the application potential is great. This is illustrated by the current work on the resilience of livestock, tropical rain forests, food supply chains and climate-resistant agriculture. To deepen and expand the research on resilience, we are working on new interdisciplinary applications for resilience.



Metropolitan Solutions

By 2050, 70% of the world's population will live in cities. As a result, cities will to an increasing degree face issues concerning the sustainability and quality of life. This concerns aspects such as food security, mobility and logistics, the availability of water, dealing with raw materials and waste, health and well-being. The metropolitan city is simultaneously an incubator for creative solutions, a precursor of social and technological innovations in sustainability, an important player on the world stage and a specific social and ecological system. In this way, the metropolitan city also serves as a 'living lab' to design, test and disseminate solutions to these problems.

We are committed to metropolitan solutions in order to arrive at smart cities: cities and metropolitan regions that – in close relationship with the surrounding rural areas – are liveable, healthy, resilient and cyclical. For instance, we understand that green areas in the city play a key role in business climate, safety (water storage), liveability and health. The Amsterdam Institute for Advanced Metropolitan Solutions (AMS) and the Delta Alliance are two of the first initiatives in this field. We would like to expand these with new international initiatives and networks.



Research







Education

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5 Strategic investment themes

5

Synthetic Biologie

Acquired knowledge on genetic material as a building block for life has increased drastically. We can use this knowledge to design new biological systems. This offers a world of possibility for improving the quality of life. However, the application of synthetic biology is still in its infancy. At present, work is taking place only with biomolecules and single-cell organisms, such as bacteria and yeasts.

Over the long term, our research will contribute to evocative aspects such as production platforms for energy, new biologically inspired materials, refined diagnostics with the aid of biosensors and the production of pharmaceuticals. This also elicits questions about what 'life' is and how science and society can mutually ensure responsible innovation – for example when it comes to societal acceptance, controlling risks and protecting intellectual property. The extra investments in synthetic biology provide opportunities for successful international competition in this area, in which natural scientists and social scientists work closely together.









Research Education

lucation

Value creation

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10 KPIs

Ideally, we would like to measure our contribution to our impact on solving major social challenges, but that is an impossible task. This is why we have formulated indicators that measure our progress as we move forward in the direction set out in this plan. We will report the progress measured by these indicators annually. The indicators are relevant for innovation, but together they do not yet create a complete picture of our organisation's performance. As a result, we will formulate a more extensive list of indicators that covers the entire breadth of the organisation. This list will include indicators for aspects such as scientific excellence, sustainability, socially responsible entrepreneurship, study success, employee satisfaction and financial key figures.

Read more in the Strategic Plan.









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Increase and anchor synergy in the organisation, by tackling multidisciplinary challenges across various sciences groups through fundamental and applied research (One Wageningen)

- We aim for an annual increase of 5% in the number of paid projects involving not only multiple sciences groups but also the university and the research institutes.
- In 2018 the financial commitment in the five strategic investment themes should have at least doubled relative to our internal commitment by means of additional external funding (public and/or private).

Develop a new educational approach for larger numbers of students and the One Education System

- Despite their growing numbers, on-campus students in 2018 rate WU education as positively as in 2014. (indicators are the average ratings given by the students in the National Student Survey on the following aspects: teaching methods, lecturer involvement with students, quality of feedback and ratio of small-scale to large-scale education).
- Every year, for at least one field of study or course, we develop digital education materials that are used for more than one target group or type of education (for example, material developed for MOOCs as well as on-campus education, or for both an online Master's programme and a short course).

Devote more attention to economic and social value creation, aimed at contributing to innovation in enterprises and strengthening the dialogue with society

- We hold at least two Wageningen Dialogues on relevant social topics each year, with a steadily increasing number of parties involved.
- We aim for an annual growth of 5% in our contributions to innovation in business. We measure these contributions using various valorisation indicators, including the number of co-publications with industry and the number of patents and licenses.

Aim for a more collaborative approach to the market and increase the turnover of the research institutes in public-private and private markets

- Between 2015 and 2018, we aim to achieve 5% annual growth in the turnover of the research institutes in public-private and private markets.
- Every year, at least one new market team starts work focused on a new market; this team consists of members from at least three sciences groups.

Strengthening our international connections

- By 2018 we will have at least two strong partner institutions on each of the continents of Europe, America and Asia with which we will collaborate at the institutional level in education and research. Such an institutional collaboration requires a minimum of three sciences groups. By 2018, we will have contributed significantly to two partner institutions in Africa.
- By 2018 we will have acquired a position in or contributed to the formation of three international consortia, through which we have accessed new markets for education and research and have made an international impact.





7 Priority areas of 2017

To realise the Strategic Plan, an implementation plan will be drawn up annually, in which we will identify a number of priority areas that will receive additional attention during that year. In the implementation plans, the objectives will be described in greater detail than in the present plan. We will appoint priority area leaders and closely monitor progress throughout the year. Naturally, we will also continue to monitor our environment so that we, if necessary, can adapt in response to new developments.

Read more in the Strategic Plan.









Research

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Priority areas

Priority area leader

Monitor

Research

Investment themes:

- A Global One Health
- Resource Use Efficiency
- Resilience
- Metropolitan Solutions
- Synthetic Biology



This priority area aims to achieve more collaboration between the organisational components in the area of research and to manage the coordination of this collaboration between the Wageningen Graduate Schools from WU, the organisational units from WR and the corporate unit that facilitates the research.

Martin Scholten, director ASG and WMR Raoul Bino, director AFSG Jack van der Vorst, director SSG Bram de Vos, director ESG Ernst van den Ende,

director PSG

Richard Visser

Arthur Mol

Arthur Mol

Education



Education ecosystem

Assuming much lower funding levels and expected developments in the field of education, this priority area will examine how the structure of our education needs to be adapted. This includes developing new education approaches with respect to the growth of student numbers, high-quality and efficient education, preserving small-scale teaching, the internationalisation of education and the use of internet-based products.

Dean of Education

Arthur Mol

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Organisation and One Wageningen



Priority areas

Future of Wageningen University

As a follow-up to the priority area regarding the future of applied research which was instituted in 2016, this priority area is aimed at the development of a long-term vision for Wageningen University. What kind of university do we wish to be? This priority area will focus on elements such as international connections, the importance of excellence in research, and accommodating student growth.

Jack van der Vorst, director SSG Dean of Education

Arthur Mol

Breaking down barriers to strengthen internal collaboration

This priority area is a further elaboration of the priority area on collaboration from 2016. In 2017, the focus will be on breaking down the segmentation between the individual units and between WU and WR.

Robert van Gorcom Martijn Hackman

Tijs Breukink

Overhead

Due to various changes in the organisation, such as reorganisations and declining turnover, among other things, it is necessary to re-assess the facilitating functions. This concerns both the decentralised and centralised overhead, for which, in particular, the coherence between decentralised and centralised overhead is viewed in the light of concentration, efficiency, contact with researchers, increasing rules and regulations, etc.

Annemieke Beers

Tijs Breukink







Research

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Value creation and market

The future of applied research

This is a continuation of the priority area from 2016. Research areas covering multiple organisational units will be identified. Special, temporary teams of existing staff will develop these further with the aim of improving the acquisition of contract research.

Raoul Bino, director AFSG Ernst van den Ende, director PSG

Louise Fresco



