

Annual report

2018



WAGENINGEN
UNIVERSITY & RESEARCH



100years
1918 — 2018

100 years of Wageningen Wisdom & Wonder

One hundred years ago, in March 1918, we were granted the academic status of university. In the century that followed, Wageningen University & Research grew into an internationally renowned research institution in the domain of healthy food and living environment. The university's greatest strength has always been its unique combination of education and research. The mission of Wageningen University & Research, now and in the future, is "to explore the potential of nature to improve the quality of life".

The start of 100 years of Wageningen University & Research, March 2018.

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Supervisory Board

At the end of 2018, the members of Wageningen University & Research's Supervisory Board were as follows.

Prof. M.J. Cohen (Chair)¹

Prof. Korver (Vice Chair)

Ms T. Klimp²

Dr B.J. Marttin MBA

Dr R.P. Smith RA

Ir. M.A. Verhoef

The members of the Supervisory Board for both institutions (Wageningen University and Wageningen Research) are the same.

Refer to 2.9.4.1 for an overview of the side activities of the members of the Supervisory Board.

¹ Until 1 April 2019. From this date, Ir. J.R.V.A. Dijsselbloem will chair the Supervisory Board.

² Since 1 September 2018.

Executive Board

At the end of 2018, the members of Wageningen University & Research's Executive Board were as follows:

Prof. L.O. Fresco (President)

Prof. A.P.J. Mol (Vice President, Rector Magnificus of Wageningen University)

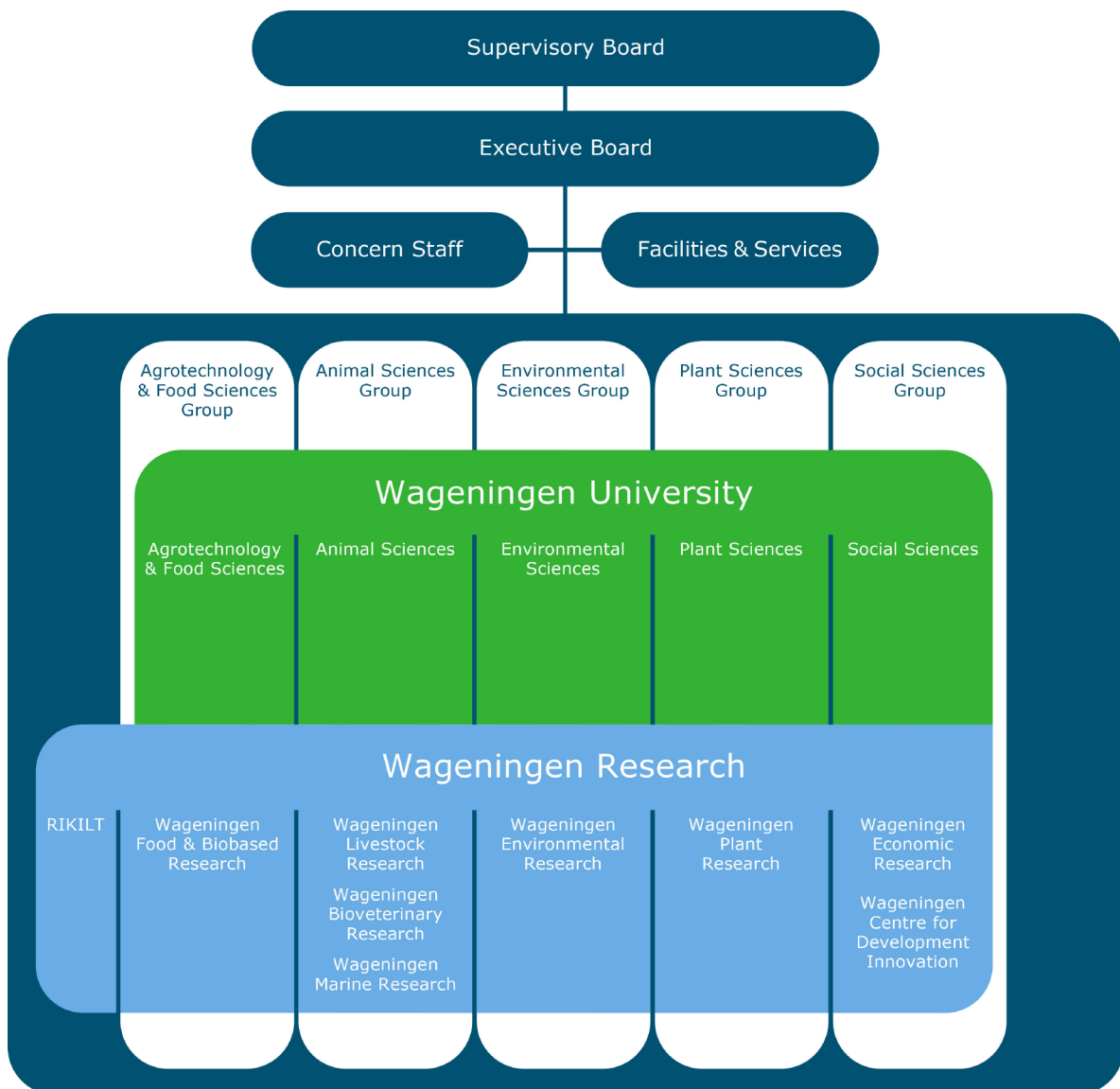
L.A.C. Buchwaldt, MBA

The members of the Executive Board are the same for both institutions (Wageningen University and Wageningen Research).

Refer to 2.9.4.2 for an overview of the side activities of the members of the Executive Board.

Profile and Core Activities of Wageningen University & Research

Wageningen University & Research is a partnership between Wageningen University and Wageningen Research. The association is organised into five sciences groups. This collaboration is the organisational, functional and administrative tool which, through combining forces, helps achieve greater effectiveness and quality of research and education. Each sciences group consists of a Wageningen University department that is organisationally integrated with one or more application-oriented Wageningen Research institutes. However, the organisations are separate administrative and legal entities. The matrix of the sciences groups together with the board of education, the research institutes and the programme directors that operate across Wageningen University & Research, ensure that interdisciplinarity and demand management are achieved.



In 2018, one research institute, RIKILT, was not organisationally integrated with a sciences group. RIKILT carries out Legal Research Tasks in the area of food safety. As of 2018, Wageningen Marine Research is part of the Animal Sciences Group.

In 2018, TNO's Functional Ingredients research group was transferred to the Wageningen Food & Biobased Research institute.

Wageningen University and Wageningen Research are independent legal entities. In terms of content, the objectives and activities of these separate legal entities are aligned both at the strategic and tactical levels within the Wageningen University & Research partnership. Collaboration occurs in the operational management of some components. However, the relationship between these components is neither determined by nor dependant on policy. Individual organisational resources may not be used for any other purpose than to realise the objectives and perform the primary tasks of the individual organisation. For this reason, the separate legal entities publish a consolidated financial report for their group. Wageningen University & Research as a whole does not publish a consolidated annual report.

Letter from the Executive Board

While employees and students of Wageningen University & Research continued to carry out their usual, outstanding work in 2018, the year was characterised by the celebration of Wageningen University's 100th anniversary. It was an intense year with numerous highlights. Inspiring alumni events took place in many countries, symbolising the bond between the university and its alumni. A global discussion on the topic of how we can sustainably feed the growing world population was held during a large reunion on campus. It was also the theme of a well-attended conference about the SDGs, with contributions from prominent international participants. The different academic conferences contributed to setting the agenda for future education and research to enable us to continue working towards our mission "to explore the potential of nature to improve the quality of life".

The thought process during the centennial and the experiences of the past years have been reflected in the Strategic Plan 2019-2022, which was presented at the end of the year with the motto "*Finding Answers Together*". The power of Wageningen University & Research lies in its multi-disciplinary collaboration within the organisation and its dialogue with the so-called "Dutch diamond" of the government, business community, research institutes, and societal organisations. This was strongly emphasised once again during the past year and new steps were taken in this respect, including an agreement about sharing equipment with Unilever's food research group, which will be located on campus.

Wageningen University & Research achieved a significantly positive result in 2018. Part of the results relate to one-off exceptional income, such as the sale of real estate. Operationally, the main positive influence on the results is a better than expected increase of direct government funding, indirect government funding and contract research funding, exceptionally high productivity (along with the accompanying work pressure), and an efficient use of facilities. Indirectly, the results are also positively influenced by the favourable economic circumstances. The cost of unemployment benefit regulations (WW) and reorganisation processes reduced sharply as people who had left Wageningen University & Research previously were better able to gain new employment.

The financial buffer that was created during the year will be used in the next few years for additional investment in innovation, attracting staff members in the current tight labour market, and in facilities such as the third education building, renovation of the Unifarm greenhouse complex, and (temporary) office space.

The positive results were achieved by Wageningen Research as well as Wageningen University. For 2018, Wageningen Research achieved a significant positive result before tax of €14 million as a result of, among other things, a significant increase of research revenue, exceptionally high productivity, and an efficient use of facilities. The revenue increase of 9% exceeded expectations. Finding additional experienced staff members is difficult due to the tight labour market. This means that the growth has had to be accommodated by the current staff, which has led to higher productivity and increased work pressure. There was also more incidental other income than expected from the sale of licences and products/analyses and from the results of spin-offs.

Wageningen University achieved a positive result of €28 million in 2018, which also substantially exceeded expectations. One-off exceptional income from the year amounts to around €11 million, which includes €9 million of income from the sale of real estate. After years of tight budgets, Wageningen University is experiencing some difficulty in the process of quickly scaling-up staff and facilities. About €12 million of additional resources was unable to be spent as of yet. Recruitment of qualified staff takes time in the current tight labour market. This means that the workforce has not expanded in line with the increased funding which has resulted from the growth of student numbers. The long-term uncertainty about funding, for instance in the context of the funding cap discussion, has for many units led to restraint in entering into commitments. This is certainly also true for investments

in the scaling-up of facilities. The positive result will be used to bring the workforce levels up to standard and to reduce work pressure.

We can look back on great results in research, for instance in combatting the crippling Panama disease in bananas; the development of more circular agricultural systems at different levels of scale; new insights into the sustainable management of woodland and fishing stocks; and the development and use of digital technologies, big data, and artificial intelligence for agriculture, food, and ecosystems. In these and numerous other areas, the research of our scientists have had a great scientific and societal impact and they deserve all our praise and thanks. The Spinoza Prize for Prof. John van de Oost is an acknowledgement of our high scientific level.

Although education is under pressure because of the growing student numbers, our lecturers and support staff have managed to continually maintain the quality of education and facilities at a high level. The Executive Board is aware that this was accompanied by high work pressure and this just further increases our true appreciation of this result. Therefore, it is an outstanding achievement that we came first in the *StudentenKeuzegids* (guide to higher education) again, for the fourteenth time! In the coming year, additional resources will be available to deal with the work pressure in education.

In conclusion, we look back on a wonderful year, with important scientific and societal results, more top ratings for education and research, increased collaboration with international and national partners, such as 4TU, and the growth of our value creation. We are thankful for the unwavering commitment of our colleagues, students, and partners to Wageningen University & Research. As a top institute, we can continue to contribute to the resolution of the large global issues in relation to sustainability, biodiversity, and food security and safety.

Prof. L.O. Fresco (President of the Executive Board)

Prof. A.P.J. Mol (Vice President of the Executive Board / Rector Magnificus)

L.A.C. Buchwaldt, MBA

1 Introduction

This annual report covers the 2018 financial year of Wageningen University & Research, the partnership between Wageningen University and Wageningen Research. This encompasses both the joint executive report and the individual annual financial report of the separate legal entities.

In the annual report, the performance of Wageningen University & Research will be presented along with the social aspects of this performance. Holding both internal and external stakeholders accountable, extends across the economic, environmental and societal impact of this performance. The annual report has been prepared in accordance with internationally accepted guidelines of the Global Reporting Initiative (GRI). The elements of the Corporate Social Responsibility Report, such as the implemented personnel policies and personnel indicators, are a part of this annual report.

Both Wageningen University and Wageningen Research have a social function. The annual report offers insight into how both organisations have fulfilled their public responsibilities.

The following chapters offer the reader an overview of the key developments that occurred in 2018.

Chapter 2 contains the reports from the Executive Board and the Supervisory Board (2.1). Section 2.2 provides key figures, while Section 2.3 outlines the ambitions of Wageningen University & Research. Following that are the achievements in education (2.4), research, (2.5) and value creation (2.6). In addition to the Corporate Social Responsibility Report (Appendix 3), the developments in terms of human resources (2.7) and business operations (2.8) are also covered. Section 2.9 offers insight into the administration of the organisation, Section 2.10 deals with the Economic Performance Indicators, Section 2.11 covers Wageningen University & Research continuity, and Section 2.12 covers the reporting criteria for this annual report.

Chapter 3 covers the annual financial reports of Wageningen University (3.1) and Wageningen Research (3.2) and the auditor's report of the financial statements. The abridged annual financial reports are directly derived from the full annual financial report, which is published separately on the Wageningen University & Research website. Finally, Section 2.9.3 deals with the remuneration for the executives of Wageningen University & Research.

The Wageningen University & Research Annual Report 2018 was prepared and validated by the Executive Board on 6 May 2019 and approved by the Supervisory Board on 20 May 2019.

2 Wageningen University & Research Executive Report

2.1 Supervisory Board

2.1.1 Report of the Supervisory Board

In 2018, the Supervisory Board held eight regular meetings. The first meeting in 2018 was a postponed meeting from December 2017. In addition to the regular meetings with the Executive Board, the Supervisory Board also met eight times in closed sessions. The Chair of the Supervisory Board regularly held informal consultations with the President and other members of the Executive Board.

Supervisor

Based on a positive recommendation from the Audit Committee, the Supervisory Board approved the Wageningen University and Wageningen Research 2018 budget, as well as the Wageningen University & Research 2017 Annual Report, and the Wageningen University and Wageningen Research financial accounts.

The Supervisory Board approved several amended regulations, such as the Administration and Management Regulations of Wageningen University and Wageningen Research, and the Corporate Governance Code which was adjusted in accordance with the revised Code of Good Governance for Universities and the Dutch Corporate Governance Code.

The Board was informed of the recommendations resulting from the Institutional Audit for Quality Assurance, which took place for Wageningen University in early 2018. Later during the year, the Supervisory Board approved the quality agreements for Wageningen University for the period 2019-2024. The Supervisory Board authorised the transition of LabVV of the Netherlands Food and Consumer Product Safety Authority (NVWA) to RIKILT, which will take place in 2019.

The Supervisory Board spoke with the Executive Board about the urgent need for accommodation as a result of the growing number of students and employees. It received recommendations from the Audit Committee in relation to the simultaneous realisation of phase 1 and 2 of the construction of the new, third education building.

The Board was informed of staff changes in the management councils of the sciences groups and the corporate departments, of important topics that were discussed with the participational structure, and of the scores on various rankings.

The Board decided to renew the contract with the external accountant.

Adviser

An important topic of conversation in 2018 was the establishment of the Strategic Plan for the period 2019-2022. The Supervisory Board was frequently updated and involved in discussions with the Executive Board. The Supervisory Board approved the Strategic Plan in November 2018.

The Supervisory Board and the Audit Committee consulted with the external auditor regarding the annual financial report for 2017 and the 2018 half-year interim report. The Supervisory Board requested that the Executive Board adopt the auditor's recommendations. The Supervisory Board received regular management reports regarding the financial condition of the organisation and the investments.

The Supervisory Board recommended that the 2019 budget be closely connected to themes in the Strategic Plan, such as the research and investment themes.

The performance of the second echelon of Wageningen University & Research was discussed. The Supervisory Board recommended that more focus be given to the development and leadership style of this group, also in the context of "succession planning".

The Supervisory Board and the Audit Committee consulted about two reports from the Netherlands Court of Audit, namely the reports "Vastgoed bij Universiteiten" (*University real estate*) and "Voorinvesteringen en medezeggenschap in het Hoger Onderwijs" (*Investment and participation in higher education*) and the recommendations made by the Netherlands Court of Audit. The Supervisory Board adopted the advice of the Audit Committee in relation to these recommendations, and have requested, among other things, an additional risk analysis from the Executive Board.

Furthermore, 2018 revolved around the Wageningen University & Research centennial. The Supervisory Board was updated on the activities and the members attended several parts of the programme, including the 100th Dies Natalis on 9 March 2018, the minting of the Wageningen University commemorative five euro coin by the Ministry of Finance, and the unveiling of the carillon.

Employer

Per the recommendation of the Appointment Committee, and after receiving a recommendation from the Central Participational Body, the Supervisory Board reappointed Prof. L.O. Fresco as President of the Executive Board.

The board approved the half-year overview of personal expenses by Executive Board members. It also granted its approval for the (new) secondary employment activities and external activities of members of the Executive Board. The Supervisory Board completed performance reviews with the members of the Executive Board in 2018.

Relationship with stakeholders

In 2018, the Supervisory Board attended the bi-annual consultations with the managers and the Central Participational Body. There have also been discussions between the Supervisory Board and the participational structure. One of the topics was the reappointment of the President of the Executive Board and the job profile for a Supervisory Board vacancy. Additionally, informal consultations were conducted between the Supervisory Board and the participational structure.

During the year, the Supervisory Board visited parts of Wageningen University & Research after every meeting. This enabled them to get further acquainted with the research that is conducted, the education that is provided, and with staff members in key positions within the organisation, such as members of management councils, lecturers, and researchers who provide important contributions to societal issues and who conduct pioneering research. The Supervisory Board was present at a range of meetings, such as the 100th Dies Natalis and the official opening of the academic year.

2.1.2 Report of the Audit Committee

The Audit Committee convened for three regular meetings and three additional meetings in 2018.

It deliberated on the 2017 Annual Report of Wageningen University & Research, the 2017 annual financial reports of Wageningen University and Wageningen Research, and the auditor's report which discusses the findings of the auditor. In particular, the valuation of the current projects, real estate, tenders, and the treasury policy were addressed. The Audit Committee agreed with the auditor's specific recommendations and advised the Supervisory Board to approve the annual financial reports for 2017 of Wageningen University and Wageningen Research and to implement the auditor's recommendations.

In 2018, the Audit Committee also discussed the management reports, including the financial statements, and an overview of the investments. An accountant was also consulted regarding the 2018 interim control audit, during which certain points of concern were indicated regarding the IT access and security policy, the WNT (*Standard Remuneration Act for Public and Semi-public Sector Senior Officials*), compliance with the EU procurement legislation, and IC Risk. The internal audit plan of the organisation was also discussed in the presence of the accountant and the internal auditor.

Other topics that the Audit Committee was informed about in 2018 are the General Data Protection Regulation and the purposely drafted annual privacy plan, the tender of the new Student Information System, the revised Corporate Governance Code, and the participation in innovation funds.

The committee extensively discussed the 2019 budgets for Wageningen University and Wageningen Research, as well as the multi-year projections and financial framework of the new strategic plan for 2019-2022. In this process, the Audit Committee requested that special attention be given to increasing property values and the HR challenges in relation to the urgency of appointing new staff. The Audit Committee gave a positive recommendation to the Supervisory Board regarding the simultaneous implementation of phases 1 and 2 of the third modular education building as well as a positive recommendation regarding the 2019 budgets for Wageningen University and Wageningen Research.

2.1.3 Report of the Appointments Committee

In 2018, the Appointments Committee convened on seven separate occasions. This involved the three regularly planned meetings and four additional meetings. The Appointments Committee prepared and conducted the annual performance appraisals with the members of the Executive Board.

In 2018, Prof. L.O. Fresco was reappointed as President of the Executive Board. Prior to the appointment, the Supervisory Board received advice from various forums, including the Central Participational Body. At the end of 2018, the preparations were commenced for the reappointment of Prof. A.P.J. Mol as member of the Executive Board and Rector Magnificus. Several forums are involved in this process, including the Appointments Committee and the Central Participational Body.

The second term for Mr L.C. Bruggeman ended on 1 January 2018. At the recommendation of the Appointment Committee, recruitment for a new member of the Supervisory Board began in late 2017. The profile for the position was established at the start of 2018 after consultation with the Executive Board and the Central Participational Body. The profile has been made public. Recruitment was commenced with the support of an external agency and the Appointment Committee submitted its recommendations to the Supervisory Board. The Supervisory Board presented the selected candidate to the minister for appointment. Ms T. Klimp was appointed as member of the Supervisory Board by the Minister of Education, Culture and Science (OCW) and the Minister of Agriculture, Nature and Food Quality (LNV) as of 1 September 2018.

At the recommendation of the Appointment Committee, the preparations were started in late 2018 for the recruitment of a new Chair of the Supervisory Board as Prof. M.J. Cohen indicated he wants to step down from his position at the start of 2019. Per 1 April 2019, Mr J.R.V.A. Dijsselbloem was appointed as Chair of the Supervisory Board by the Minister of Education, Culture and Science (OCW) and the Minister of Agriculture, Nature and Food Quality (LNV).

The composition of the Executive Board has a healthy distribution of seats among men (67%) and women (33%). At the start of 2018, the Supervisory Board did not have a balanced distribution of seats, specifically, it was composed of five men (83%) and one woman (17%). The balance has improved with the appointment of Ms Klimp, with two women (33%) and four men (67%).

The Supervisory Board conducted a self-evaluation in 2018. A number of measures were formulated as a result. These were shared with the Executive Board.

Details of the remuneration for the members of the Executive Board and Supervisory Board for 2018 are provided in Section 2.9.3 of this report.

2.1.4 Report of the Education and Research Committee

The Education and Research Committee met twice in 2018. The committee extensively discussed the preservation of educational quality, current issues in relation to educational reform, and the recommendations received after the institutional accreditation in January 2018. The committee issued a positive recommendation on the quality agreements for Wageningen University 2019-2022, which were approved by the Supervisory Board.

Other topics that were discussed with the Executive Board were scientific integrity and developments in the area of data science.

2.1.5 Independence and Compliance

The Supervisory Board ensures that board members are independent. In the Supervisory Board's opinion, this is indeed the case in accordance with the requirements of Wageningen University & Research's Corporate Governance Code. The Executive Board is responsible for compliance with all relevant legislation and regulatory requirements and for managing the risks associated with the activities of the institution. The Executive Board reports on and discusses internal risk management and control systems with the Supervisory Board and the Audit Committee. The [Wageningen University & Research Supervisory Board Regulations](#) (in Dutch) apply to the Supervisory Board.

2.1.6 Background of the Supervisory Board members

Prof. M.J. Cohen (1947) has been a member of the board since 1 September 2013 and is Chair of the Appointments Committee and a member of the Education and Research Committee. At his request, he honourably stepped down during his second term of office on 1 April 2019. Mr Cohen has held numerous public offices among them, Rector Magnificus of Maastricht University, Mayor of Amsterdam and leader of the Labour Party in the House of Representatives.

Prof. S. Korver (1953) has been a member of the board since 1 January 2013 and is Chair of the Education and Research Committee and a member of the Appointments Committee. His second term of office will end on 1 January 2021, at which point he will be not eligible for reappointment under the board's rotation schedule. Mr Korver is also a professor holding an endowed chair at Tilburg University.

Mr B.J. Marttin MBA (1965) has been a member of the board since 1 July 2011 and is also Chair of the Audit Committee. His second term of office ends on 1 July 2019. He will not be eligible for reappointment at that point. Mr B. Marttin is a member of the Managing Board of Rabobank Group.

Mr R.P. Smith RA (1960) has been a member of the board since 1 January 2013 and is also a member of the Audit Committee. His second term of office ends on 1 January 2021. Mr Smith will not be eligible for reappointment at that point. Mr Smith was Chair of the Executive Board of Royal Cosun until 1 June 2017.

Ms M.A. Verhoef (1959) has been a member of the board since 1 January 2017 and is a member of the Appointments Committee and of the Education and Research Committee. Her first term of office ends on 1 January 2021. At this point she will be eligible for reappointment due to the provisions of the Board's rotation schedule. Ms Verhoef is also President of the Executive Board of Spirit Jeugdhulp, a youth-care organisation in Amsterdam.

Ms T. Klimp (1972) has been a member of the board since 1 September 2018 and is a member of the Audit Committee. Her first term of office will expire on 1 September 2022. At this point she will be eligible for reappointment due to the provisions of the Board's rotation schedule. Ms Klimp is the Director of Finance of Paints and Coatings for Commercial and R&D at Akzo Nobel.

2.2 Key Figures

2.2.1 Wageningen University & Research

Table 2.1 Education

	2015-2016	2016-2017	2017-2018	2018-2019
Bachelor's programmes	19	19	19	19
Master's programmes	28	28	29	30

Table 2.2 Research

	2015	2016	2017	2018
Number of scientific publications ³	4,398	4,514	4,826	5,305
Wageningen University	3,924	3,986	4,064	4,614
Wageningen Research Foundation	1,230	1,401	1,356	1,517
Number of PhD degrees obtained	305	296	295	286

At the request of the library, epubs ahead of print were included. Excluding the epubs, the number of publications is 5,061. Epub ahead of print are the publications that have already been released online, but which have yet to be assigned definitive publications details in the registration system.

Table 2.3 Students

	2015-2016	2016-2017	2017-2018	2018-2019
Number of enrolled students (Figure 2.1)	10,380	11,278	12,000	12,439
Bachelor's students	4,790	5,298	5,655	5,902
Master's students	5,050	5,480	5,822	6,105
Other enrolments	540	500	523	432
Influx of first-year students	2,612	2,962	2,977	3,003
Bachelor's	1,524	1,655	1,711	1,744
Master's	1,088	1,307	1,266	1,259
Number of graduates (Figure 2.2)	2,576	2,519	2,946	3,190
Bachelor's	991	880	1,095	1,162
Master's	1,585	1,639	1,851	2,028
Number of nationalities	112	103	106	106
Percentage of international students				
Bachelor's students	4	3	3	3
Master's students	37	40	40	38

Table 2.4 Employees

	2014	2015	2016	2017	2018
Average number of employees (in FTE)	5,106	4,995	4,912	4,852	5,040
Distribution on the basis of appointment:					
Wageningen University	2,594	2,546	2,523	2,492	2,590
Wageningen Research Foundation	2,512	2,449	2,389	2,360	2,450

Relates to staff with a regular employment contract.

³ Reference date 24-2-2017 - The numbers of publications may differ slightly from the number specified last year, as there was a lag in entering the publications into the registration system. A number of publications were produced through a combined effort of WU and WR. These publications were counted once in the total.

Table 2.5 Sustainability

	2014	2015	2016	2017	2018
Reduction of CO ₂ emissions by % compared to 2010 ¹⁾	47	46	47	51	48
Annual energy reduction (%)	4.2	3.4	2.3	6.0	2.2

¹⁾ The annual CO₂ emissions as a percentage of the total CO₂ emissions for the reference year 2010 (100%). For further explanation see Section 2.8.5.2.

2.2.2 Wageningen University *Figures x €1 million*

Table 2.6 Key financial figures for Wageningen University

	2015	2016	2017	2018
Government funding excluding targeted subsidies	173.7	182.4	189.9	202.5
Tuition and tuition fees ¹⁾	28.2	32.3	36.9	37.8
Research funding and targeted subsidies	26.8	28.3	28.6	32.2
Matching market and contract research	66.2	60.1	59.1	60.0
Investments in buildings and land	11.0	4.0	5.7	6.7
Investments in other tangible fixed assets	13.6	12.3	7.5	11.0
Net result	- 1.7	-2.5	13.2	27.6
Wageningen University capital				
Capital invested in fixed assets	279.6	258.7	247.4	238.0
Equity capital	153.7	151.2	164.4	192.0
Total capital	375.3	353.1	348.0	369.6
Solvency ratio (%)	40.9%	42.8%	47.3%	51.9%
Wageningen University liquidity				
Liquid assets	39.6	44.9	53.9	88.9
Current ratio	0.5	0.5	0.6	0.8

¹⁾ Excluding course fees.

2.2.3 Wageningen Research Foundation *Figures x €1 million*

Table 2.7 Key financial figures for Wageningen Research foundation

	2015	2016	2017	2018
Turnover	314.4	299.2	299.4	323.1
Proportion of revenue from LNV (%)	40	40	38	42
Investments in buildings and land	3.7	14.3	16.6	17.7
Investments in other tangible fixed assets	3.0	3.8	5.5	7.2
Net result	8.7	2.7	4.2	10.4
Wageningen Research Foundation Capital				
Capital invested in fixed assets	339.3	335.4	336.1	339.5
Equity capital	301.8	304.5	308.7	319.1
Total capital	544.7	542.9	525.1	547.9
Solvency ratio (%)	55.4	56.1	58.8	58.2
Wageningen Research Foundation Liquidity				
Liquid assets	94.2	115.8	93.8	117.7
Current ratio	1.5	1.5	1.4	1.3

2.3 Mission, Vision and Strategy

2.3.1 Mission and ambition

Wageningen University & Research (WUR) is an international research and knowledge centre whose mission is to *explore the potential of nature, to improve the quality of life*. The ambition of Wageningen University & Research within the domain “healthy food and living environment” is to not only develop high-level knowledge but also to help put this knowledge into practice across the planet. In addition, we train professionals who are able to generate breakthroughs in knowledge and technology in the near and more distant future. It is our ambition to maintain our position as a leading supplier of applied scientific research in the green domain.

There are no one-dimensional solutions for the urgent challenges within our domain. This is why we cherish the open connections that exist between the natural science and social science disciplines at Wageningen University & Research.

In the coming years, we wish to further develop our leading position in the domain “healthy food and living environment”. We wish to do this in close collaboration with the government, the business community, and other knowledge institutes, and universities both at home and abroad. We wish to remain an international leader, to bundle strengths and funding together with other parties, to share knowledge and to find sustainable solutions for the major challenges the world faces. This is the ambition of Wageningen University & Research.

2.3.2 Domain

The domain of Wageningen University & Research of “healthy food and living environment” consists of three interrelated core areas with partial overlap:

- *Society and well-being*
This core area focuses on human behaviour in relation to food and living environment, lifestyle and perceptions, but also institutions, governance, market, supply chains and social innovations.
- *Food, feed and biobased production*
This core area concerns the sustainable production and processing of food, feed and biobased products, international food chains and networks, food safety and health aspects of nutrition.
- *Natural resources and living environment*
This core area concerns nature, landscape, land use, water management, sea, natural resources and biodiversity.

2.3.3 Strategic Plan

In 2015, work was started on implementing the [Strategic Plan](#) for the 2015-2018 period. An environment analysis in which important developments were identified was the starting point for determining the mission, vision, and strategy of Wageningen University & Research for the 2015-2018 period.

The ambitions of Wageningen University & Research are far-reaching: through top research and education we aim to make a substantial contribution to solving the major societal challenges in our knowledge domain. The direction outlined in the Strategic Plan for the 2015-2018 period encompasses five important innovations:

- Increasing and anchoring synergy in the organisation by working on multidisciplinary problems, both fundamental and applied, across our sciences groups (“One Wageningen”).
- Development and implementation of the Wageningen Education Ecosystem (the development of online educational components, the realisation of synergy between education for various target groups and increasing the diversity of the target groups: campus, distance, lifelong learners).
- More attention for economic and social value creation focused on contributing to innovations in businesses and the dialogue with society.

-
- Striving to improve the joint market approach and achieve a higher turnover for the research institutes in the public-private and private market.
 - Strengthening our international connections.

To realise the abovementioned ambitions, work continued in 2018 on the five investment themes (Global One Health, Resource Use Efficiency, Resilience, Metropolitan Solutions and Synthetic Biology). In addition, priority areas are chosen each year. At the end of 2017, the Executive Board decided not to establish new priority areas for 2018, since several of the major priority areas from 2017 spilled over into the new year, as priority areas, as areas of attention for the development of the new Strategic Plan, or as initiatives to be implemented. These concern the investment themes and the following priority areas: "Education Ecosystem", "The future of applied research (future of Wageningen Research foundation)", "The future of Wageningen University", and "Operational Management 2.0".

In the autumn of 2017, the Executive Board also started the procedure for creating the new strategic plan for the 2019-2022 period. At the start of this year, the Executive Board presented ten strategic questions for the new Strategic Plan 2019-2022. Subsequently, ten focus groups started working to collect ideas and provide recommendations about the topics as input for the new strategic plan. Students also participated in the focus groups. The focus groups organised several interactive consultation meetings and online discussions with staff and students to gather input.

The focus group recommendations were used as input for the Wageningen University & Research Strategic Plan 2019-2022. The initial concept of the strategic plan was presented and discussed within the organisation in September. A lot of feedback and input was included in the definitive version. The strategic plan was reviewed by the Central Participatory Body. The Joint Assembly approved the definitive version and the Central Works Council provided a positive recommendation. The Strategic Plan 2019-2022 was approved by the Supervisory Board and the Minister of Agriculture, Nature and Food Quality (LNV) (for Wageningen Research Foundation). In January 2019, the new Strategic Plan was launched, distributed, and made publicly available.

2.3.4 Attention for Corporate Social Responsibility

"Wageningen University & Research staff members are aware of the social effects of their work and act accordingly" is stated in the section on Social Responsibility of the [Wageningen University & Research Integrity Code](#). This means that staff members, at all levels, are expected to act with respect for humans and animals and with an awareness of nature and the living environment. This principle blends seamlessly into the WUR domain: knowledge of our living environment and healthy food contributes to a better world.

Corporate social responsibility (CSR) for Wageningen University & Research means that we set high standards regarding social responsibility and sustainability in everything we do. The basic principle is that social impact should be considered in decision-making. Wageningen University & Research established its ambition to become an even more socially responsible organisation in the [Strategic Plan 2015-2018](#). To bring about this ambition, the CSR agenda was drafted which forms the basis for the CSR and sustainability policy of Wageningen University & Research. This agenda contains 21 social themes that are important to our organisation and our stakeholders. See Table 2.8 for the 10 themes with the highest priority.

The full CSR Agenda is included in the [Wageningen University & Research CSR Report 2018](#). The themes of research and education are at the top, with social responsibility at the heart of all our activities. Through our research, we wish to contribute to the global challenges in the field of ecology, sustainability, health and food safety. In education, we strive to apply the latest insights in the area of sustainability. At the request of the Executive Board, the importance of the theme *Ethically responsible research and education* was emphasised in 2018, with ethics in research, working according to the Integrity Code, and honest dealings (anti-corruption) as priority areas. Additionally, the Key Performance Indicators (KPIs) were reviewed per theme and adjusted where needed.

A selection of the 2018 activities related to the CSR agenda are the development of strategies for the energy transition (of Wageningen University & Research itself) and sustainable (transport) mobility. In the area of HR, the focus was on an inclusive work environment, (employee) mobility, and dealing with work pressure. Milestones were the Studium Generale lecture series about modern slavery, the awarding of an additional quality mark for sustainability at Wageningen University by the Accreditation Organisation of the Netherlands and Flanders (NVAO), and the SDG conference as one of the events of the Wageningen University & Research centenary programme.

A new strategic plan was written in 2018. The CSR group has made proposals for the further development of the CSR strategy. At its core is the ambition for continuous improvement. The preparations for the Strategic Plan 2019-2022 were another reason to further consider the question of what next? What is the next level for Wageningen University & Research in the development of the CSR policy? The starting point is to continue on the current path, with "One Wageningen" at the heart of the CSR strategy. That way, Wageningen University & Research can optimally utilise all available knowledge on all fronts - in education, research, and business - to work toward sustainability.

The sustainability effort did not go unnoticed. It received recognition internationally: In December 2018, Wageningen University and its campus were once again declared the most sustainable university in the world in the [UI GreenMetric ranking](#). Wageningen University & Research scores well in the Dutch CSR benchmarks too. The Transparency Benchmark created by the Ministry of Economic Affairs (EZ) identified WUR as the most transparent of all Dutch universities and knowledge institutes in its CSR reporting over the past few years. Although the first position has been taken by Eindhoven University of Technology, Wageningen University is always placed in the top 3 most sustainable Dutch educational institutions in the SustainaBul ranking, which is drafted annually by students.

Table 2.8 The 10 themes with the highest priority in the CSR Agenda

Subject	Ambition
1. Innovation & research	Contribute to the global challenges in the field of ecology, sustainability, public health and food safety. Translate our knowledge into innovations. Quickly translate scientific breakthroughs into practice and education.
2. Education	Outstanding education. Implement the latest insights in the area of embedding sustainability in education. Strive for meaningful contact between teachers and students. Focus on the personal learning needs of the student. Offer students a solid foundation of scientific knowledge and academic skills.
3. Ethically responsible research and education	High ethical standards for all activities: <ul style="list-style-type: none">- Study: apply an independent and ethical work method to ensure that society can trust in the results of our work.- Integrity: staff and students act in accordance with the Wageningen University & Research Integrity Code which formulates the principles for expected behaviour.- Anti-corruption: carry out all activities in an honest manner, without corruption or bribery to gain an unfair advantage.
4. Contribute to the public debate	Inform society in an ethical and honest way regarding the outcomes of scientific research and the assumptions and considerations that have been made. Generate awareness of the contribution which our research makes to healthy food and living environment in the public debate.
5. Diversity and opportunities for employees and students	Realise an inclusive work environment with equal opportunities for staff and students. Pay attention to talent, mobility, equal opportunities and reflecting society based on the realisation that different talents complement each other.
6. Responsible use of public funds	Ensure the responsible (i.e. lawful, efficient and effective) use of public funds and make this clear to government bodies and society.
7. Public-private partnerships	Collaborate with national and international partners (according to the golden diamond principle) in achieving our goals (research for and towards society) and guaranteeing (financial) continuity in research and education.
8. Customer satisfaction	Respond effectively to what clients expect regarding CSR: optimise research and education based on the needs of our clients.
9. Stakeholder involvement	Involve stakeholders in our research and education in order to bring our strategy and activities in line with their expectations.
10. Partnership	Take responsibility towards society. Be accountable for our choices of partners by accounting for social, economic and environmental risks, opportunities and effects.

The ambitions for sustainability and CSR in the Strategic Plan and the development of the themes in the CSR agenda are coordinated by the CSR group. The CSR group consists of Wageningen University & Research staff in key positions throughout the organisation and it is their job to assess the progress. The group reports to the Executive Board. As chair, the Director of Facilities & Services manages this group and together with the Director of Human Resources is responsible for the content and implementation of the CSR policy.

In the [Wageningen University & Research CSR Report 2018](#), the actions, efforts, and results of all 21 themes of the CSR agenda are expounded on in greater detail, and additional information is provided about the reporting in accordance with the Global Reporting Initiative (GRI).

2.3.5 In Dialogue with the World

The domain of Wageningen University & Research draws continued interest from society. All developments in the field of healthy food and living environment appeal to the imaginations of many and there are many strong opinions on the subject. Thanks to social media, there are many opportunities to express these opinions and reach a large number of stakeholders. It is important for Wageningen University & Research to contribute to this discussion and to demonstrate its relevance. It is part of corporate social responsibility.

Since 2015, maintaining the dialogue has been an important priority area in the strategic plan and this was also true in 2018. To this end the programme “Wageningen Dialogues” was created. This programme was further developed in 2018. Various initiatives have been developed for dialogues inside the organisation as well as with stakeholders, which were detailed further in 2018. An example of this is the dialogue regarding Agroforestry. Internal and external parties working on this topic investigated common interests with the prospect of joining forces to tackle their topic. Another example is a dialogue for and by students in which they are challenged to look beyond the borders of their study programme and find opportunities to develop themselves further at Wageningen. Following the training programme for the Wageningen Dialogue team, which was held in 2017, a staff training programme was organised this year to support the continuation of the dialogue. Additionally, a range of dialogues were started in 2018, including one on fashion and sustainability, one on circular agriculture, and one on nature-inclusive agriculture.

The dozens of events organised in the context of the centenary were also important in 2018. At the heart of the activities lies the organisation of meetings: meetings between scientists and staff, but also with network members and stakeholders. Noteworthy is the WURld dialogue which was held in the presence of His Majesty King Willem-Alexander. During this dialogue on access to healthy food in megacities, we switched over to alumni in China, South America, Africa, and the United States of America, and interested parties could also participate online.

Social media dialogue was also a focus point in 2018. Our social media team is active 24/7 and serves as a point of contact for everyone who approached our organisation via these channels. On our website, the options for contacting the organisation and researchers have been further expanded and people are invited to participate in online discussions on various topics, e.g. as a result of blogs by scientists or topics that are touched upon in our advertisements in national newspapers. After publication (thirty times per year), these lead to dozens of interactions with our scientists.

2.3.5.1 Stakeholder dialogues

Dialogues with stakeholders start from our primary process. Research programmes have a steering committee in which stakeholders from different backgrounds in society can be involved in the setup and implementation of our research. In education, the most important stakeholders are organisations representing students, such as the Student Council, study associations and student associations. In addition, each degree programme has a programme committee in which students are represented and a professional committee for permanent reflection on the content of the programme by the professional field. At the administrative level, discussions take place almost daily with representatives from nature conservation organisations, directors of food companies, representatives of political parties and regional and local authorities. Internationally we are working on building strong relationships with important stakeholders such as the CGIAR institutes, the United Nations, the World Bank and key NGOs.

Because the work we do is very closely linked with major social themes, our research is also regularly the focus of discussions and debates in the media and on a number of blog platforms such as Foodlog. Our researchers and administrators are actively involved in these discussions. Topics that were addressed last year included climate tables, CRISPR, sustainable fashion, protein transitions, ammonia emissions, decline of insects in Europe, biocircular agriculture, and the relationship between food and health.

2.4 Education

2.4.1 Profile and policy

As an international university, we contribute to the development of solutions for urgent and relevant challenges. The power of Wageningen University & Research lies in its potential to combine the expertise of Wageningen University with that of the specialised research institutes of Wageningen Research. The interdisciplinary nature of Wageningen University enables us to integrate our efforts and insights from various scientific, social, scientific and technical academic fields. Bringing this expertise together leads to scientific breakthroughs that can quickly be implemented in practice. At

the same time, these topics are also included in our education. This is the Wageningen approach. In education, attention is also paid to entrepreneurship, both through the education curriculum and through extra-curricular initiatives (e.g. in the 4TU partnership, see also 2.6.2.1).

Companies, government bodies, and research institutions can visit [Education Project Services](#) to connect their questions to courses for students who are learning to use their academic skills to resolve concrete issues (see also 2.6.3.3.). The Science Shop is available for non-profit organisations (see 2.6.3.4). Through Wageningen Academy and the Centre for Development Innovation (CDI), Wageningen University & Research offers courses, training programmes, and degree programmes for professionals in the business community, in government, or in the semi-public sector (see 2.6.3.6).

Our education and research is aimed at the domain of “healthy food and living environment” (see 2.3.2). In the 2018/2019 academic year, the range of programmes for the more than 12,000 campus students consisted of 13 Dutch Bachelor’s programmes, six English Bachelor’s programme (Tourism) and 30 English Master’s programmes in the fields of Agro Technology and Food Sciences, Animal Sciences, Environmental Sciences, Plant Sciences and Social Sciences (Appendix 28, Table B1.1).

Three of these study programmes are jointly provided with other institutions of higher education. The Tourism Bachelor’s programme is provided with NHTV in Breda and the Water Technology Master’s programme is provided with the University of Groningen, Twente University, and Wetsus in Leeuwarden. The Metropolitan Analysis, Design, and Engineering (MADE) Master’s programme is offered along with the Delft University of Technology, under the umbrella of the Amsterdam Institute for Advanced Metropolitan Solutions. Three Master’s programmes offer a part-time, online specialisation, which provides students across the world with the opportunity to obtain a full Master’s and to combine study and work.

In addition to these degree programmes which are accredited by the Accreditation Organisation of the Netherlands and Flanders (NVAO) and are publicly-financed, Wageningen University offers open and online education, such as Massive Open Online Courses (MOOCs) and professional online courses.

Wageningen education is multidisciplinary and the Master’s programmes, in particular, are strongly international in character, both in regard to the curriculum and the composition of the campus student population. The International Classroom is the instrument used to educate students about working in an international context and to further enhance the educational quality.

The form and content of education in the Bachelor’s and Master’s programmes is updated and reviewed annually in the “education change cycle”. The Board of Education, the degree programme board of all NVAO-accredited programmes at Wageningen University, determines the curriculum of the study programmes and is responsible to ensure the quality and study feasibility of the programmes.

In 2018, a start was made with the implementation of the “Vision for Education” (2017) with the following education mission for Wageningen: *“We educate students to become academic professionals, who can contribute to sustainable solutions for existing and future complex issues in the domain of ‘healthy food and living environment’ all over the world, and who take their social, personal and ethical responsibilities seriously.”*

In it, three important pillars for the development of education are defined:

1. High-quality scientific knowledge
2. A rich learning environment is offered, in which the development of knowledge, skills, and approaches are combined
3. Flexible and personal learning paths

To ensure a permanent focus on the further development of education and our study programmes, Wageningen University is a member of many umbrella associations and organisations relevant to its domain.

- Academic Cooperation Association (ACA)
- Euroleague for Life Sciences (ELLS)
- European University Association (EUA)
- Association for European Life Science Universities (ICA)

- Netherlands Universities' Foundation for International Cooperation (NUFFIC)
- Accreditation Organisation of the Netherlands and Flanders (NVAO)
- Bologna Process Organisation
- Platform for International Education (PIE)
- Platform EdX (MOOC provider and online learning platform)
- Association of Universities in the Netherlands (VSNU)

2.4.2 Highlights

Educational reform

In 2018, €850,000 was divided between 36 proposals for the improvement of education: ultimately, 22 innovation proposals for courses were honoured, 11 for programmes, and 3 for generic projects (the implementation of LabBuddy, the implementation of peer-review, and an experiment with the automatic grading of open questions). Applicants who went on to the second round received educational advice and feedback to their proposal. The applicants of the honoured projects presented their proposals to each other and projects from previous years are available on the [website of 4TU](#). The chair group Education and Learning Sciences (ELS) will conduct research into the effectiveness of educational reform and the results of educational reform will be presented during the annual lecturer's day.

Open and online education

In 2018, work was done on nine new MOOCs in the area of food (three), sustainable tourism (two), landscape (two), biobased economy (one), and the production and marketing of beer, all in the context of 100 years WUR in collaboration with BSc students. With these additions, the total Wageningen portfolio now contains 27 online courses. The number of participants, coming from a wide range of countries, grew in 2018 by 10% to nearly 154,000. The total number of participants that has taken one or more MOOCs rose in 2018 to over 500,000. Over 100 Wageningen University & Research lecturers are involved in the online courses. In 2018, 155 regular degree students followed a MOOC, completed their exam, and received credits at one of the partner universities in the *virtual exchange* programme. The number of students participating in the three online MSc programmes (Food Technology, Nutrition & Health, and Plant Sciences) rose sharply to more than 100.

New programmes

Starting in September 2018, five of the Dutch-language BSc degree programmes at Wageningen University will be provided in English from now on. This brings the total number of English-language BSc programmes to six. Through these, a large group of international BSc students now participates in education at Wageningen University. The Master's degree programme Biobased Sciences has also commenced.

Extended Daytime Schedule

In September 2018, the Extended Daytime Schedule (EDS) was introduced as part of a set of interrelated measures to enable a flexible response to the expected growth of student numbers. The educational spaces in De Dreijen will remain in use temporarily and a modular education building will be constructed on campus.

Quality agreements

Every university needs to establish "Quality Agreements" for the period 2019-2024 concerning the use of funding that has been freed up as a result of the discontinuation of the basic study grant. This is to ensure that these funds are spent on improving the quality of education, as specified in the coalition agreement. Wageningen University has developed a quality agreement and the participatory body provided its consent at the start of January 2019. An important part of the resources is allocated to the chair groups and the sciences groups for the realisation of the themes chosen by Wageningen University: small-scale and intensive education, more and better mentoring for students, educational differentiation, proper educational facilities, and professionalisation of lecturers. Wageningen University's quality agreement will be assessed during 2019 and an evaluation will take place in 2024. Both are organised by the Accreditation Organisation of the Netherlands and Flanders (NVAO). See also 2.4.5.1 (Study Advancement Funds).

Comenius Leadership programme: Boundary Crossing

It was communicated at the end of April that Wageningen University & Research was awarded a Comenius Leadership grant. The project focuses on how Wageningen University students can be better educated and supported when learning Boundary Crossing Skills in relation to intercultural, interdisciplinary, and transdisciplinary cooperation. It relates to education policy support at course, curriculum, and university level. Researchers and lecturers from all science groups are involved.

Student Challenge "Design the Ultimate Urban Greenhouse"

In January 2018, 23 of the 40 international, interdisciplinary and highly motivated teams started their mission: to design the ultimate urban greenhouse for the redevelopment of the Amsterdam Bajes quarter (the former site of the Bijlmer Bajes prison). Eventually, fourteen teams reached the finish line and the ground-breaking ideas were presented to the professional jury in Wageningen on 28 August. The finalists hailed from China, the U.S., the Czech Republic, Germany, Italy, and the Netherlands, including six WUR teams. The top prize of €10,000 to spend on the further development of the concept was awarded to the "Plan Open Bajes" by the Wageningen University & Research team "GreenWURks". The next edition of the Greenhouse Challenge will be in 2020, and the project group will be looking for a suitable location in China. An innovation contest will be organised around protein transition in 2019.

IT in education

In 2018, calls to tender were sent out for the learning environment of Wageningen University, as well as the new Student Information System (SIS). In consultation with lecturers and students, Brightspace was chosen as the new electronic learning environment. It will replace the current Blackboard. The software package Osiris was selected as the new SIS. A start was also made on the development of a single access point for information about study and social activities: a new digital community for students which will also provide access to course applications. Work was also done on facilitating "study anytime, anywhere" on the basis of "Bring Your Own Device" (BYOD), by making course applications available on the personal laptops of students. From the middle of 2019, a supporting laptop selection will be offered.

Educational reform with ICT acceleration plan

The VSNU, Association of Universities in the Netherlands, and SURF commenced an "Acceleration plan for educational innovation with ICT" in November 2018. Its aims are to make flexible studying possible, to use technology to enable students to study smarter and better, and to improve graduates' alignment with the labour market. Wageningen University decided to focus on the following themes: improving the flexibility of education, collaboration with EdTech, and digital learning resources.

Dies Natalis, Teacher of the Year and Opening of the Academic Year

The celebration of the 100th Dies Natalis on 9 March 2018 opened the centenary year. The theme of the Dies Natalis was: "Unravelling Life, Wisdom & Wonder". The most prominent speaker was chemist Professor Lee Cronin of the University of Glasgow. To mark the occasion, honorary doctorates were presented to Katrina Brown (University of Exeter), Carl Folke (Stockholm University), Eugene Koonin (NCBI and NIH, United States) and Fusuo Zhang (China Agricultural University).

On 24 April 2018, the 2018 Teacher of the Year Award of the University Fund Wageningen (UFW) was presented to Prof. Henry van den Brand, Associate Professor of Adaptation Physiology at the Department of Animal Sciences.

Rector Magnificus Prof. Arthur Mol opened the 2018-2019 academic year on 3 September 2018. The theme of the opening was "Food and Agriculture: Europe and the World". Prime Minister Rutte, EU commissioner for Agriculture and Rural Development Phil Hogan, and two young academics from Wageningen University & Research - Milou van de Schans and Janna Barel - addressed the attendees.

2.4.3 Results and success rate

The success rate (study success) of the Master's programme after two years is 43% and 82% after three years. This is more or less the same as in previous years. In the Bachelor's programmes, the success rate after three years has dropped from 41% to 37%, while the success rate after four years has risen from 75% to 76%.

According to the Keuzegids Universiteiten published by the Centrum Hoger Onderwijs Informatie, Wageningen University has been rated as the best university in the Netherlands for the fourteenth consecutive year. Thirteen of the nineteen Bachelor's programmes received the distinction of "Top programme" as a result of the highest success rates, the most contented students (specifically in regard to the content, lecturers, contact hours, and study feasibility of the programme), and the best NVAO assessments. Wageningen was the only university to receive a total score of ++.

In prominent international rankings such as Times Higher Education, ARWU, and QS, Wageningen University consistently received top spots in 2018, despite some of these rankings not adjusting for the formative scope of an institution. In the rankings that differentiate between different fields, Wageningen University ranked first for Agriculture (QS, Taiwan NTU Ranking, ARWU and US Best Global University Rankings), Food Science and Technology (ARWU), and Plant and Animal Sciences (Best Global Universities Rankings). In the Taiwan NTU Ranking, Wageningen University came second in the field of Plant and Animal Sciences. Wageningen University also scored highly in the field of Environment/Ecology (Taiwan NTU: 1, QS: 8, and US Best Global: 2).

According to the UI GreenMetric University Ranking, which focuses on policies and provisions related to a green campus and sustainability, Wageningen University & Research can call itself the greenest institution in the world for 2018. Finally, Wageningen University & Research came in second among Dutch universities in an Elsevier poll regarding general social impact and took first place when the topic was specifically collaboration.

2.4.4 Quality assurance

Internal

The course and programme evaluations provide crucial feedback to lecturers, programme directors, chair holders and the Examining Board regarding the quality of education. The new programme for the online student evaluations, Programme and Course Evaluations (PaCE), was further developed in 2017/2018. The integration into MyPortal (the personalised digital portal for education information) was realised. The option to provide students, on the one hand, and programme directors and professors, on the other, with feedback on the results of evaluations had positive effects on the response. Students appreciate the feedback on the evaluations and this has resulted in them providing a significantly higher NSE score for feedback on the evaluation results. All in all, PaCE acts as an important impulse in the quality assurance process. The responses to the programme evaluations were generally satisfactory: 32% on average.

The results of the Bachelor's first-year evaluation for the 2017-2018 academic year were once again very positive, with an average score of 4.0 on a scale of 1 to 5. Of the students, 84% had a positive response to the question: "Considering all aspects of the first-year programme (content, difficulty, level), how would you rate it in general?" Of the first-year students, 98% would recommend their degree programme at Wageningen University to pre-university students. The data of the different quality assurance instruments are discussed by programme directors and committees in order to examine how and whether programmes can be improved. The programme committees formulate improvement plans for the programmes. They submit them to the Board of Education, which in turn informs the Executive Board.

External

2018 revolved around two activities: the Institutional Audit for Quality Assurance (ITK) carried out by the Accreditation Organisation of the Netherlands and Flanders (NVAO), and the preparation for accreditations of over 40 programmes.

An international panel visited Wageningen University in January for the Institutional Audit. The panel issued a positive recommendation: Wageningen University has an adequate internal quality assurance system which, in combination with a culture of quality, ensures the realisation of the Wageningen vision on good education. The panel also made a positive recommendation in relation to sustainability and internationalisation. Since Wageningen University passed the Institutional Audit, the limited performance review framework can be applied during programme audits. Work is already being done on the panel's recommendations: making our objectives SMARTer, focusing on the position of the programme director, and focusing on the workload of the Examining Boards.

Based on the NVAO assessment, Wageningen University was awarded the Internationalisation certificate from the European Consortium for Accreditation in higher education (ECA), which emphasises our position as an international university. The sustainability predicate was also awarded to Wageningen University by NVAO.

Between January 2018 and January 2019, forty-one programmes were assessed for a re-accreditation. Together, the largest number of these programmes (28) form the Wageningen visitation cluster "Life Sciences and Natural Resources". Other programmes were included in the national clusters of programmes: Leisure and Tourism, Milieuwetenschappen, Aardwetenschappen, Communicatiewetenschappen, Gezondheidswetenschappen, Development Studies, and Scheikunde. A self-evaluation was written by every programme, which included a SWOT analysis by students. All programmes were evaluated as satisfactory or good. The MSc programme Leisure, Tourism and Environment even received the final assessment of "Excellent". A re-accreditation will take place for eight programmes in January 2019. This will conclude the third cycle of the programme evaluations. The fourth cycle will start in 2021/2022. The first accreditation of the MSc programme Biobased Sciences also took place in 2018, which was completed with a conditional positive recommendation.

2.4.5 Funding

Education at Wageningen University is funded by direct government funding for education and research that consists of government funding of €202.5 million and the proceeds from tuition and course fees of €37.8 million, totalling over €240 million. Just as in the previous three years, government funding was also capped at a maximum increase of 2% in 2018. Even though the funding for the green education sector was transferred to the Ministry of Education, Culture and Science as of 1 January 2018, established funding agreements with the Ministry of Economic Affairs and Climate (EZK) and the Ministry of Agriculture, Nature and Food Quality (LNV) were still applicable for 2018. These agreements outlined the funding cap methodology.

The funding parameters of the model that calculates the government funding for Wageningen University – based on the number of enrolled students, degrees and completed PhD programmes – have increased to approximately €12 million. The external educational funding therefore did not increase proportionately to our student numbers. Despite this, Wageningen University maintained last year's internal system in which educational resources are allocated based on real education data.

2018 was the final year in which a funding cap was imposed on the direct government funding for Wageningen University. From 1 January 2019, the funding cap will be abolished and Wageningen University will participate fully in the university funding model of the Ministry of Education, Culture and Science.

2.4.5.1 Study Advancement Funds

The table below outlines the report of the commitment of the study advancement funds in 2018, adhering to the structure of the quality agreements (see also 2.4.2). The participational structure has assented to this commitment.

Table 2.9 Commitment of Study Advancement Funds

Commitment of Study Advancement Funds 2018 (in €1,000)	Budget 2018	2018 Result
For small-scale education		
<i>Thesis support</i> *)	1,671	1,671
<i>Decentralised policy leeway for education intensification</i> *)	500	500
More and better guidance for students		
<i>Student counselling</i>	50	5
Focus on talent development, within and outside the study programme		
<i>Student challenges</i>	284	243
<i>General skills / talent development</i> **)	300	38
Suitable and good education facilities		
<i>My Workspace</i>	220	13
Further lecturer professionalisation		
<i>PhD skills training</i> **)	150	44
Reduction overspent	-120	-
Total commitment Study Advancement Funds 2018	3,055	2,514

*) Realisation based on funds committed to the departments.

***) For these projects, the personnel costs were not booked on the particular projects. This came to about €0.1 million.

Explanation:

Small scale education

In 2018, the chair groups within the sciences groups have been awarded a total of €1.7 million in additional funding for the guidance and assistance of thesis students. Increasing student numbers has put pressure on this supervision. Additionally, the sciences groups have received a total of €500,000 to resolve bottlenecks in the staffing of chair groups. These funds were used to extend contracts or to appoint an educational support person to a cluster of chair groups.

More and better guidance for students

A stress prevention project for students was started in 2018. The team of student psychologists was expanded to facilitate this.

Focus on talent development

The first Student Challenge took place in 2018, organised by Wageningen University & Research (see 2.4.2). Additionally, two skills development projects were started for students: a project focused on writing skills and a project focused on working in diversified groups.

Education facilities

A new student workspace is in development, based on "study anytime, anywhere", in response to the use of personal devices by students, the so-called "Bring Your Own Device" (BYOD) (see 2.4.2). Preparations were completed in 2018 for investments in equipment and licenses.

Lecturer professionalisation

PhD candidates don't just conduct research, they are often also involved in education, including as supervisors for thesis students. A special training course was developed for these PhD candidates in order to support them in a more professional way.

For a number of projects, only limited use was made of the available funding. The reason is mostly that these projects are still in the start-up phase, appointments were only concluded later on in the year (student psychologist for instance), and limited expenses were incurred during the preparatory phase (for instance education facilities).

2.4.6 Students

2.4.6.1 Student numbers

Interest in Wageningen University's Bachelor's programmes increased slightly in 2018 once again. However, this increase was less than in recent years. The growth is over 2%. Very noticeable is that the inflow of Dutch students into Bachelor's programmes decreased by 1%, whereas the inflow of international students more than doubled (from 37 to 86 students). This is due to five Bachelor's programmes switching from being taught in Dutch to being taught in English. The inflow in the MSc programmes has grown by 3%, which is largely caused by a growth in the number of transfer students from BSc programmes.

On the reference date of 1 October 2018, 3% of the Bachelor's students were not Dutch: 203 of a total of 5902 students. Approximately 40% of these international students were German and 11% were Belgian. Of the Master's students, 38% are not Dutch: 2331 of the 6105 students, spread over 106 nationalities. The main nationalities are Chinese (498), German (246), Italian (242), Greek (177), Indonesian (161), Spanish (119) and Indian (91).

All the Master's programmes are taught in English and are provided to Dutch and non-Dutch students together.

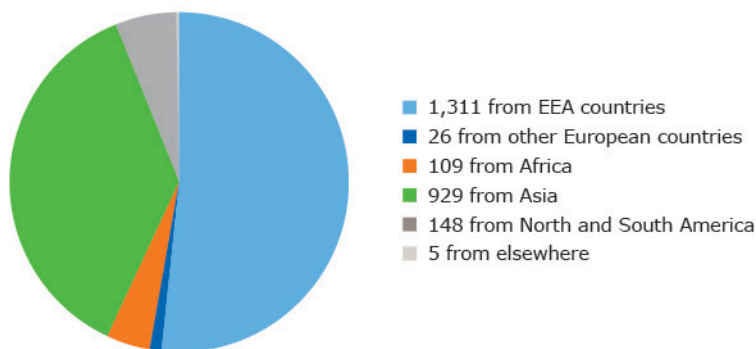


Figure 2.1 Distribution of the 2528 international students (BSc and MSc) at Wageningen University according to continent on reference date 1 October 2018 (excluding exchange students)

2.4.6.2 Study and student counselling

To ensure good study progress, Wageningen University provides its students with study counselling via study advisers and student counselling via student deans and psychologists.

In line with the Strategic Plan 2019-2022, quality agreements were made in 2018 in relation to strengthening the guidance and support for students. The stress prevention project was started and lecturers are prepared to deal with well-being issues facing students. The personnel capacity of study advisers and study psychologists is being extended. A decision was also made to increase the provision of training for students and to bundle this in a training centre for profiling reasons.

The Dean's Office completed 1695 sessions and answered 1528 e-mails in 2018. Additionally, 158 written requests were processed. An increasing amount of questions are processed digitally or by e-mail. The number of students requesting a meeting with a dean remained stable. In relation to the topic of the meetings, students increasingly complain about study support and, specifically, about thesis supervision. This is likely because the number of students per thesis supervisor has increased. It is also noteworthy that fewer discussions were in relation to students with a disability: many requests in relation to disabilities (particularly dyslexia) are processed in writing. Another striking point is the increase of students with repetitive strain injuries (RSI) to 5%. The deans noticed that students with an administrative position develop RSI relatively often.

The number of students requesting to meet with the student dean has remained stable, while the number of students requesting to meet with a psychologist has substantially increased. In 2018, 1010 students had one or more sessions with a student psychologist, this is over 15% more than in the previous year (875). In percentage terms, the number of requests also increased. In particular, the first two months of the new academic year 2018-2019 (September and October) showed a large increase in the number of requests (around 30% more than in the same months a year earlier). In total, 1933 individual talks took place (this was 1741 in 2017). The main reasons students want help from the student psychologists has remained fairly unchanged over the past few years. The most common issues related to studies are study stress, performance anxiety, discipline and graduation problems. In the category of personal problems, depression-related help requests are by far the most frequent. This category also shows a marked increase in the number of registrations by students who are experiencing family problems. This could involve conflicts in the family, or physical or psychological problems of parents or siblings for which students feel partly responsible.

2.4.6.3 Student services

Wageningen University is highly committed to providing excellent service to its students. This is provided for the most part by the Student Service Centre (SSC). This is housed in the Forum building and welcomes students with questions about enrolment, admission, tuition fees, grade lists, graduation and more. Students can also go to the SSC for legal advice on study-related matters, for advice on study delays or for help from a psychologist.

In 2018, additional attention was given to the improvement of student communication in regard to the most important administrative activities. For instance, a specific campaign was launched regarding the annual "re-enrolment" through Studielink. This minimised the number of students who forgot to re-enrol. The website for current students was improved in 2018. The focus shifted from what is offered by the Student Service Centre (SSC) to what the students need.

Service provision to students is conducted by phone, online (website), the student contact system, and the information desk. The number of questions the SSC received through the student contact system in particular increased substantially: over 240,000 were answered through the system in 2018.

2.4.6.4 Student facilities

Wageningen University feels it is important for students to have a rich life in and outside of the university, in addition to being active in their study programme. The university supports a range of extracurricular activities for student and other organisations: student associations, study associations, sports and cultural associations, and organisations involved in social responsibility, sustainability, entrepreneurship, skills, etc. A wide variety of facilities are realised this way, while students gain experience in organising these. Students also play a crucial role in the preparation of the introduction weeks for new students (in August and February) and in the organisation and support of sports activities for students.

SWU Thymos, the sports foundation of Wageningen University, promotes the sports climate for students of Wageningen University and Aeres University of Applied Sciences in Wageningen by organising a wide range of events and internal competitions. The Foundation has a student board promotes the interests of student athletes – both individual athletes and the members of the 29 student sports clubs. In 2018, the Wageningen Werewolves Quidditch Association and the Zweefvliegclub Deelen joined as recognised sports organisations.

In June of the centenary year, the *Groot Nederlands Studenten Kampioenschap* (Great Netherlands Student Competition - GNSK) took place in Wageningen. Over 15,000 students from all over the Netherlands participated in their sport. In the city rankings, Wageningen achieved a commendable second place.

Sports Centre De Bongerd (SCB) is the sports centre for students and employees of Wageningen University & Research. All students and staff of Wageningen University & Research are able to use the SCB facilities at reduced rates. SCB offers a high-quality sports programme with a broad range of sports and activities in excellent indoor and outdoor facilities. The tendering process for a new indoor

climbing wall was started in 2018. The wall will be completed in 2019. Exercise and sports are promoted in various ways. The "Bottoms Up" project (2017), which is aimed at making students sit less, is starting to pay off. YouTube videos have now been created that are a maximum of 2 minutes long and can be shown during lectures. The PauseXpress project is in development for staff members. The client file has increased by more than 1000 students since the 2016-2017 academic year. The introduction of the Extended Daytime Schedule means that the activity in the gym is now more spread out over the day.

2.4.6.5 Profiling Fund

A number of regulations for supporting students financially have been incorporated into the Wageningen University Profiling Fund:

1. The Student Financial Support Regulation (FOS regulation): for force majeure, recognised administrative activities and professional sport
2. Wageningen University study financing for students following a two-year Master's programme in Social Sciences who are entitled to Dutch study finance (MCS, MDR, MID and MME)
3. Wageningen University Fellowship Programme, scholarships/grants/tuition waivers for non-EEA students
4. Emergency Student Funding

Table 2.10 Overview of Wageningen Financial Support

Category	Number of applications	Number of payments	Total payments (€)	Average payment (€)	Total duration (months)	Average duration (months)
1. FOS regulation ¹⁾						
1.1 Force Majeure	112	112	122,733	1,096	325.5	2.9
1.2 Administrative/participational	425	425	570,870	1,334	1,741.1	4.1
1.3 Participation as a top athlete	5	5	4,948	990	16.5	3.3
Total FOS	542	542	698,551	n/a	2,083	n/a
2. Social Sciences masters, 2-year ²⁾	82	75	290,832	3,878	923	12
3. Fellowships ³⁾						
3.1 WUFP grants ⁴⁾	n/a	56	626,000	11,179	672	12
3.2 WUFP tuition fee waivers ⁴⁾	n/a	505	965,000	1,910	4,320	8.5
4. Emergency Student Funding ¹⁾	1	1	671	671	n/a	n/a
Total incl. WUFP	625	1,179	2,581,054	n/a	n/a	n/a
Total incl. WUFP		618				

¹⁾ EEA + non-EEA.

²⁾ EEA.

³⁾ Non-EEA.

⁴⁾ WUFP: selection of accepted MSc students.

Explanation:

1. A total of 542 students utilised the FOS regulation (Student Financial Support), including 28 non-EEA students: 16 due to circumstances beyond their control and twelve due to administrative activity. The application process is organised in such a way that only students who are actually eligible for the regulation can apply (student dean, head of the university sports centre).
2. A total of 82 students applied for the Social Sciences Master's regulation. Because the basic study grant was abolished, seven of the 82 students no longer qualified for the regulation.
3. Only non-EEA students are eligible for the Wageningen University Fellowship Programme (WUFP). In 2018, 28 new grants for a maximum of the institutional tuition fees were awarded to talented students, totalling €520,800, and five full grants were awarded to talented African students, totalling €165,500. The figures mentioned apply to the first year. Additional payments were for ongoing grants (a total of 23) that started in 2017. Total expenditures from the WUFP were €626,000 in 2018. Total expenditures for the WUFP were €1,591,000 in 2018. This includes discounts and top-ups for scholarship programmes and bilateral agreements.

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4. The gift from the Social Emergency Fund was for an airline ticket for a non-EEA student for an unforeseen interim journey home.

2.4.6.6 International exchange

The number of outgoing exchange students has increased again in 2018. Exchange is beneficial as Wageningen University receives students from renowned partners worldwide, who would otherwise be unlikely to come study with us. It also provides these students with the opportunity to go study at reputable international institutions.

For the 2018-2019 academic year, Wageningen University has received a record amount of Erasmus+ funding. This is why additional focus has been placed on the promotion of the grants programme through Facebook, Instagram, and additional promotion events. This is the first year we have also been awarded a small number of Erasmus grants for Lincoln University (New Zealand) and The Hebrew University of Jerusalem (Israel), for both incoming and outgoing students.

In 2018-2019, 464 Wageningen University students participated in a study exchange. Of those, 350 received an Erasmus+ grant, nine went to Switzerland and received a Swiss grant, and 105 went to non-EU destinations. Compared to the number of students that had registered for selection, we were able to actually send 87% out on exchange. The other 13% dropped out during the selection. Either the student withdrew or did not meet the requirements (such as passing the first year before leaving). A total of 152 grant applications were received for internships by outgoing students (per 4 February 2019).

The number of incoming students has increased to its usual level of 356 following a dip in 2017. Incoming students are a welcome addition to the diversity of nationalities in Wageningen and contributed to the international character of our education. The incoming exchange students took part in the regular activities organised for them, such as the Annual Introduction Days (AID) and activities by student organisations such as IxESN and ISOW. The arrival of the students went smoothly. They were very enthusiastic about the personal guidance they received from the Exchange Coordinators and about the form and content of the education. Some students have transferred into the regular study programmes at Wageningen University & Research following their exchange.

Several new agreements with top universities have been concluded in order to meet the demand for exchange options in different fields. These include the University of Nottingham, University of Helsinki (extended), Oslo Metropolitan University, University of Łódź and Ecole Polytechnique Fédérale de Lausanne. To promote the exchange and to improve contact, the team attended the conference of the European Association of International Education (EAIE, Sevilla) and visited universities in Australia, Israel, Bern, Switzerland (ETH), Sweden (SLU) and Norway (University of Bergen), among others. Wageningen University also welcomed visitors, such as the University of Göteborg, which has led to an extended contract.

2.4.6.7 Student participational structure

Students at Wageningen University enjoy participation at different levels within the university. In the programme committees (concerning the content and quality of the degree programmes) and at the central level in the Student Staff Council (GV) and the Student Council (SR).

The Student Council consists of twelve full-time members from various groups and nationalities. These student members are elected each year for a one-year term by Wageningen University students. Besides the usual topics, such as the Education and Examination Regulations, important topics that were on the Student Council agenda in 2018 were the initiative proposal from the GV and SR to invest the funding arising from the changes in the study finance system for student support and study skills (continuation of the discussion of Wageningen University budget 2018), the Wageningen University & Research Strategic Plan 2019-2022, and the Student Council initiative in relation to free Dutch language lessons for international students. The election turnout in 2018 was 37.7%.

2.4.6.8 Complaints and appeals

Dispute Advisory Committee

In 2018, the Advisory Committee on Disputes (GAC) received 24 appeals from Wageningen University. Sixteen objections were made to the rejection of a request for a student grant, including four that were submitted regarding a decision based on the "Extra WU Study Financing for students of MCS, MDR, MID and MME". Three objections were submitted regarding a decision based on the Registration Resolution and one was made regarding a decision based on the Student Financial Support Regulations.

In 22 cases, an amicable settlement of the disagreement was possible, and the GAC did not need to provide a recommendation to the Executive Board. In the two other cases, the GAC advised the Executive Board once to declare the objections inadmissible because of inexcusable delays and once to declare it unfounded.

Examinations Appeals Board

43 appeals were filed with the Examinations Appeals Board (EAB) of Wageningen University in 2018. 29 appeals were filed in response to a binding negative study recommendation. In 24 of these cases, the parties reached an amicable agreement which meant that the CBE did not have to consider the substantive details of the appeal. In five cases, the CBE declared the appeal unfounded after hearing the student and the Examining Board. Of the other fourteen appeals, eight were directed against a decision not to admit the appellant to a Master's programme. Five appeals were submitted against assessments and one was made against a refusal to grant an exemption. In one case, the appeal was declared inadmissible due to inexcusable delay and, as a result, the hearing of the applicant was cancelled. In eleven other cases, the CBE also did not reach the substantive processing phase as an amicable settlement of the disagreement was agreed. In two cases, the CBE declared the appeal founded after hearing the student and the Examining Board.

2.4.7 Alumni

The alumni network of Wageningen University in 2018, had a network of 50,000 graduates and PhDs, spread across some 150 countries. Alumni are kept informed of relevant developments at Wageningen University & Research and the Wageningen domain through the online platform "Wageningen University & Research Connect", which was launched in 2017. At the end of December 2018, Wageningen University & Research Connect counted 8200 members in 45 country groups.

In 2018, over 50 alumni meetings were organised globally, in the context of "100 years WUR", often in collaboration with the Dutch embassies and international alumni. Over 2500 people attended the alumni reunion in Wageningen on 23 June 2018. His Majesty King Willem-Alexander opened the reunion and planted a tree on campus. The same day, five global panels, in North and South America, Africa, Asia, and Europe, took part in a worldwide dialogue about the increasing world population and the access to healthy food in megacities.

The Dutch alumni network Wageningen Ambassadors consists of 43 prominent alumni of Wageningen University & Research, all of whom are leaders in business, knowledge institutions, NGOs and government. Their commitment contributes to strengthening the link between Wageningen University & Research and society. In 2018, the Ambassadors supported eight projects, including some jubilee activities; the renovation of the *Koetshuis* in the Belmonte Arboretum; the development of "executive education" by Wageningen Academy; and the "leadership skills training" for Wageningen University students who participate in the Honours Programme.

Alumni and relations donations to the Wageningen University Fund (WUF) aim to promote the growth and prosperity of Wageningen University & Research. The donors helped make it possible in 2018 for twenty students from developing countries to study in Wageningen and supported international activities by Wageningen students. The crowdfunding platform obtained nearly €35,000 in donations for three projects, including non-alumni who felt involved in a specific research project. On the occasion of the centenary, in a collaboration with donors, the University Fund presented a carillon to the university, which was festively unveiled by the Minister of Education, Culture and Science.

2.4.8 Outlook

In 2019, Wageningen University will start on the implementation of the quality agreement, which has to lead to strengthening the quality of education, improving the support of students, and reducing the work pressure for lecturers. In this context, the implementation of the ambitions and objectives as set out in the "Vision for Education" will be continued. Both plans are part of the new Wageningen University & Research Strategic Plan for 2019-2022. Furthermore, 2019 will revolve around the implementation of the electronic learning environment Brightspace, the implementation of the new SIS Osiris, the implementation of BYOD for students, and the development of a student portal. Additionally, work will continue on the implementation of the recommendations from the Institutional Audit, and the recommendations from the programme accreditations that took place in 2018. Besides the implementation of the plans, a next step will also be taken in the development of the "Education Ecosystem" which will address the offering of a coherent portfolio of campus education, online education, and education for professionals.

2.5 Research

2.5.1 Policy and organisation

The research at Wageningen University is conducted through chair groups. Each chair group, led by a professor, has its own sphere of expertise within the domain of "healthy food and living environment".

Wageningen University leads six graduate schools within an overarching organisation. The Wageningen Graduate Schools:

- Experimental Plant Sciences (EPS; a national graduate school)
- Wageningen School of Social Sciences (WASS)
- The C.T. de Wit Graduate School for Production Ecology & Resource Conservation (PE&RC)
- The VLAG Graduate School (for Nutrition, Food Technology, Agro Biotechnology and Health Sciences)
- Wageningen Institute of Animal Sciences (WIAS)
- Wageningen Institute for Environment and Climate Research (WIMEK; part of the national graduate school SENSE, for which Wageningen University acts as coordinator)

In addition, Wageningen University participates in the following graduate schools which are led by other organisations:

- Institute for Sustainable Process Technology (ISPT)
- Research Institute and Research School for Economic and Social History (N.W. Posthumus Institute)
- Graduate School of Polymer Science and Technology (PTN)
- Interuniversity Centre for Educational Research (ICO)
- Netherlands Institute for Catalysis Research (NIOK)
- Interuniversity graduate school - Dutch Institute of Systems and Control (DISC)

The Wageningen University graduate schools have three core tasks. They coordinate, develop, and facilitate the PhD programme of Wageningen University. They also ensure the safeguarding, monitoring and advancement of the quality and progress of academic research (PhD candidates, postdocs and researchers). Finally, they coordinate a coherent research programme for the university within the mission of the graduate school.

The research of Wageningen Research can be grouped into the following categories: Knowledge Base Research (KB), Policy Support Research (BO), Legal Research (WOT) and top sector research.

Knowledge base research is an important part of the research carried out within the Wageningen Research themes. These themes were redefined in 2015. They are financed through knowledge base research funding. The programme content of the policy support research, the legal research, the top sector research and the contract research is connected to these themes. The selected themes are:

- Sustainable food and non-food production
- Global food and nutrition security

-
- Healthy and safe food for healthy lives
 - System earth management
 - Metropolitan solutions
 - Biobased circular economy
 - Big data, technologies and methodologies
 - Social innovation for value creation

In addition, Wageningen University & Research decided to make extra investments in a number of research themes. For this, strategic resources from Wageningen University, knowledge base resources from the Wageningen Research Foundation and R&D resources from the top sectors will be used. The themes from the Strategic Plan for 2015-2018:

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

The policy support research is carried out in two programmes: Nature, Landscape and Rural Areas and Agro.

The legal research tasks have been incorporated into six programme units.

- Infectious Animal Diseases
- Food Safety
- Genetic Resources
- Nature and Environment
- Fisheries
- Economic Information

Research within the top sectors Agri & Food and Horticulture & Propagation Materials is managed by the Top Consortium for Knowledge and Innovation (TKI), specifically set up to manage these two top sectors. Planning for each top sector is done on the basis of questions that are formulated in the context of the "golden triangle" of the government, the business community and knowledge institutions. From these questions, public-private partnerships (PPPs) arise through the implementation of projects and programmes.

2.5.2 Internationalisation

In order to increase the quality and quantity of the international portfolio, Wageningen University & Research has regional account managers for Brussels/Europe, Africa, Asia (excluding China), China, and Latin America. Within these regions, the account managers focus on the countries or areas that are most relevant for Wageningen University & Research.

Brussels/Europe is of unique importance for Wageningen University & Research, because a substantial portion of research funding is provided by Brussels. Wageningen University & Research is dedicated to assisting researchers as optimally as possible in securing this funding, specifically the funding coming from RTD and DG-Agri (Horizon 2020 funding). Other directorates in Brussels are becoming increasingly important for Wageningen University & Research. Relation management therefore now includes DG Environment, DG CLIMA, DG CONNECT, DG SANTE, and DG DEVCO. In that context, Wageningen University & Research supports parties in Brussels in the development and implementation of policy and provides input for the formulation of the underlying research questions and challenges. In 2018, the Mansholt Lecture in Brussels was on the theme of circular agriculture. Wageningen University & Research introduced two missions in Brussels to contribute to the agenda for Horizon Europe: "Plants by design: towards a bio economy" and "European Sustainable Food Mission". Wageningen University & Research is also involved with the Joint Programming Initiatives (JPI). Wageningen University & Research is particularly involved in JPI FACCE, which focuses on agriculture, food security, and climate change, along with the Ministry of Agriculture, Nature and Food Quality (LNV).

In Africa, the support for the relationship management activities in countries such as Ethiopia, Ghana, Morocco, and South Africa were continued in 2018. Due to the new policy of the Ministry of the Interior (other themes and regions), more attention was given to opportunities for Wageningen University & Research in countries such as Nigeria and Tunisia. The new Nuffic Orange Knowledge Programme (OKP) offers opportunities. To be successful in the OKP calls, the relationships with members of the Borderless Network were further strengthened. Wageningen University & Research also played a leading role in the involvement with the Strengthening Higher Education in Africa programme which is financed by the World Bank.

Activities were developed in many countries in Asia. After an earlier secondment of an employee to South Korea (RDA), a Japanese employee was seconded to Wageningen from NARO in 2018. Additional focus was placed on countries such as India and Vietnam. In 2018, the OneWageningen India strategy was developed, which forms the basis for a more intensive and better coordinated approach to strengthen the collaboration with research institutes and the private sector in India. A consortium of Dutch and Vietnamese partners have submitted a proposal under the Orange Knowledge Programme, which was approved for funding at the end of 2018.

The priority countries in Latin America are Brazil, Colombia, Argentina, and Mexico. The trade mission to Colombia led by Prime Minister Rutte and minister Schouten has generated many opportunities for Wageningen University & Research there (tropical fruits, flowers, sustainable palm oil sectors). An analysis of the Brazilian livestock farming and meat production sector resulted in a project aimed at sustainable, small-scale livestock farming in the Amazon region. In Argentina, the sectors for collaboration have now been clearly described and consist of water management, innovation hubs, and the use of pesticides. Activities in countries such as Mexico, but also Ecuador and Colombia, are focused on improving chances for students from these countries to follow a study programme in Wageningen.

China is of great importance to Wageningen University & Research. Although a lot has already taken place, the Chinese market still has many untapped opportunities. Therefore, Wageningen University & Research has decided to expand its "China Office", which operates in China on behalf of Wageningen University & Research. The Wageningen University & Research China Strategy and the business plan for the China Office were approved in 2018 and the expanded China Office is now operational. In a collaboration with the China Office, several projects were developed with the public and private sector in China. During the trade mission led by Prime Minister Rutte, several contracts between Wageningen University & Research and Chinese partners were signed. Additionally, collaboration agreements with CAAS and CAU, among others, were strengthened during various visits.

In 2017, a pilot was started with eleven Relation-focused Account Management Teams, aimed at specific accounts. This pilot was assessed at the end of 2018 and the recommendations will be implemented in the first half of 2019.

2.5.3 Results

Academic awards

The awarding of six Veni, two Vidi and two Vici grants in 2018 brought the total number of laureates since the beginning of the innovational incentive in 2002 up to 92 Veni, 43 Vidi and 12 Vici grants. Since the ERC grants were set up by the European Research Council in 2007, 6 ERC Starting Grants and 9 ERC Advanced Grants were awarded to Wageningen researchers. The ERC Consolidator Grant was set up in 2013, of which Wageningen has received one. Four of them have now been awarded to Wageningen researchers. Additionally, Prof. J. van der Oost received the Spinoza Prize in 2018.

PhD graduations

The graduate schools ensure a challenging PhD programme and are committed to helping their PhD candidates attain the highest possible level. Their success has been demonstrated numerous times by the positive assessments of the inspections that have been carried out and by the participation levels of PhD candidates in Europe in the courses offered in Wageningen.

The number of PhD candidates was more than 2000 by the end of 2018. Most PhD candidates are affiliated with one of the Wageningen graduate schools: EPS (232), WASS (419), PE&RC (380), VLAG (454), WIAS (194) and WIMEK (349). A few PhD candidates are affiliated with graduate schools led by other organisations.

In 2018, the number of PhD graduations was 286, nine less than in 2017. Of the 286 PhD graduations in 2018, seven were “joint graduations”, in which a partner university was also involved. For two of those, the graduation ceremony did not take place in Wageningen.

Of the 286 PhD candidates, 134 were women (47%). Of the PhD candidates, 173 (60%) were not of Dutch nationality. The percentage of PhD candidates with a successfully completed Training & Supervision Plan (TSP) increased slightly to 94% (92% in 2017).

Top Sectors

In the top sector Agri & Food, the Top Consortium for Knowledge and Innovation (TKI) Agri & Food honoured 21 new public-private partnerships (PPPs) in 2017 (amounting to €10.7 million, of which €3 million to be spent in 2018). Additionally, €1.3 million was committed to EU co-funding projects of Wageningen Research Foundation. Within the top sector Horticulture & Propagation Materials, this involved approximately 6 new PPPs (€6.9 million, of which €1.6 million to be spent in 2018), the Energy and CO₂ programme and EU co-funding proposals (€0.4 million). Wageningen Research Foundation’s participation in these PPPs is partially funded by the Ministry of Agriculture, Nature and Food Quality (LNV) and the Ministry of Economic Affairs and Climate (EZK), while businesses provided 50% (combination of cash and in-kind) of the financial contribution. A total of €400,000 was available for funding the so-called “Seed Money Projects”. The resources for this are received from the top sectors Agri & Food and Horticulture & Propagation Materials.

2.5.4 Quality assurance

The research inspections at Wageningen University are part of a national system, in which each university is required to submit to an external inspection once every six years. These external inspections are carried out in accordance with the Standard Evaluation Protocol (SEP 2015-2021), developed and established by the Royal Netherlands Academy of Arts and Sciences (KNAW), the Netherlands Organisation for Scientific Research (NWO) and the Association of Universities in the Netherlands (VSNU).

Wageningen University undergoes these external inspections with the graduate schools as the leading unit. In 2015, all inspected Wageningen graduate schools received a positive recommendation from this committee enabling them to continue their activities as accredited graduate schools. Already in 2015, this assessment of the graduate schools took place, in which both the performance of the graduate schools and all their chair groups received an “excellent” rating in general. For details, visit the [Wageningen University](#) website and the website of the graduate schools (EPS, PE&RC, VLAG, WASS, WIAS, WIMEK). The mid-term review was completed in 2018 and the results will have a big impact on the way the visitation will be organised in 2021. The approach to the visitation of 2021 is currently a topic for discussion. The reason is that the focus of the review will no longer be on the smallest cluster, the chair group, but on a larger cluster with a collective strategy.

The obligation to periodically have the research institutes of Wageningen Research (WR) scientifically assessed is stated in the *Regeling Subsidie* (grant regulations) for Wageningen Research and is part of the agreements between the Ministry of Economic Affairs and Climate (EZK) and Wageningen Research Foundation. In the context of these regulations, Wageningen Bio Veterinary Research and Wageningen Livestock Research (both parts of the Wageningen Animal Sciences Group) were reviewed in May 2018, and Wageningen Economic Research was reviewed in November. Both reviews were concluded with highly satisfactory results. However, the review committee did express its concern about the age distribution of the staff. These reports are public and were submitted to the Ministry of Economic Affairs and Climate (EZK) and the Ministry of Agriculture, Nature and Food Quality (LNV), including the board’s response to the recommendations.

2.5.5 Funding

2.5.5.1 Wageningen University

Research at Wageningen University is funded by direct government funding, indirect government funding and contract funding. The amount of direct government funding for education and research was €240.2 million in 2018. In addition, targeted subsidies from the Ministries of EZK and OCW totalled €1.7 million. The indirect research funding, the second flow of funds, which is mostly provided by the Netherlands Organisation for Scientific Research (NWO), amounted to €30.5 million in the year under review. External funding, or the third flow of funds, amounted to €60.0 million. Of this amount, approximately €41.4 million was related to contract research, €1.4 million to top sector research, and €17.2 million to co-funding and subsidies.

In 2017, the graduate schools had €2.5 million of their own resources at their disposal for the appointment of PhD candidates and postdocs. Some graduate schools allocated these resources fully through an internal “open competition” whether or not on the basis of particular themes, for instance the strategic investment themes. Other graduate schools chose a combination of open competition, resource allocation for newly appointed professors, Veni/Vidi laureates and co-funding of subsequent rounds in the “new style” of the NWO Graduate Programme, for which NWO only finances the first round.

2.5.5.2 Wageningen Research Foundation

Of the research funding at Wageningen Research, €24.5 million comes from Knowledge Base funding from the Ministry of Agriculture, Nature and Food Quality (LNV), €72.6 million from LNV programme funding (BO and WOT), €2.2 million from indirect government funding from NWO, €24.3 million from the co-funding and subsidy market (including the EU), €57.2 million from the Top Sectors, and €99.4 million from the bilateral market/contract research (including the business community and LNV).

2.5.6 Outlook

The quality of research provides a strong starting position. 2019 will be the first year of the implementation of the new Strategic Plan 2019-2022: Finding Answers Together. In terms of research in general, further improvement of research excellence is the focus. In addition, we will further intensify the excellent connection to important clients and partners, such as the government, the European Union (EU) and the business community. This fits in with the theme of the abovementioned strategic plan.

During the term of the new strategic plan, the development of new knowledge at Wageningen Research Foundation will be organised in five programmes, financed by the strategic knowledge base funds (KB) of the Ministry of Agriculture, Nature and Food Quality (LNV). These programmes represent the content-related ambitions of Wageningen Research Foundation and are aligned with the agendas of the Ministry of Agriculture, Nature and Food Quality (LNV) as well as other ministries, the Top Sectors, the Sustainable Development Goals, and the European agenda.

The programmes relate to the following themes:

- A. Circular and climate neutral
- B. Food security and valuing water
- C. Nature inclusive and landscape
- D. Safe and healthy
- E. Data driven and high tech

For each programme, from 2019 a programme director will be responsible for the vision and strategy development, content development, external and internal positioning and profiling, and management of the execution of the programmes. This is an important innovation which aims to optimise the integral design and management of the knowledge base research. In addition, the decision was made to provide additional investment in three WUR-wide research themes. For this, strategic resources from Wageningen University, knowledge base resources from the Wageningen Research Foundation

and R&D resources from the top sectors will be used. These themes from the Strategic Plan for 2019-2022 are:

- Connected circularity
- Protein transition
- Digital twins

2.6 Value creation

Due to our international position as a leading research institution in the field of healthy food and living environment, Wageningen University & Research has an even greater responsibility to share the knowledge we have developed and to apply it in society. This is why knowledge and infrastructure are shared and made usable for critical social challenges in the knowledge domains. The knowledge achieves economic and social impact through application.

In the Strategic Plan 2015-2018, more emphasis was placed on value creation as one of the three pillars of Wageningen University & Research, in addition to education and research. The five focus points for value creation were the collaboration with the business community, dialogue with society, knowledge for policy, sharing facilities, and educating people. Steps were taken in all areas, as is evident from this annual report. Additionally, Corporate Value Creation was established in 2017 and works based on four core tasks: making knowledge valuable (tech transfer), entrepreneurship with knowledge, societal value creation by sharing knowledge, and the campus ecosystem by creating access to research facilities and stimulating local buzz.

Research funding providers, governments and the business community expect that Wageningen University & Research will make the impact and value creation apparent. The Royal Netherlands Academy of Arts and Sciences (KNAW) published its recommendation "*Maatschappelijke impact in kaart*" (tracking the social impact of research) in 2018. With regard to the VSNU, [quantifiable valorisation indicators](#) were established. The VSNU indicators will show the output across all the activities of Wageningen University & Research, from our graduates to spin-off operations and from IP requests to the additional training of pre-university lecturers. Output is an indicator of future impact. In addition to quantifiable indicators for output measurement, narratives are also important for identifying long-term impact. The report identifies a number of fields in which the efforts towards valorisation results are manifested:

- Collaboration, tech transfer, and co-creation with partners
- The entrepreneurial use of knowledge
- Sharing knowledge
- Wageningen Campus Ecosystem
- New professionals

For more detailed information about the valorisation output, see Appendix 2 (Knowledge Valorisation Indicators).

2.6.1 Collaboration, tech transfer, and co-creation with partners

The knowledge makes a significant contribution to innovation and progress. Value creation does not only occur through the transfer of knowledge and technology through various forms of intellectual property rights, licences, and spin-offs. Collaborative formats, such as contract research and public-private collaboration are especially important for this. Wageningen University & Research works with other academic institutions, businesses, governments and NGOs. By collaborating with various partners in the pre-competitive stage and combining our research capacities, businesses can more quickly clear specific thresholds which must be achieved before commercial product development can take place. Research institutes often play a crucial role in the organisation of this type of open innovation by bringing partners together to achieve a shared, long-term objective and by contributing their fundamental knowledge and facilities. Knowledge development through co-creation with various stakeholders in the production chain or with partners that have different perspectives increases the chance of broadly accepted solutions and the actual use of knowledge to create impact.

2.6.1.1 Co-creation and the development of new partnerships

An important component of Wageningen's knowledge valorisation is co-creation: the added value from research with stakeholders and other parties. Wageningen University & Research has years of experience in this area and has contributed to the foundation of large consortia. In 2018, Wageningen University & Research implemented many new, ongoing projects and programmes funded by public-private partnerships (PPPs), especially through the participation in the top sectors Agro & Food and Horticulture & Propagation Materials. Wageningen University & Research also participated in various consortia for the development of research, education and innovative business clusters at the regional level, with the Food Valley region being a prime example. Other examples of consortia are the Personalised Nutrition and Health Consortium with TNO and the Internet of Food and Farm project.

The Relationship Account Management teams (RAM teams) combine their efforts across Wageningen University & Research for multinationals, countries, and institutional clients nationally and internationally. The account handling process was evaluated at the end of 2018. The conclusion is that the RAM approach with One Wageningen teams works well, both for the client and Wageningen University & Research. A number of recommendations was made for further improvement.

In order to help devise new creative solutions for professional practice, Wageningen University & Research organises "Hackatons", "Business Challenges" and "Student Challenges" in which students, Wageningen University & Research sector experts, and interested parties collaborate on new insights and concepts.

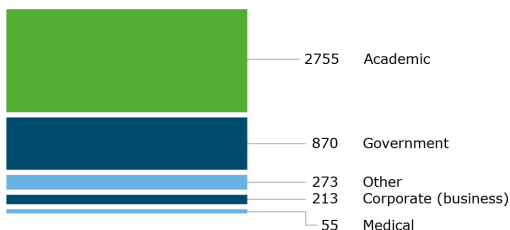
Wageningen University & Research started "Company Day" in 2018. On that day, entrepreneurs, innovators and policy makers converge on Wageningen Campus under the theme "Future Perspective", to hear about the latest developments in Wageningen and learn about their implementation in society. During this day, applications of 100 years of research by Wageningen University & Research were presented in the ["Wageningen University & Research Impact Portfolio"](#). Within the 4TU partnership, work is performed on closer collaboration regarding valorisation. The complementary nature of the technical universities and Wageningen University & Research provides good opportunities for innovation. 4TU conducts work on the research programme "High Tech for a Sustainable Future" in which postdocs and tenure track researchers from different disciplines work together. In 2018, a joint application with 4TU was submitted to the Netherlands Organisation for Scientific Research (NWO), named Synergia, on the topic "High Tech to Feed the World". 4TU also collaborates on raising funds to assist early-stage start-ups in order to move beyond the "valley of death" (pre-seed phase) in the High-Tech Seed Fund Innovation Industries. A joint 4TU application is in preparation for 2019. In 2018, a decision was made to organise the Student Challenge 2019 within the 4TU context.

The turnover from EU grant programmes is a measure for the contribution of Wageningen University & Research to co-creation on international social challenges. In 2018, the turnover of Wageningen University in the EU subsidy market remained the same as in 2017 at €15.4 million. The turnover of Wageningen Research from EU funding programmes was €20.3 million in 2018, compared to €21.7 million in 2017. See also Table 2.15 in Appendix 2.

Research projects carried out through co-creation with stakeholders often also lead to co-authored publications in academic journals and trade journals (Appendix 2, Table B2.16 and B2.17). Figure 2.2 shows that the primary share of the co-publications are prepared with other academic institutions and roughly one third are prepared with government bodies and the business community (dark blue).

Co-publications 2018

Number of co-publications (co-authored publications) of Wageningen University & Research with partners from within and outside of academia, globally



Source: Scopus, Elsevier B.V. All rights reserved. SciVal ®

Figure 2.2 Number of Wageningen University & Research co-publications with partners in 2018

2.6.1.2 Tech transfer and innovative capacity

Wageningen University & Research sometimes claims the intellectual property for its inventions. The main objective here is to encourage the business community to use these for the development of new products or processes. This increases the innovative capacity of society. By granting patent licenses to potential market partners, knowledge can be broadly disseminated, thus leading to more innovations and impact. The basis for a new IP policy was created in 2018. Wageningen University & Research has 157 patents and patent applications in its portfolio and has granted 113 licenses for patents, species, models, or materials. Over 70% of the patents are licensed which means that a lot of impact is created by the knowledge. In 2018, 22 new patent applications were submitted, of which 12 were from Wageningen University and 10 were from Wageningen Research Foundation (see Appendix 2, Table B2.4). This number is in line with previous years.

The policy is focused on distributing knowledge as widely as possible by seeking out parties that want to use the patent during the first 30 months after the application has been made. The knowledge will also be publicly disseminated during this period.

The turnover in bilateral research with the business community is a measure for the contribution of Wageningen University & Research to the innovative capacity of businesses. Wageningen University's contract research, bilaterally funded by the business community, amounted to €15.4 million in 2018, compared to €15.5 million in 2017. The turnover of Wageningen Research Foundation from bilateral research with the business community consisted of €47.5 million from contract research funded by the business community in 2018, compared to €42.7 million in 2017. This growth stems from the increasing use of the TKI allowance. See also Appendix 2, Table B2.14

2.6.1.3 Knowledge for government policy and legislation

An important part of the research conducted at Wageningen Research Foundation institutes is commissioned by the Dutch and EU government. We carry out statutory research tasks in the areas of infectious animal diseases, food safety, economic information, fisheries management, genetic resources and nature. The policy support research and the scientific research forms the basis for government policy, rules and regulations in the domain aimed at protecting the health of people and animals, promoting exports and preserving vibrant nature. Through these Statutory Research Tasks and the policy-supporting research, we make a concrete contribution to society. The knowledge is made available via KennisOnline and newsletters. One example is the *Attentiemail Rundveehouderij* (attention e-mail cattle farming) which brings the latest insights and developments to the attention of cattle farmers. A second example is the use of robots in greenhouse horticulture due to a limited availability of labourers. Together with the business community, the sweet pepper harvesting robot **SWEeper** was developed, which combines knowledge about robotics with knowledge about crops, greenhouses, and growth models.

A third example is the contribution of Wageningen University & Research to the establishment and realisation of the LNV vision of Circular Agriculture.

A fourth example is the research programme “Biobased Performance Materials” regarding plant-based raw materials which was completed in 2018. In a collaboration with the business community, the research was focused on roofing and carpet tiles made from 100% biobased bitumen, biobased alternatives for digital printer inks (2D and 3D), and sheet materials based on residual streams from nature.

2.6.1.4 Customer satisfaction

The Ministry of Economic Affairs and Climate (EZK) has submitted an impression of customer satisfaction and knowledge utilisation for all six TO2 institutes to the House of Representatives. This is why, starting in 2016, a new survey system was introduced at all TO2 institutes, in which the same questionnaire is used for all types of projects (with the exception of those that fall under the statutory research tasks and projects without a clear external commissioning party). In 2018, just as in the previous years, Wageningen Research clients were very satisfied. In 2018, Wageningen Research Foundation scored an 8.6 for client satisfaction and 97% of respondents deemed the research to be useful (see Appendix 2, Tables B2.7 and B2.8).

2.6.2 The entrepreneurial use of knowledge

New enterprises contribute to the application of new knowledge and, through their growth, to economic development. Stimulating entrepreneurship and supporting start-ups are therefore important components of value creation for Wageningen University & Research. Wageningen University & Research encourages entrepreneurship among students supports the founding of start-ups. If these start-ups grow, they will have the opportunity to establish a location on Wageningen Campus. Employees and start-ups outside of Wageningen are also welcome to use their knowledge in the agri-food domain.

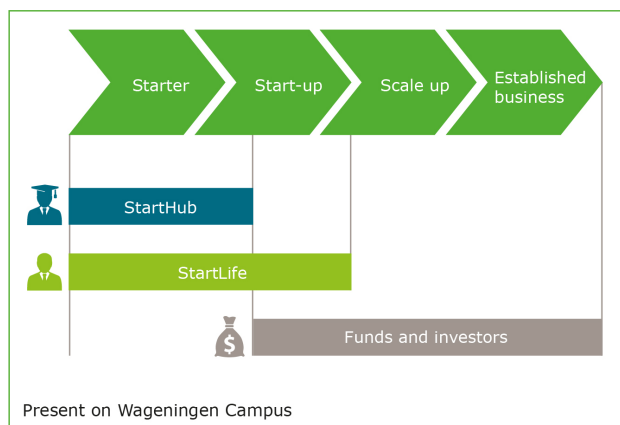


Figure 2.3 Wageningen University & Research supports entrepreneurial students and staff to help them grow from an idea to a business.

2.6.2.1 Entrepreneurial education

With its regular course programme, Wageningen University offers a wide selection of degree programmes that support the enterprising student at all stages of education. In the 2017-2018 academic year, there were 15 courses that were fully or partially focused on value creation and/or entrepreneurship for beginning Bachelor’s students, Master’s students, and PhD candidates. Student participation in entrepreneurial education has stabilised after several years of growth. In the 2017-2018 academic year, 1048 (non-unique) students took exams in one of the 15 courses focused on entrepreneurship (for more details see Appendix 2, Table B2.2). In the 2017-2018 academic year, 48 students entered the designated MSc entrepreneurial programmes (Mastertrack & C-KIC, >48 ECTS) and this number is growing. In the 2017-2018 academic year, Wageningen University students have carried out 19 entrepreneurship-related projects for businesses. The flow of students from the BSc or MSc education to extra-curricular follow-on activities has increased significantly. Striking is the number of student start-ups (Remode, Dustin, PUlenta, BirdsAI) from the MSc

programme New Venture Creation in 2018. In regard to extra-curricular education in the area of entrepreneurship provided through StartHub, about 70 students participated in the Inspiration workshop series and about 15 students participated in the Startup Week. StartHub has about 80 active members who regularly join the meetings and workshops. About 10% of the participants are PhD candidates.

Every year, about three to four student start-ups apply for Climate KIC's accelerator programme "Per Call". The number of candidates and participants in the "learning journey" also steadily increases every year.

2.6.2.2 StartHub

Student incubator StartHub Wageningen caters to students, PhD candidates and recent graduates who wish to learn more about entrepreneurship and/or who have already started their own business. The educational components test and develop the interest of students. Guidance and assistance with actually starting a business provide career perspectives. The StartHub works together with an active student board, sponsor partners, and external private partners in order to provide advice to students starting businesses.

In 2018, the incubator organised a total of 35 practical workshops on entrepreneurship and more than 1000 students and recent graduates attended the events. There were 71 intake interviews with enterprising student teams, of which over 20 have actually launched their start-up between September and December. Up to and including 2018, 36 initiatives and legal entities were founded by members and tenants of StartHub, of which 6 were founded in 2018. Seven start-ups received a student start-up loan from StartLife in order to expedite their activities. In 2018, 22 start-ups had offices in the Student Incubator, which resulted in the current location being entirely leased. Some of the start-ups found locations elsewhere.

Entrepreneurship among students

> 1000 potential entrepreneurs among students



Figure 2.4 Education and incubator programmes for entrepreneurship for Wageningen University students

2.6.2.3 StartLife

StartLife Foundation is the national incubator programme for start-ups in Food, Agro and the Biobased Economy. Wageningen University & Research and Oost N.V. are the founders. In this way, Wageningen University & Research provides access to knowledge and networks in its domain for start-ups from all over Netherlands. One of StartLife's activities is the Incubation Programme, in which guidance and assistance is provided to start-ups that work on high-tech innovations in Agro, Food, and the Biobased Economy. Upon successful completion of the programme, they can receive a starters loan in three instalments with a maximum of €85,000. In 2018, 30 new start-up teams formally joined StartLife Wageningen, making use of the network, the support programmes, and/or pre-seed loans. Two of these were spin-offs from Wageningen University & Research.

In 2018, StartLife adopted a new approach. Around 10 starters participate together in the new StartLife Accelerate Programme on Wageningen Campus. For a period of three months, the start-ups learn and work together and validate their business plans, potential clients, and pitches for investors.

In the reporting year, StartLife has strengthened a number of partnerships, including those with Unilever R&D, Lidl, Döhler Ventures and the PHW-gruppe. Lidl organised themed weeks with innovative consumers/producers, and contacted StartLife in that context. StartLife selects a number of start-ups for Lidl and has committed to a minimum of fifteen products from StartLife starters.

In 2018, Rabobank, Anterra Capital, StartLife and Wageningen University & Research organised the third edition of F&A Next: the European platform for corporations, investors, start-ups and scale ups in the agri-food domain. The platform is a two-day event which takes place on Wageningen Campus, which has a European-wide impact thanks to the presence of 550 international partners, 200 of which are start-ups.

Investments from the Innovation Industries investment fund, in which Wageningen University & Research is a minor participant (€0.7 million*) also work as an incentive to get other funding providers on board. This has led to investments in Solynta (€15 million), and A-Mansia (€17 million) in 2018. A-Mansia is a Wageningen University & Research spin-off. Capital injections allow the businesses space to grow, for instance by investing in follow-on research at Wageningen University & Research.

*) Annual Accounts p18 Wageningen University and p19 Wageningen Research Foundation

Entrepreneurship via StartLife

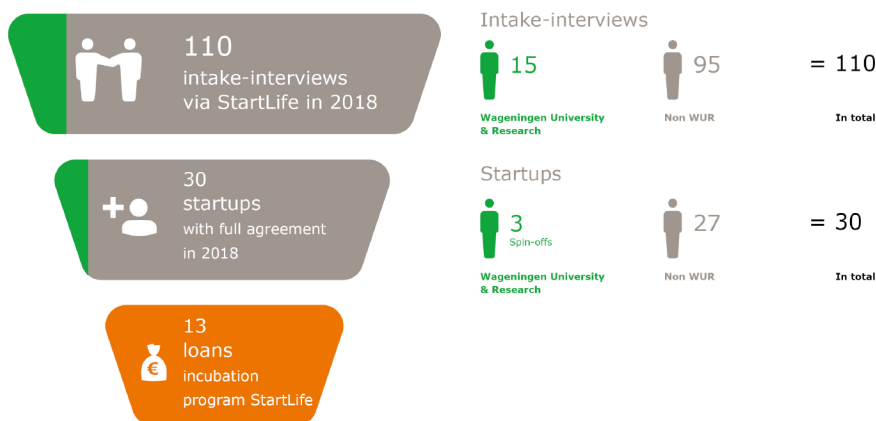


Figure 2.5 StartLife output

2.6.2.4 Spin-offs

Knowledge application can occur through the transfer of intellectual property to researchers who start a company or have shares in a company (a spin-off according to the VSNU definition). Wageningen University & Research has launched a total of 33 spin-offs. By investing in the valorisation programme StartLife, the national impact of Wageningen University & Research on new business activities is much higher than through academic spin-offs alone. In total, more than 200 start-up teams received guidance and funding from StartLife Wageningen from 2011 to 2018. One spin-off was founded in 2018: Agri-Gripping (Appendix 2, Table B2.6). In 2018, Wageningen University & Research was awarded four Take-off Grants from the Netherlands Organisation for Scientific Research (NWO) in order to conduct feasibility studies into commercialising knowledge through the establishments of spin-offs.

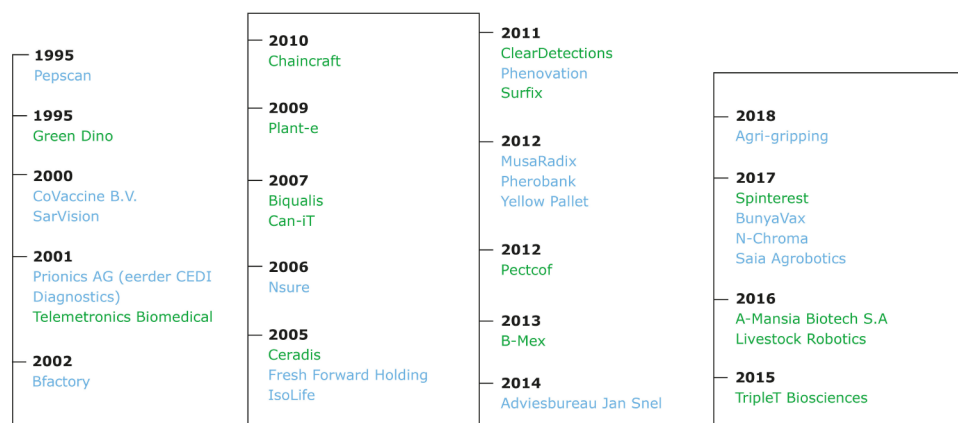


Figure 2.6 Timeline of Wageningen University and Wageningen Research Foundation spin-offs

2.6.3 Sharing knowledge

Making knowledge and knowledge infrastructure accessible to businesses, citizens and societal organisations is an important part of the value creation of Wageningen University & Research.

2.6.3.1 Sharing scientific knowledge through open access

Wageningen University & Research not only shares its scientific output in scientific journals (long-term average of roughly 4500 annually), but also does so through field-specific publications for professionals in the sector and through publications for the general public, in print as well as electronic (social) media. Results are made available via the library, [KennisOnline](#) and other online databases and via a large number of popular websites which cater to the target group. The Wageningen University & Research website provides various, theme-focused publications. This enables a larger group of potential users of this new knowledge to be reached.

The number of publications for professionals and for the general public increased in 2018 in comparison to 2017, but is still below the level of 2016 and previous years. There are several reasons for this. The number of Wageningen Research Foundation reports is a reflection of the number of projects at Wageningen Research Foundation and that number is dwindling. Changes in the registration systems and differing policies regarding input at the business unit or chair group level may be part of the reason. This demands extra attention (Appendix 2, Table B2.16).

2.6.3.2 Science communication and Wageningen Dialogues

In addition to communication with fellow scientists, businesses, NGOs, and government bodies, Wageningen University & Research is active in science communication directly with society. The organisation is at the cutting edge when it comes to addressing substantial, modern-day social themes: the growing world population and the increase in wealth leading to a growing demand for food; climate change and its subsequent impact; urbanisation; and an increased burden on the soil, water, and air, which, in turn, makes food safety uncertain. All of these topics pose significant challenges to the world and elicit a wide range of opinions. Wageningen University & Research and its stakeholders discuss these themes through the Wageningen Dialogues. For several years, Wageningen University & Research has gained experience with the Wageningen Dialogues concept and the Wageningen Dialogues programme has gradually been developed further. In 2018, four Wageningen Dialogues were held about nature-inclusive agriculture, cutting across the silos, agroforestry, and circular fashion.

In addition, various broadly accessible meetings have been organised on and around Wageningen Campus, which contribute to the dissemination of knowledge:

- In the speakers corner of Impulse
- The evenings of Studium Generale
- The Science Café lectures in Loburg in Wageningen
- Apps, such as “How fresh is your fish?” and “Weerbeleving” (weather experience)
- WURtalks
- Kinderuniversiteit
- MOOCs on edX welcomed its 500,000th participant in 2018
- Initiatives for a wide audience, such as Food and Cancer information
- Videos on WURtube

In 2018, Wageningen University & Research was involved in various public events, including those organised for the centenary, such as the [living room discussions](#) about food waste and events in the city of Wageningen about [100 years](#) of working together.

2.6.3.3 Education Project Services

Businesses, authorities, and research institutes can receive support through [Education Project Services](#), which links issues in society with courses in the curriculum. In the different courses, students and their supervisors investigate the problem at hand, enabling students to learn to apply academic skills in order to solve problems in society. This usually takes place in a multidisciplinary environment. In the 2017-2018 academic year, this involved 175 projects for small and medium-sized businesses, start-ups, PPP consortia, the government, and social organisations. 1349 Bachelor’s and Master’s students and 360 employees (Wageningen University and Wageningen Research Foundation) were involved in these projects (See Appendix 2, Table B2.10).

2.6.3.4 Science Shop

Social organisations that want to use Wageningen’s knowledge can request research projects via the Science Shop, which is where students and researchers collaborate with clients on new solutions for society at the local or regional level. This requires a great deal of attention to the social sensitivity of students and the practical value of the recommendations provided to the client. With these types of Learning in Communities, Wageningen University & Research promotes dialogue between science and society. The Science Shop completed 14 projects in 2018, in which 26 Wageningen University & Research employees, 126 Bachelor’s and Master’s students, and 52 external stakeholders were involved (See Appendix 2, Table B2.9).

In 2018, an Impact Assessment was conducted of the Science Shop and the projects that were completed two to three years ago. The impact of the completed projects was relatively substantial: nearly all projects led to actual impact and a more robust social dialogue regarding the projects. We want to promote this better in the future and also use these Science Shop projects more actively as the germinator for new themes for all of Wageningen University & Research.

For instance, in 2018, the Science Shop contributed to increasing awareness of cancer patients undergoing changes in their sense of taste. Four factsheets respectively targeting dietitians, nurses, patients, and dieticians provide information about how to deal with those changes. A different project addresses a question from a number of nature and environmental organisations in Amsterdam. They wanted to know what the value is of green spaces in the city in comparison to construction. A social cost-benefit analysis shows that in some cases and locations, the value of greenery is higher than that of concrete. The nature and environmental organisations can use these results to better support their viewpoint in discussions with the municipal council and project developers.

2.6.3.5 Science Hub, Food Valley Network VO-HO, and green education

With the assistance of public-private partnerships (PPPs), Wageningen University & Research provides a major contribution to lessons on nutrition and food in primary education.

Together with scientists, the Wageningen University Science Hub (WKWU) and the Food Valley Network VO-HO developed lesson materials and activities for primary and secondary education.

Through this, WUR contributes to socially relevant, challenging and attractive education and improves the quality of incoming students. In the year under review, the Science Hub offered fourteen teaching products, introducing approximately 540 teachers and 8000 children in primary and secondary education to themes and research from Wageningen University & Research. The Food Valley Network VO-HO reached nearly 1470 lecturers through courses, workshops, and lecturer development teams with 27 lesson products. Wageningen University contributed to the National Biology Olympiad, which reached over 9,000 students and 300 lecturers (see Appendix 2, Table B2.11).

Wageningen University & Research also participates in the Green Table - the partnership for green education. The Green Table encourages the exchange of knowledge in the green education system via programmes in which WU is the coordinator. These include Groen Kennisnet, WURKS, and Groenpact.

2.6.3.6 Courses and degree programmes for professionals

Through Wageningen Academy and the Centre for Development Innovation (CDI), WUR organises courses, training programmes and degree programmes for professionals in the business community and public or semi-public sector. In doing so, it provides its clients with the most current and relevant Wageningen knowledge. In this process, the focus is on everyone in the agri-food business from young professionals to senior executives. Wageningen Academy feels that its role is to match the demand from this target group with the Wageningen knowledge it provides. In addition to open-enrolment courses, Wageningen Academy is increasingly developing customised programmes (via co-creation). Wageningen Academy provided 40 open-enrolment courses for 1030 participants in 2018. For companies, 36 in-house courses were provided to 995 participants. Additionally, Wageningen Academy organised study visits and distance learning programmes.

At executive level, Wageningen Academy offers an Executive MBA in Food & Agribusiness in collaboration with TIAS Business School, the AgriFood Global programme with the IESE Business School, and the European Food and Agribusiness Seminar (EFAS) in collaboration with CEIBS (China Europe International Business School).

The Centre for Development Innovation (CDI) offers an annual programme of short, open enrolment courses for mid-career professionals primarily from Africa and Asia and to a lesser degree also from Latin America, Europe and North America. The courses cover the full range of Wageningen University & Research's knowledge domain, with topics such as Climate Change Adaptation, Fisheries Governance and Rural Entrepreneurship. Course participants come from government institutions, research institutes, NGOs and the business community. Sometimes CDI course participants continue on to MSc or even PhD programmes at Wageningen University. Alumni from CDI courses regularly secure follow-up assignments for CDI or projects from other WUR divisions. A total of 840 people participated in the 31 CDI courses in 2018.

Summer schools at Wageningen University & Research are organised by the graduate schools, Wageningen Academy, ELLS, European Master in Food Studies, or by student organisations. More information is available online at www.wur.eu/summerschool. The summer schools are primarily focused on attracting external participants, from Bachelor's students to PhD candidates and professionals. In the summer of 2018, 17 meetings were organised in Wageningen that could count as summer schools. Eleven summer schools were organised for PhD candidates, three for Bachelor's and Master's students, and three for professionals by Wageningen Academy. Around 500 people participated in Wageningen Summer School 2018, which took place between 15 June and 6 September.

2.6.3.7 Wageningen in the region

Wageningen University & Research works globally and is also firmly integrated into its own locale. We participate in many regional networks, such as the Triple Helix, the FoodValley Region and KIEMT, and other location-based areas, such as the DairyCampus and South Holland. WEcR works together with the universities of Rotterdam, Delft, and Leiden in the provincial programme ACCEZ regarding the circular economy. Wageningen University & Research works closely together with the Province of Gelderland, the municipalities, and regional parties on the cross-regional multi-year investment programme on the topics of innovation, business climate, mobility, accessibility, and living, called

FoodValley 2030, directed by the Province of Gelderland. In 2018, the RegioDeal FoodValley was awarded, in which Wageningen University & Research participates. New initiatives under development are TOPFIT for preventative healthcare and the Imec initiative which will be mentioned further down. The Province of Gelderland also committed a substantial investment to support StartLife, local buzz, and the further development of Wageningen Campus in the period 2018-2019.

2.6.4 Wageningen Campus Ecosystem

In 2018, Wageningen University & Research continued the development of the Wageningen Campus Ecosystem. More specifically, it relates to increasing the number of parties within the ecosystem (campus acquisition), the interaction within the Campus Ecosystem (local buzz/campus community), and the optimal use of research facilities of Wageningen University & Research/Wageningen Campus (Shared Research Facilities). These matters are closely related to the physical aspects of the further development of Wageningen Campus, for which there is close collaboration between colleagues at the Real Estate & Housing department of Facilities & Services (which is responsible for the physical aspects of campus development) and the Municipality of Wageningen.

2.6.4.1 Campus acquisition

Following a strong development phase, Wageningen Campus Ecosystem has clearly taken shape over the past few years and this has been acknowledged and appreciated. In addition to the quality and talent (Wageningen University & Research), the other important elements for maintaining this vibrant ecosystem are entrepreneurship and start-ups (including StartHub, StartLife, and the accommodation for various organisations and businesses), access to high-quality research facilities (Shared Research Facilities, see 2.6.1.3), and local buzz.

This Campus Ecosystem made up of Wageningen Campus and Business & Science Park Wageningen (BSPW) will lead to more collaboration between different parties on and near the campus and to increased economic activity in the region. The collaboration between the two parts of the ecosystem (the WUR campus and BSPW) is continually improving and the coherence is also clearly visible due to the changed signage on BSPW, which is now in the style of Wageningen Campus. The need to firmly anchor the whole of Wageningen Campus Ecosystem as the knowledge centre of the FoodValley Region is acknowledged by the Province of Gelderland and the municipalities of Wageningen and Ede. Serving as this anchor enables the region to continue growing into a global hotspot for Agriculture, Food, and the Biobased Economy, while building upon a strong foundation in this knowledge ecosystem. Therefore, a proposal for a multi-year investment programme is being drafted by the Province of Gelderland in the AgriFood 2030 programme.

It is already evident that the various elements of the ecosystem of Wageningen Campus are crucial in the selection of a location by businesses and organisations. The construction of Unilever's Global Food Innovation Centre is progressing well (a festive ceremony marked the topping out of the building in September 2018) and it serves as a driving force behind the interest of other parties in Wageningen and its surroundings. In 2018, the following parties, among others, opened their hubs on Wageningen Campus/BSPW: Witteveen & Bos, DSM Animal Nutrition, HZPC, Deuka, and JoinData.

A number of these parties are temporarily accommodated in Impulse until the expansion of the business centre Plus Ultra is completed. From 2020, this expansion will also provide a prominent place for the different start-up activities of Wageningen University & Research (StartHub and Centre of Entrepreneurship), StartLife, the Wageningen University & Research Student Challenges, and techno-starters.

Additionally, there are many leads for establishing business locations on Wageningen Campus once the expansion is ready. In this context, Imec can be named specifically: besides a location on Wageningen Campus with an ultimate workforce of about 100 staff, it also includes a connection to the research collaboration OnePlanet (Imec, Wageningen University & Research, and Radboud University).

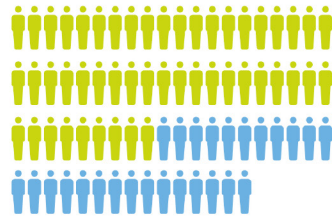
Wageningen Campus

7500 jobs

of which

4900
WUR

2600
Non WUR



160 companies

of which

40
spin-off companies

15
startup companies

A company settles on the campus

A company is founded on the campus

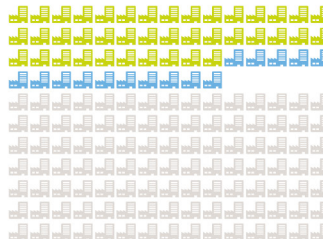


Figure 2.7 Wageningen Campus incorporates 7500 jobs and 160 companies

2.6.4.2 Wageningen Campus community & local buzz

The year 2018 was characterised by the anniversary of the university. In that context, many academic public (networking) meetings and seminars were organised and hosted at Wageningen Campus. These were open to a wide audience. The connection to the creative sector was strengthened in 2018 through the Creative Innovation and Art meets Science programmes, among others, and through a new collaboration with ArtEZ Arnhem on the theme of Circular Fashion, within which academics, students, startups, and designers carried out work on new challenges. About 30 publicly accessible meetings and exhibitions were organised in Impulse. The Wageningen Campus Connect Cafe, aimed at Science and Innovation within the AgriFood domain, was continued in 2018. Wageningen University & Research as well as external parties on campus, including the BSPW, have contributed to the content. For the (campus) business community, the presence of students on campus is an important source of added value. Student Career Services organised several activities in 2018 facilitating the meeting of students and businesses.

In 2018, a total of about 250 public meetings were organised in Impulse, beside the large-scale events that were organised in the marquee and the education buildings.

Attention was drawn to the campus activities through a physical monthly calendar, the monitors in various buildings, the Wageningen Campus website, social media, the campus app, and the LED sign at the main access road onto campus. Additionally, steps were taken in 2018 to create a Wageningen Campus e-newsletter, with the first edition planned for 2019.

2.6.4.3 Shared Research Facilities

Wageningen University & Research wants to retain its leading position in education and research and advanced research facilities are crucial for this. Wageningen University & Research invests in high-quality research facilities every year. These facilities range from high-quality laboratory equipment and the related expertise to larger research facilities.

Through the Shared Research Facilities (SRF), Wageningen University & Research provides third parties with access to its research facilities. This stimulation and facilitation of "joint use" does not only contribute to more cost-effective operation of the research facilities, but it is also a particularly good way for researchers (at Wageningen University & Research as well as external partners) to familiarise themselves with and utilise the facilities and expertise of others. This is often the basis for further collaboration in research projects and, thus, actively contributes to the strength of the Wageningen Campus Ecosystem.

SRF (previously CAT-AgroFood) resources are also invested into the research infrastructure. Important acquisitions in 2018 are the "Robin", a mobile device for phenotyping plants, and a large-scale extruder for research into the processing of biobased materials. Additional investments included those

for advanced mass spectrometry, Next Generation Sequencing facilities, and a FTIR microscope. The average occupancy of the SRF equipment portfolio (part of the total equipment portfolio of Wageningen University & Research) was 60% in 2017 and the number of external users was 36. Of course, the equipment was also extensively used for research projects which Wageningen University & Research conducts for external parties.

In 2018, work was carried out on the research facilities strategy for Wageningen University & Research. The objective is to operate more WUR-wide, with a more pro-active attitude. This will result in research facilities being used more strategically, for instance in partnerships. As part of this, the SRF research facilities are also accessible for external parties, as is stipulated in the new strategic plan of Wageningen University & Research (2019-2022, Finding Answers Together). The ambition is to also encourage other campus residents to also provide access to their facilities. The first successes were achieved in 2018 as Unilever will house some of its research equipment at comparable research facilities at Wageningen University & Research (a scanning electron microscope at the Wageningen Electron Microscopy Centre at WUR and two NMR devices at Magnefy, the NMR centre at WUR) and they will make this equipment accessible to third parties through SRF. Additionally, Unilever will make part of the equipment located in their own building accessible to third parties through SRF.

2.6.4.4 Physical aspects of campus development

2018 saw the continuation of many different projects in relation to real estate and accommodation on Wageningen Campus. For instance, the new parking garage on P1, the greenest parking garage in the Netherlands, was completed and formally opened and the preparations were completed for a new distribution station for electricity, essential for the accommodation of middle-sized and larger R&D companies.

In 2018, great strides were made on the business strip of Wageningen Campus, the central area where companies can establish a location. For instance, the negotiations with Kadans for the further development of the third quadrant were completed. The business centre Plus Ultra will be extended (Plus Ultra 2) and a multi-storey parking facility for the tenants of the buildings will be realised by Kadans. The construction of these buildings will start in the first half of 2019. At the same time, the construction of Unilever's Food Innovation Centre is in full swing, with an expected opening date in 2019. Besides these developments, there are two smaller locations available on the business strip for third parties. The further development of Wageningen Campus on the Born Oost (the grounds where NIOO-KNAW and Aeres are located at the moment) will be pursued due to the extensive interest from knowledge-intensive organisations to set up a location on Wageningen Campus and since this fits in with the ambitions of Wageningen University & Research, stakeholders, and other players in the knowledge intensive domain in Wageningen. The activities in relation to planning for the further development of the grounds have also started, such as making it accessible for traffic, drafting an urban design plan, coordinating with stakeholders, and carrying out the necessary research for the development plan. Taking into consideration the physical aspects of the further development of Wageningen Campus so far, such as different parties setting up locations on the business strip, and the future development of the Born Oost, the signposting will be updated in 2019 to better fit the new and future situation.

In addition to the (preparatory) construction activities of external parties on Wageningen Campus, several large developments on campus are in progress for Wageningen University & Research buildings. For instance, the Programme of Requirements was established for the third education building (across from RIKILT, current location of Triton). Due to the increasing pressure on the space within the Wageningen University & Research buildings (caused by increasing student numbers), a decision was made to develop the first two phases of this building simultaneously. It also frees up space for growth in the research buildings, space which is currently used for education.

A new design phase and a tender was initiated for the Dialogue Centre, after an earlier plan stalled due to the strong increase in building costs. The goal is to start construction before the end of 2019. The Dialogue Centre will offer a central space on campus for interaction, encounters, and academic dialogue, including PhD graduations, inaugurations, symposia, and small-scale seminars. Impulse will continue focusing on smaller groups (up to about 80 people) and on offering a programme that

connects science and culture (see 2.6.1.2). In 2018, significant progress was made in relation to the Unifarm research facilities. At the end of the year, the contractor agreement was signed for the first phase of the new greenhouse complex, in which high-grade research compartments will be realised in a modern, sustainable, and future-focused extension of the greenhouse building. In addition, preparations were completed for a new greenhouse and a climate building with sophisticated phenotyping facilities and a link to the aforementioned Shared Research Facilities (see 2.6.1.3).

The accessibility of Wageningen and Wageningen Campus remains a focus point. In 2018, the frequency of buses was increased once again, the use of (electric) bicycles increased, and the first steps were taken to develop an express bicycle route to the Ede-Wageningen station and a direct bus service to Arnhem Central Station. Access for cars will be upgraded slightly in 2019 by further optimising the traffic lights at the Mansholtlaan, in advance of a definitive solution for the roundabout at the main entrance of the campus. Directed by the Province of Gelderland, work is being done on the overall access to Wageningen, by way of the Campus Route or an alternative using the existing infrastructure. The first administrative and process steps have since been taken in this spatial and politically-sensitive matter. Wageningen University & Research is working intensively with various parties (the Municipality of Wageningen and the Province of Gelderland) to take the proper measures for both the short and long term to make Wageningen and the Wageningen Campus easily accessible for all types of transport.

2.6.4.5 Wageningen Campus community

In 2018, work continued on strengthening the vibrant campus community. This included the organisation and/or hosting of a wide range of public, scientific meetings with internal and external speakers, seminars, network gatherings, and cultural programmes. In 2018, we also started a monthly networking cafe using Campus Connect, which focuses on science and innovation in the domain of AgriFood and is intended for scientists, entrepreneurs, and startups. The cafe was organised in collaboration with external parties located on campus and the contributions resulting from this are shared as much as possible. An important number of these meetings are held in Impulse, the debate and meeting centre. In 2018, a total of about 250 public meetings were held at Impulse.

Attention was drawn to the campus activities through a physical monthly calendar, the monitors in various buildings, the Wageningen Campus website, social media, and other internal channels. In 2018, the LED sign was placed at the entrance of the campus and the Wageningen Campus app was developed.

2.6.5 New professionals

2.6.5.1 Wageningen alumni

The alumni contribute to achieving social objectives, such as more sustainable production and consumption, improved health, and the competitive capacity of the business community. In this way, they contribute significantly to the impact of Wageningen University & Research.

Of the graduating Master's students, 29% found a job in the business community and professional field. The five-year Labour Market Survey was also released in 2018. Alumni that graduated less than five years ago mostly work in the business community (58%) and primarily in knowledge transfer and research.

Alumni 2018

Percentage of outgoing MSc students that find employment per specific sector

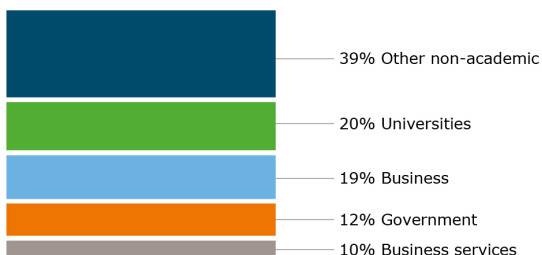


Figure 2.8 Percentage of MSc graduates who find employment per sector

In the reporting year, Wageningen University had a network of over 50,000 alumni and PhD candidates spanning approximately 150 countries. Alumni are kept informed of relevant developments in the Wageningen domain through things like social media, LinkedIn and www.wageningenur.nl/en/Alumni.htm. In addition, alumni meetings take place at home and abroad (see 2.4.7). Finally, the PhD candidates also contribute significantly to the impact of Wageningen University (see 2.5.3).

2.6.5.2 Wageningen University & Research Student Challenge

In 2018, the first edition of the Wageningen University & Research Student Challenge took place as part of the festivities around the centenary of Wageningen University. The initiative challenged students from Wageningen and beyond to find a solution for food production in an urban environment. The case was linked to the Bijlmer Bajes complex in Amsterdam. A total of 23 multidisciplinary teams participated, with students from 39 universities from 10 countries. A team from Wageningen University & Research won.

2.6.6 Outlook

Society is increasingly demanding answers to questions regarding the legitimacy of public spending in the area of research and demanding that these scientific insights be translated into innovative applications. Value creation from education and research is a continual process involving many stakeholders, including the government, the business community, entrepreneurs, regions and societal organisations with Wageningen University & Research playing a central role. Creating an impact together is also the central message of the Strategic Plan 2019-2022: Finding Answers Together. Value creation is an important objective of the Strategic Plan 2019-2022 and this is pursued in different ways. It is about promoting entrepreneurship in education, research and value creation within an increasingly robust ecosystem around Wageningen Campus, where solutions to social challenges are sought in collaboration with strong partners and through the use of high-quality facilities.

In 2019, challenges and masterclasses will be used to encourage researchers to valorise their good ideas through one of the many avenues of value creation (PPP project, IP, tech transfer, entrepreneurship, outreach, etc.). In addition, specific expertise, coaching, and funding is offered to develop a concept into a complete, concrete product. Value creation is also made more tangible by such activities as improving the perception of impact through impact stories, sharing best-practices, and establishing an impact award.

2.7 Employees

The strategic priority areas established by the Executive Board form the basis for the HR policy of Wageningen University & Research. In 2018, the focus was particularly on leadership development, diversity, and mobility, with the One Wageningen concept at its core.

These HR topics will be specifically discussed in this annual report, as well as topics that are highlighted in the context of corporate social responsibility (CSR). The key figures characterising our workforce are included in more detail in the Social Annual Report (Appendix 3).

2.7.1 One Wageningen

The One Wageningen concept forms the basis for working on collaboration and (internal) mobility. The HR policy specifically focuses on making employees aware that they are jointly responsible for the whole organisation. Wageningen University & Research wants individual talents to develop to their full potential by offering employees a challenging, inspiring and international work environment.

2.7.2 Talent development

HR supports talent development by encouraging and facilitating leadership development for both young talents and experienced managers. This is an essential aspiration for an inclusive organisation like Wageningen University & Research and is therefore well-planned. The talent development programmes specifically focus on leadership development.

Wageningen University has a tenure track programme for academic staff which leads to at least an Associate Professor 1 (UHD1) position. Further promotion to Professor holding a personal chair is an option. The Tenure Track development programme supports the career policy through development assessments and a course programme designed for this target group, which includes leadership development.

2.7.3 Mobility

Wageningen University & Research offers several programmes in the field of sustainable employability of staff. These are mainly focused on the development of competencies and/or supporting career development. Sustainable employability requires constant training and development of talent and behaviour, thus limiting the need for intermittent development and downsizing. As a result, the organisation can anticipate market developments, make strategic business choices, and look to the future. Strategic workforce planning is of great importance for the organisation and its employees. The HR policy also focuses on removing obstacles to internal mobility. The new Collective Labour Agreement for Dutch Universities (CAO NU) also includes the "compulsory" internal mobility of support staff every five years.

If the employee is forced to leave the organisation, support can be provided by a work coach who is a full-time employee at Wageningen University & Research. This employee is tasked with guiding and assisting former Wageningen University & Research employees in order to limit unemployment benefits (WW) and extra-legal payments (BW) made by Wageningen University & Research as much as possible and to stimulate the mobility of departing employees.

These also include former Wageningen University & Research employees who leave due to illness (ZW) and, therefore, receive occupational disability benefits from Wageningen University & Research (due to the personal risk responsibility). At this time, the distribution is 0.7 FTEs for WW/BW and 0.3 FTEs for ZW guidance.

The sciences groups are ultimately responsible for their staff and the WW/BW benefits for these employees are at the group's expense. The sciences groups determine whether a current or former employee will receive guidance and assistance from the work coach. A work coach saves us money on roughly 70% of beneficiaries. Approximately 30% of beneficiaries quickly move on to a different stage in the labour process without guidance or assistance from the work coach.

2.7.4 Diversity

The current staff composition of Wageningen University & Research is not sufficiently reflective of society and is also less diverse than the student population. This is why the focus is on appointing more women to managerial positions and attracting international employees. Additional focus is also placed on the employment of people with a distance to the labour market, in response to the

Participation Act, the job agreement act (*Wet banenafpraak*), and the quota requirement for people with a work disability (*quotumheffing arbeidsbeperkten*). Achieving this last point depends strongly on the placement options that can be created by the decentralised organisational units. Workshops and training sessions were offered on the topic of *gender balance*, for instance "Selection without prejudice" by the Netherlands Institute for Human Rights. The percentage of female professors at Wageningen is gradually increasing. When recruiting more international employees, it is important that the organisation focuses on "cultural awareness". This is why, in the coming years, the key focus areas will be international community building, partner programmes and "dual careers" (career paths for partners).

2.7.5 Vitality

Internal and external research has revealed that the work pressure experienced by Wageningen University & Research staff members is high, sometimes excessively so. This problem seems to be on the increase. The Executive Board, trade unions, and participational structure acknowledge this high work pressure which is largely caused by the growing number of students, changing markets, and limited and competitive grant programmes that lead to increased pressure to obtain and conduct research projects. Additionally, the complexity of operational management procedures, regulatory pressure, and monitoring and control are all experienced as sources of stress. The approach to dealing with work pressure is through WUR-wide activities, such as additional, structural funding per chair group to absorb the work pressure and growth of student numbers, meta-analysis of the growth in education, simplification of (HR) processes, chair massages, and bespoke measures on the work floor. It includes more in-depth measurements of work pressure, vitality and work satisfaction: implementation of work pressure clinics; workshops about stress recognition and management for managers, teams, and employees; programmes aimed at connection and collaboration; and various vitality projects. Monitoring and sharing of experiences is achieved through a Community of Practices. When taking future measurements of employee satisfaction, it will be considered whether initiatives have led to a measurable decline in work pressure and an increase in employability. Additionally, Wageningen University & Research provides the vital@work programme, focused on energising employees and teams, so that they are able and motivated to continue to work now and in the future in a healthy, productive and happy way. Projects and initiatives such as fruit at work, promoting the "real" conversation, move@work, stimulating internal promotion, and Vitality Week also contribute to the achievement of this goal.

The Collective Labour Agreement (CAO) for Wageningen Research Foundation enables the employer to offer individual employees the so-called "generation instrument", aimed at sustainable employability and vitality. This should also lead to a more balanced age distribution within the organisation. In relation to this, a new generation pact has been developed in the new CAO NU for employees of Wageningen University. Both regulations offer older employees the option to work less and receive a lower salary, while still maintaining full pension generation.

2.7.6 Corporate Social Responsibility

For the Wageningen University & Research HR policy, corporate social responsibility (CSR) includes the stimulation of inclusivity, vitality, employability, and development of employees. In 2018, about 1.2% of Wageningen University & Research labour costs was spent on education for employees.

Additionally, scientific integrity must be preserved, human dignity must be protected and suitable employment conditions must be provided. And work is done in a healthy and safe work environment. The methods employed by Wageningen University & Research to achieve these are described below.

2.7.6.1 Scientific integrity

Society must be able to trust that the results of the work done at Wageningen University & Research are generated and published independently and with integrity. Wageningen University & Research has therefore adopted a number of core principles in the form of codes, regulations and agreements to ensure the integrity of individual employees and the organisation as a whole.

These are:

- The Wageningen University & Research Integrity Code. This applies to all employees and guest employees of Wageningen University and Wageningen Research Foundation.
- The Netherlands Code of Conduct for Research Integrity as established by the Association of Universities in the Netherlands (VSNU). This is fully applicable for all researchers within Wageningen University & Research.
- The Corporate Governance Code of Wageningen University & Research. This code describes the principles of good governance.
- The Implementation Regulations Side Activities Wageningen University & Research. According to these regulations, employees are required to ask their employer for permission in advance to carry out side activities. It is important both for Wageningen University & Research and for potential clients to have insight into any side activities in order to prevent a conflict of interest. The approved side activities can be found at we@wur.
- The Whistle-blower's Regulations. These regulations describe how an employee should act if he/she suspects inappropriate behaviour at Wageningen University & Research.
- The Regulations Complaints procedure unwanted behaviour.
- The Personal Data Protection Regulations. These regulations provide a description of the tasks, responsibilities, and procedures with regard to the processing of personal data within Wageningen University & Research and is applicable to all data processing operations within Wageningen University & Research.
- The Camera Surveillance Regulations. This regulation provides a description of the responsibilities and procedures for the camera surveillance carried out within Wageningen University & Research.
- The Anti-corruption Code of Wageningen University & Research.

Employees are required to familiarise themselves with these principles and verify this by signing their appointment letter or their employment contract.

2.7.6.2 Recruitment and selection

A clear recruitment and selection procedure offers candidates insight into the Wageningen University & Research work method for job applications. The code established by the Dutch Association for Personnel Management & Organisation Development is applicable to this process. Reappointment candidates and those with long-term occupational disability take priority. Candidates with limited job prospects and employees who participate in a From Work to Work programme are given priority over other internal candidates.

Considering the ageing within the organisation in combination with the increase of the number of students and the tight labour market, the expansion of (international) academic staff has top priority. In 2018, additional focus was placed on this group through additional labour market campaigns and the preparations for the recruitment team to start work. The qualities and talents of the employee are decisive in recruitment. For this reason, new employees are recruited both from the Netherlands and abroad, particularly for research positions. Many settle in the Wageningen region afterwards. This is another reason to organise the aforementioned international community development and facilities for international employees, particularly around Wageningen.

2.7.6.3 Employment conditions

Wageningen University & Research has two CAOs, the Collective Labour Agreements for Dutch Universities (CAO NU) and the Collective Labour Agreement for Wageningen Research Foundation. The current CAO NU runs from 1 July 2017 to 1 January 2020 and contains specific agreements regarding the reduction of work pressure, mobility, sustainable employability, and career prospects for junior lecturers and postdocs. Furthermore, a wage increase of 2% on 1 May 2018 and 2.6% on 1 February 2019 has been agreed.

In November 2017, an agreement was signed for a new CAO for Wageningen Research Foundation which will be valid from 1 April 2017 until 1 April 2019. This contains the agreement for a salary increase of 1.9% on 1 November 2017 and 1.8% on 1 November 2018. It specifically contains agreements regarding work pressure and improving employability. Wageningen Research Foundation employees receive an individual development budget, which includes at least two development days.

The remuneration for senior executives is in line with the Standard Remuneration Act for Public and Semi-public Sector Senior Officials (WNT).

2.7.6.4 Healthy and safe working environment

Wageningen University & Research addresses the policies in the area of health and welfare integrally from the disciplines of industrial medicine, occupational social work (OSW), labour and organisational sciences and human resources. These disciplines thus actively contribute to promoting a healthy lifestyle amongst employees.

OSW pays a lot of attention to preventing work-related stress and encouraging effective behaviour. In 2018, as in previous years, a large number of workshops and lectures were given by OSW in this context.

Wageningen University & Research has also appointed confidential counsellors for undesirable behaviour, to whom employees and students can go to with questions regarding undesirable behaviour. The confidential counsellors can also provide help with navigating the complaints procedure. Partly because of the role of these confidential advisers, these complaints rarely lead to a procedure. Those who receive a complaint against them may also need support and they can engage with OSW in that regard. This is to prevent any conflict of interest for the confidential counsellor, otherwise, they would need to look after the interests of both the complainant and the accused.

Risk analyses and evaluations (RI&Es) provide insight into the possible risks of certain work activities for the health of the employee. This insight is very important in order to be able to arrange the work activities in such a way so as to avoid adverse health effects. In a number of positions at Wageningen University & Research, it is useful to periodically perform medical checks on employees or to provide vaccinations. Where necessary, this is compulsory at Wageningen University & Research. If an employee is unable to comply with this (for example due to their religion), the employee will not be able to carry out the particular work activities and will be assigned other duties.

Wageningen University & Research has also developed a policy for periodic occupational health examinations (PAGO). Wageningen University & Research uses the Occupational Health and Safety (Arbo) catalogue which was developed in collaboration with VSNU.

Finally, special attention should be given to the health risks of employees who are posted abroad. They will be given the necessary preventative vaccinations and follow-up care will also be provided upon their return to the Netherlands, in consultation with organisations such as the Vaccination Centre. An Infection Prevention policy has also been established, closely connected to the Infection Prevention policy for students. A 2018 European call for tenders has led to a renewed contact with the occupational health and safety service Zorg van de Zaak.

Sick leave

In spite of the preventive policy implemented and the sickness guidance process, the sickness absence percentage at Wageningen University & Research (including long-term absence) increased from 3.9% to 4.1% for the entire organisation in 2018, and has now exceeded the target threshold of 4%. Sickness absence at Wageningen Research Foundation decreased by 0.1% to 4.3%, while at Wageningen University it increased by 0.6% to 4.0%. As was also explained in the Vitality section, work pressure appears to be a significant factor in the increase of sickness absence and an action plan has been created with the aim of reducing it.

2.7.6.5 Employee participational structure

Employees of Wageningen University and Wageningen Research are represented in decentralised work councils, the Central Works Council (COR) and the Student Staff Council (SSC). The latter consists of employee representatives and students of Wageningen University. The COR and GV work together in the Wageningen University & Research Council. The participational structure is an important partner in policy formation for the Executive Board and the managing directors of the organisational units. Involvement of the employees and students in the decision-making process regarding important topics helps to generate broader support.

Additionally, regular consultations with representatives of the unions in the *Personeelsoverleg Stichting Wageningen Research* (PO Wageningen Research Foundation) and the *Overlegorgaan Personeelsaangelegenheden van Wageningen University* (OPWU). The most important topics for the PO Wageningen Research Foundation are the Collective Labour Agreement for Wageningen Research Foundation and the social consequences of organisational developments. OPWU focuses on the legal positions of employees, the social consequences of organisational developments, and the expenditure of the decentralised employment funding, among other things.

2.7.6.6 E-HRM

In 2018, the “End of the mail coach” project was further rolled out. As a result, HR processes in relation to corporate services have been digitised as much as possible, thus making them more uniform. At the same time, processes were made “lean” and “best practices” were chosen. This enables the updated working methods to be aligned within the knowledge units. The total HR process alignment will be further outlined by means of a roadmap and three annual releases.

2.7.7 Complaints and appeals

Protection of employees against possible objectionable decisions or conduct is guaranteed through various complaints and objection regulations at Wageningen University & Research. The following provides an overview of the number of submitted or processed complaints in 2018 per procedure.

Wageningen University & Research

In the review year, the Wageningen University & Research Scientific Integrity Committee (CWI) processed one new complaint and made a recommendation regarding it to the Executive Board. This complaint is still pending with the Netherlands Board on Research Integrity (LOWI).

In 2018, no complaints in relation to the Regulations Complaints procedure unwanted behaviour were filed with the respective complaints committee. In 2018, two objection procedures that began in 2017 were completed. One was declared unfounded and the other was declared partly inadmissible, partly unfounded.

Wageningen University

The Wageningen University Advisory Committee on Appeals and Objections (AWB Chapters 6 and 7, CAO-NU) received five notices of objection in 2018, of which two were withdrawn and three were declared unfounded. One appeal was filed in 2018.

Wageningen Research Foundation

On the basis of Wageningen Research Foundation’s Klachtenregeling Individueel Klachtrecht (regulations for individual grievances), two complaints were submitted to the Grievance Committee for Individual Right of Complaint in 2018. One was declared unfounded and one is still pending. In 2018, three of the objection procedures begun in 2017 were processed and all were declared unfounded.

2.8 Operational management

2.8.1 General Data Protection Regulation

In 2018, the previously established regulations and implementation of the privacy policy was further expanded with the objective of complying with the privacy frameworks from the General Data Protection Regulation (GDPR) which became legally enforceable on 25 May. A [privacy](#) group was established and an [intranet site](#) and an internet page about privacy were published, collating all policy documents about personal data, procedures, and information with practical tips and associated formats and FAQs in one location. Additionally, presentations were organised for students, researchers, and employees to emphasise the importance of properly protecting personal data and to raise the awareness of privacy issues. The digital tool SmartPia became available last year and has since been further developed, substantially improving the quality of the legally required Register of

Processing Operations as well as the results of the Data Protection Impact Assessments (DPIAs). Using business intelligence, a thorough privacy management report will be available from 2019, which can be used as part of the regular reporting system which all separate organisational divisions use to report to the Executive Board. In the context of transparency, an internet page was created detailing an overview of the registers of processing operations of employees, students, and visitors. The rights of stakeholders are also addressed here, as online forms were created for requests in relation to inspection, protection, removal, change, and data portability of personal details. To embed the compliance with privacy regulations within all the organisational divisions, a formal governance structure was implemented at the decentralised level. Besides the Data Protection Officer and the Corporate Privacy Office, local Privacy Officers were also appointed to safeguard privacy, security, Research Data Management and Big Data. To enforce “privacy by design”, a start has been made with screening (cloud) applications in regard to privacy and the applications with a positive result are placed on a “white list” to promote their use within the institution.

2.8.2 Application roll-out and process optimisation

In 2018, the multidisciplinary model for the provision of information and IT was further implemented. Besides the previously established Domain Management Teams (DMT) for Education and ICT, the outlines for the domains of research and operational management were further defined. These DMTs have defined the planning for 2019 and enable WUR-wide ICT portfolio management. Additionally, it strengthens the multi-disciplinary collaboration between the primary process and the support staff.

The vision on the provision of information is included in the creation of a new strategic plan, in which digitisation plays a prominent role. Ultimately, this thread has been woven into the Wageningen University & Research Strategic Plan 2019-2022.

The educational processes and systems were in a state of flux: the Student Information System was purchased and a tender was completed for a Learning Management System. This resulted in process and system changes which will be implemented through various projects during 2019. Project management and architectural support will be provided from the strengthened Project and Architecture team.

Data storage has been further expanded due to the internal focus on cybersecurity and Research Data Management under the motto “Wageningen University & Research is serious about data”. New data storage services enabled data to be stored at lower costs. In 2018, the High Performance Computing environment of Wageningen University & Research was renewed, which means that the collaboration partners (Wageningen University & Research and the business community) can conduct pre-competitive research using joint computing power.

A decision-making process was concluded to enable the harmonisation of Wageningen University & Research’s approach to client relation. The contract management processes will be supported in line with this. The implementation will take place in 2019.

To strengthen the mutual collaboration within Wageningen University & Research, a modification (“decompartmentalisation”) to MyProjects was prepared in 2018 to standardise the time administration. A lot of attention was also paid to GDPR compliancy in this respect. The resilience against cyber incidents was tested by participation in the national OZON exercise.

2.8.3 Open Access

The development of Open Access as one of the main pillars of the National Plan Open Science received a major boost in 2018 by the launch of Plan-S by an international coalition of Research Funders. Plan-S triggered a lively discussion due to its daring position regarding the acceleration of the transformation of the academic publication system, including a reform of the manner in which publications play a role in acknowledgement and appreciation of academic work. Based on a discussion with a group of researchers, Wageningen University & Research clearly signalled that the rate of development towards Open Access requires more time. In particular, the negative effects for journals

of a quick transformation of the business models requires additional attention. For instance, these would provide an incentive to lower the quality requirements for the acceptance of articles.

The further expansion of the so-called Read & Publish agreements with publishers once again led to a growth in the number of Open Access publications. Over 9000 publications offer this option to Wageningen University & Research authors. In 2018, 55% of the scientific articles were from open access. The project "You share, we take care" promotes the legal depositing of articles in the Wageningen University & Research repository (Groen Open Access).

2.8.4 Research Data Management

In 2018, support for Research Data Management was assigned to the Wageningen Data Competence Center (WDCC), creating a one-stop-shop for Data Science and competence development, as well as archiving of data using FAIR principles (Findable, Accessible, Interoperable, Reusable). The activities from different supporting Facilities and Services departments (IT, library, DML) come together in the WDCC.

The renewed data policy was introduced in the campaign "Wageningen University & Research is serious about data". The campaign included presentations to chair holders (Wageningen University) and business unit managers (Wageningen Research Foundation). Individual researchers are supported in the creation of Data Management Plans. 77 people participated in the Research Data Management course and it received positive feedback. A lot of attention was also given to the developing role of data stewards within the organisation.

Important milestones in 2018 included the organisation of the symposium "FAIR Data Science in green life sciences". The symposium brought over 200 participants together and 40 international speakers, during which 10 parallel sessions were organised, generating a lot of interesting ideas about how data can be made FAIR. The registration of the 1000th dataset also indicates that Wageningen University & Research is indeed "serious about data".

2.8.5 Safety and environment

Wageningen University & Research is taking its social responsibility seriously with sustainable operational management. This endeavour is also the starting point for the attention areas of safety and environment.

2.8.5.1 Safety

Education, research, and support activities are accompanied by risks. In the areas of health and safety, Wageningen University & Research wishes to protect employees and students as effectively as possible. The objectives are to ensure optimal working conditions, guarantee health and safety, and stimulate the well-being of employees and students.

The quest for optimal working conditions is the starting point for the Wageningen University & Research health and safety catalogue (*Arbocatalogus WUR*), which is derived from the eponymous product of the VSNU. This catalogue applies to both Wageningen University and Wageningen Research and reflects the Wageningen University & Research policy. Parts of the VSNU Health and Safety Catalogue were translated into policies for Wageningen University & Research on various topics, namely in-house emergency services; risk assessments and evaluations (RI&E); hazardous materials; information, instruction and supervision (VO&T); and arms, neck and shoulder complaints (KANS). Each organisational division is responsible for having a current RI&E and for conducting in-depth RI&Es.

Under the title of safety@wur, additional work in the area of VO&T was done in 2018 on the development of e-learning modules for working safely for students and employees. In addition to the e-learning module "Better safe than sorry" about working with genetically modified organisms (GMOs), other e-learning modules are now available about the risks of field work and computer work.

2.8.5.2 Environment

Wageningen University & Research annually publishes an environmental report on implemented policy, activities and performance in the area of the environment. With this, Wageningen University & Research meets the requirements of various environmental licenses. The goals achieved in 2018 in the field of CO₂ emission, energy and waste are summarised in Table 2.11 and are briefly explained in this annual report. In the [Wageningen University & Research Annual Environmental Report 2018](#), the results and activities of all environmental policy fields are addressed in more detail.

Table 2.11 Summary of the environmental results of operational management

Component/Issue	Objective	Achievements in 2018
(1) CO ₂ footprint	Reduction relative to 2010	-48%
CO ₂ compensation footprint	Increase relative to 2010	+86%
Climate neutrality		113%
(2) Energy	2.0% reduction per year	-2.2%
	Sustainable electricity procurement	100% ^{a)}
	Generating wind energy	62.4 million kWh
(3) Waste	Reduction relative to 2014	-0.2%

a) Purchase of wind energy with guarantees of origin, registered with certiq.

(1) The CO₂ footprint is calculated annually. The calculation is conducted in accordance with ISO 14064-1, based on the Greenhouse Gas Protocol. The CO₂ performance ladder was applied to the analyses. The CO₂ footprint was audited by an independent consultant.

The footprint provides more insight into the direct and indirect emissions of greenhouse gases, among other things. These emissions are due to the use of energy and fuel, the leakage of cooling liquids, keeping livestock and the use of agricultural land. Mapping out the emissions enables Wageningen University & Research to be more aware of CO₂ emissions and what can be done to reduce and compensate for it.

The total CO₂ footprint in 2018 was 42.8 kilotons, with the calculated CO₂ compensation being 48.3 kilotons CO₂ (see Figure 2.9). In 2018, the CO₂-compensation footprint from sustainable energy creation was 13% higher than the total CO₂-footprint.

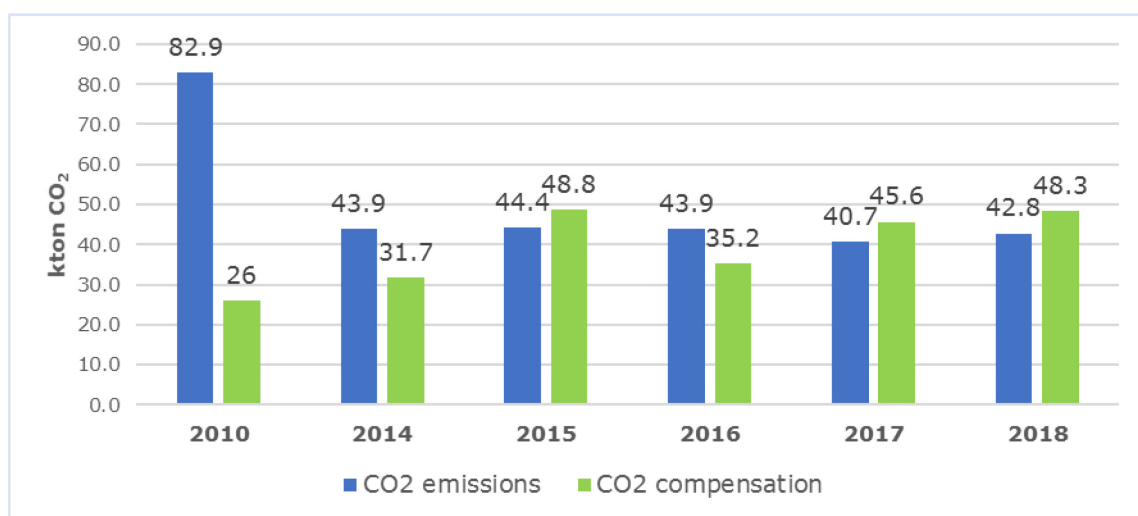


Figure 2.9 The CO₂ emissions and the CO₂ compensation in kilotons, 2014-2018, with 2010 as the reference year

In 2018, the total CO₂ emissions decreased by 48% when compared to the reference year of 2010. When compared to 2017, the CO₂ emissions increased (+5%; 2.1 kton CO₂). The sources that contribute most to greenhouse gas emissions are the buildings (especially natural gas), air kilometres, commuting and agricultural land (see Figure 2.10). The natural gas consumption for the heating of buildings has decreased further in comparison to last year (Table 2.12). In comparison to 2017, the emissions from flying (+0.9 kton) and commuting from home to work (+0.9 kton) increased in particular, which is related to the growth of the number of employees and students. The emissions due to waste processing also increased (+0.3 kton). Wageningen University & Research compensates for its CO₂ emissions by generating its own wind and solar energy, through thermal energy storage systems at Wageningen Campus and through the use of biomass.

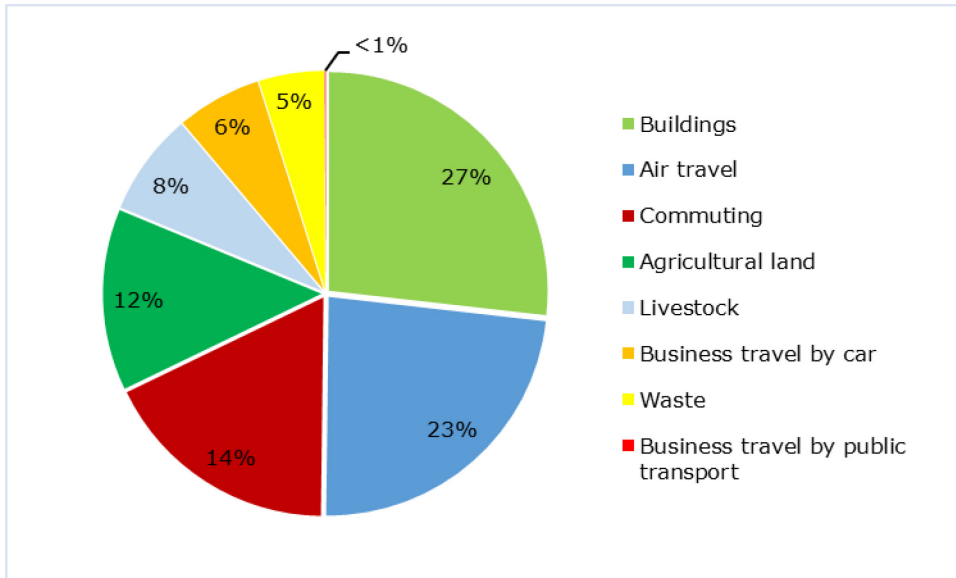


Figure 2.10 Distribution of CO₂ emissions sources in 2018

(2) Wageningen University & Research conforms to the long-term energy efficiency agreement for universities (Meerjarenaafsprak 3 - MJA3). Within this context, Wageningen University & Research adheres to various objectives, such as the use of renewable energy and achieving a 30% improvement in energy efficiency in the 2005-2020 period or a 2% energy reduction per year.

In 2014, we drew up our [EnergieVisie 2030](#) for 2030. This vision aims for a secure, affordable and, most importantly, sustainable energy supply. The energy efficiency plan for 2017-2020 was submitted, including the measures taken for realising energy savings and further increasing the share of renewable energy. Table 2.12 provides an overview of the energy use over the past five years with 2005 as the base year.

Table 2.12 Direct and indirect energy consumption by Wageningen University & Research

Energy consumption WUR	Base year					
	2005	2014	2015	2016	2017	2018
Electricity (kWh)	59,581,768	57,129,458	55,660,591	54,930,781	51,558,971	50,385,528
Natural gas (Nm ³)	11,031,812	6,273,363	6,503,170	6,302,302	5,477,413	5,362,499
Electricity and natural gas (GJ)	886,033	712,717	706,771	693,845	637,391	623,193
CO ₂ (tonnes)	53,598	12,095	11,650	11,290	9,812	9,606
CO ₂ as a percentage of 2005	100	23	22	21	18	18
Annual energy reduction (%)		4.2	3.4	2.3	6.0	2.2

In 2018, Wageningen University & Research achieved a 2.2% energy reduction compared to 2017. This does not include the correction for the influence of climate on cooling and heating. This means that the objective from the MJA3 was also achieved for 2018. Despite the growth in research and education (due to the growing number of students, among other reasons), less energy was used. Important contributions to the reductions are the more efficient use of buildings and the installation of over 2000 solar panels in Wageningen and Lelystad. The savings were reinforced by the energy incentives, in which Wageningen University & Research divisions are responsible for their own energy budget. The direct calculation based on actual energy use stimulates investments in order to achieve further energy savings.

With the energy savings achieved and the procurement of 100% green wind energy (with guarantees of origin), CO₂ emissions have been reduced even further compared to the 2005 base year, as Table 2.12 shows. In Lelystad, Wageningen University & Research has wind turbines that generated more than 62.4 million kWh of renewable energy in 2018. That's more than Wageningen University & Research's own energy consumption.

(3) Wageningen University & Research has three main waste streams: business, paper and hazardous waste. In recent years, better insight was gained primarily of the discharged waste volumes. Virtually all 28 locations in the Netherlands now provide waste figures. Waste volumes in 2018 were reduced by 106 tonnes, or 4.8% (see Figure 2.11 and Table 2.13).

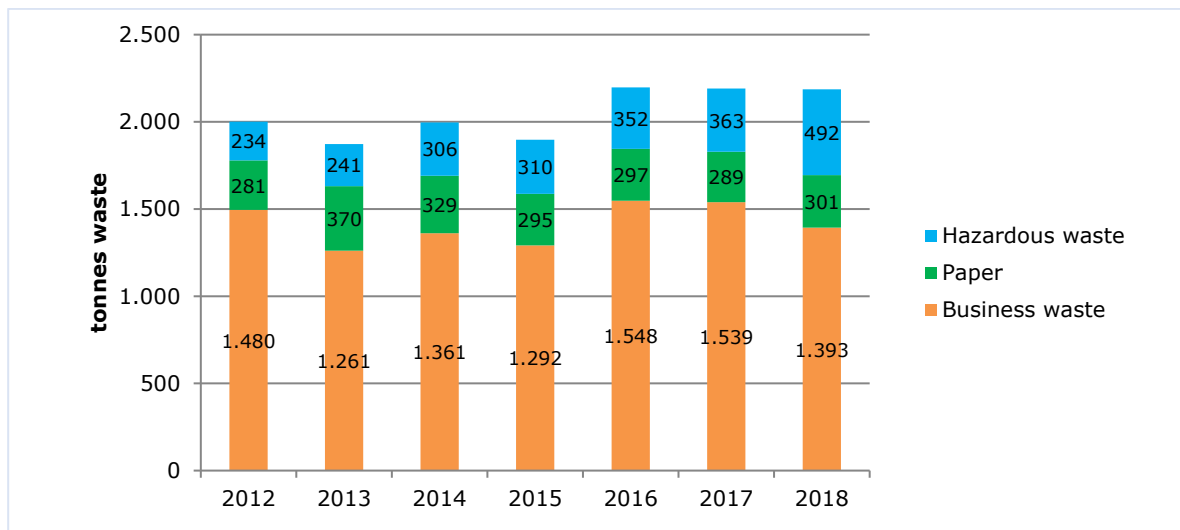


Figure 2.11 Amount of waste produced in tonnes, 2012-2018

The decrease in business waste volume in 2018 (-129 tonnes) is due to the significant decrease in the quantity of residual waste (-112 tonnes). Additionally, there is a decrease in the volume of construction waste (-41 tonnes) and research-related waste such as soil (-46 tonnes). However, there is an increase in the volume of animal waste (+61 tonnes). In contrast to the large decrease of business waste, the volume of hazardous waste has increased (+129 tonnes). This can be mostly explained by the increase of and changes to animal research. The separation of waste has increased once again, especially in relation to Swill+GFT waste (+23 tonnes). This is clearly visible for a large number of buildings on campus, including those that switched to EcoSmart in 2018: Zodiac, Actio, Atlas and de Bongerd. This has led to a 5% improvement of the separation percentage. In the education buildings, the separation percentages are as high as 69% (Orion) and 68% (Forum).

In 2018, Wageningen University & Research conducted an analysis of material flows, mapping out all goods coming onto campus as well as all waste streams leaving campus. This analysis forms the basis for a shift towards circular operational management.

Table 2.13 Waste flows in 2012-2018

Type of waste	2012	2013	2014	2015	2016	2017	2018
Paper and cardboard (tonnes)	284	370	329	295	297	289	301
Industrial waste (tonnes)	1,495	1,261	1,361	1,292	1,548	1,539	1,393
Hazardous waste (tonnes)	222	241	306	310	352	363	492
Separation percentage (%)	37	46	54	52	50	54	59
Annual change	-1	-6	+7	-5	+16	-0.3	-0.2

2.8.6 Procurement policy and supply chain responsibility

Wageningen University & Research complies with all relevant laws and regulations in the area of procurement and adheres to the principles of proportionality, objectivity, non-discrimination and transparency. In order to responsibly carry out our procurement, the integrity of the purchasers must be beyond repute. For this purpose, the NEVI Code of Conduct used as the foundation. This code of conduct respects the regulations of the United Nations on human rights and the rights of children. This code serves as a test for assessing the behaviour of purchasers. The most recent General Government Terms and Conditions for Public Service Contracts (ARVODI), General Government Purchasing Conditions (ARIV), and the Uniform Administrative Conditions for the Execution of Works and Technical Installations (UAV) are, in principle, applicable to all service contracts and outsourced work projects.

In addition to the existing laws and regulations, Wageningen University & Research also upholds its own procurement policy. The objective of this is to ensure that all controllable expenditures take place lawfully, efficiently and effectively, in accordance with the core values. As much as possible, we follow the sustainability criteria as published on Pianoo.nl. In addition, for each contract, additional sustainability criteria, including the international social criteria, are considered and upheld, where possible. This can include consulting the sustainability panel consisting of employees and students. This happened twice in 2018.

The policies and procedures for procurement are determined by the Executive Board. The results are discussed regularly with the directors of operational management and the responsible member of the Executive Board. As of 2016, the new Socially Responsible Purchasing (SRP) growth model has been used to measure efforts in relation to SRP and to achieve greater CSR awareness throughout the organisation.

In 2018, 41 European tenders and multiple private projects were concluded with a total value of €38 million. Based on the SRP growth model for sustainability requirements from the Netherlands Enterprise Agency (RVO), 97% of Wageningen University & Research's purchases were sustainable and international social conditions were included as a contract condition in eight European calls for tender. No complaints were received in 2018. More information about the activities and the results of the procurement policy in relation to sustainability can be found in the [Wageningen University & Research Environmental Report 2018](#).

2.9 Compliance

2.9.1 Governance

Wageningen University and Wageningen Research operate as separate legal entities under the name Wageningen University & Research. In terms of administration, collaboration has been shaped by a governance union: the Executive Boards of Wageningen University and Wageningen Research consist of the same members. This is intended to guarantee maximum administrative unity between the university and the research institutes. The Executive Boards and Supervisory Boards of Wageningen University and Wageningen Research together form the Executive Board and Supervisory Board of Wageningen University & Research.

The Executive Board is responsible for the administration of the university and the research institutes and is accountable to the Supervisory Board. The Executive Board receives advice from the Board of Directors, in which the five sciences groups are represented by their managing directors.

The participational structure is an important partner in policy formation for the Executive Board and the managing directors of the organisational units. Each sciences group has a joint works council for employees of Wageningen University and Wageningen Research who work within the sciences groups. In addition, there are separate works councils for RIKILT, Corporate Staff and Facilities & Services. From these works councils, a Central Works Council (COR) has been formed for which members are elected by and from among the members of the works councils. The Student Council (SC) and the Student Staff Council (SSC) are participational bodies of the university. The SSC consists of members of the Central Works Council, supplemented by two directly elected employees, two directly elected PhD candidates and members of the SC. Students and staff have an equal number of votes in the SSC.

The COR and SSC together make up the WUR Council. The consultation meetings between the Executive Board and the central participational body take place in the WUR Council and the SC. However, the WUR Council does not have any authority, as this remains with the COR and SSC.

Wageningen University & Research strives to ensure complete transparency regarding the governance of the organisation, behaviour and mutual rights and obligations. This is expressed in the [Corporate Governance Code of Wageningen University & Research](#), comprised of the Code of Good Governance for Universities and supplemented by relevant provisions from the Dutch Corporate Governance Code for Wageningen Research Foundation. This transparency is also demonstrated through the [Administrative and Management Regulations](#), the Netherlands Code of Conduct for Scientific Practice, the [Wageningen University & Research Integrity Code](#), the Anti-corruption Code, the statement regarding the [positioning of research at Wageningen University & Research](#), the [Regulations concerning Personal Information](#), the Regulations for Camera Surveillance, the [Guidelines Multicultural Settings](#), the [Whistle-blower Regulations Wageningen University & Research](#), the [Code for Transparency in Animal Testing](#) and various complaints regulations.

2.9.2 Risk management and internal control

2.9.2.1 Risks of strategic objectives

The Strategic Plan 2019-2022 for Wageningen University & Research was prepared in 2018. The plan outlines how the organisation wants to answer the social issues in its domain. To maintain its global position as a top knowledge institution, the organisation will need to change. In the strategic plan, twelve Change Performance Indicators (CPIs) are defined to measure the progress of this change process. The twelve CPIs are further operationalised and quantified as part of the implementation process. This way, the Executive Board monitors the strategic risks at the highest level.

The financial forecast in the long-term, including relevant internal and external developments and uncertainties, will be included in the multi-year projections for Wageningen University & Research and will be shared with the Supervisory Board. These give an indication of the risks associated with the growth in student numbers, developments in research turnover, and support decisions for large investments, such as the third modular education building as well as the progress of the Strategic Plan. The results are shared in the Continuity section.

The significant increase in student numbers at Wageningen University has posed great challenges for the organisation. Scaling up of the staffing level and facilities needs to be completed carefully to safeguard the quality of education and research. The organisation also wants to retain sufficient flexibility in its spending pattern, to allow for a timely response to developments in the external environment. These factors, in combination with a tight labour market, are the reason that the scaling up process is progressing slower than desired.

Wageningen Research's primary risks stem from uncertainty and funding cutbacks. Until 2017, there was a rapid decline of available funding from the Ministry of Agriculture, Nature and Food Quality (LNV). In 2018, this trend has reversed and LNV funding has increased significantly. The adjustment

of Wageningen Research Foundation to the revised financial resources takes time. In times when financial resources are significantly increased, such as in 2018, it is difficult to scale-up in a timely fashion to meet the capacity required to conduct the requested research.

The main strategic risks facing the organisational units are discussed in the quarterly meetings between the managing directors and the Executive Board. The Executive Board frequently discusses risks with the Supervisory Board

2.9.2.2 Risk appetite

In recent years, Wageningen University has taken a cautious approach to entering into long-term financial obligations. One of the causes for this was uncertainty regarding government funding (funding caps, performance agreements) and continued student growth. This caution has led to the very positive result in 2017 and 2018. The Executive Board is of the opinion that this cautiousness has permeated too deeply and will take measures to ensure that the available resources are used to the fullest extent for good education and research and to decrease high work pressure, e.g. through using more resources in the organisation for the long term and by placing fewer caps. Wageningen University has sufficient internal capital to offset temporary shortages.

Wageningen Research Foundation is searching for new research propositions (“markets”) in order to be less reliant on LNV funding. Divisions of Wageningen Research Foundation take risks in order to develop new markets, because the scope and potential of the available resources in these markets are uncertain. The Executive Board considers this acceptable, provided that the research propositions fit within the business model of Wageningen Research Foundation, in which an innovative research portfolio can be built that covers its own costs on the basis of a mix of LNV funding, contract research, and grant turnover. The development of this is followed up on in the P&C cycle.

2.9.2.3 Management risks

In order to implement and monitor intended policies, Wageningen University & Research has a planning and control cycle. This includes:

- Annually drawing up a framework letter (multi-annual framework to define the tasks for the upcoming financial year);
- Annual budget statement for each unit;
- Quarterly reports on the balance and the development of results and the risks;
- Monthly monitoring of financial and liquidity developments per organisational unit and department (Early Warning System);
- The Budget Allocation and Project System (BAPS) was implemented for the Ministry of Economic Affairs. BAPS is used to inform cluster leaders and financial departments about the depletion of the ministry’s project budgets;
- Recalculation of the cost per business unit. Deviations from previous years are being reviewed. Deviations from the previous year were clarified or explained.

The quarterly reports and the budget are a standard, integral component of the agenda in the discussions between the Executive Board and the management councils. These are organised four times each year.

Since the amount of liquidity is considerable, the policy requires regarding the spending of temporary liquidity surpluses. The Treasury regulations are the applicable framework here.

Within Wageningen University & Research, an interest rate committee convenes once every quarter under the direction of a member of the Executive Board.

In 2018, many efforts were made to improve the management of financial processes and internal control. The major concerns regarding the internal control were the tax compliance, tendering and the quality of the project management.

The internal control of the grant projects continues to demand a lot of attention from the organisation. To meet the increasingly stringent requirements of funding providers, a great deal of investment is being made in improving project control through training programmes, but also by recruiting new

employees with a higher level of education. Furthermore, under the direction of the Corporate Staff, efforts are carried out on the further standardisation of the instruments for project management and the implementation of the internal control of the projects has been centralised.

The internal management of financial processes and internal control fall under the responsibility of the department of Financial Accounting & Internal Control. This department not only focuses on the drafting of guidelines, but also independently monitors compliance with these guidelines by the decentralised units.

The internal management of IT projects has been strengthened. In accordance with a previously recommendation, the information manager role has been more clearly defined, management has been reinforced with the assistance of an Architecture Board, and domain architects have been appointed. The responsibilities of the latter two include the analysis of processes and assisting in innovation.

Social developments, both in the field of IT security and in the research domain, in conjunction with the open nature of the campus, result in the risk of emergencies for Wageningen University & Research. In order to manage these risks, if they occur, Wageningen University & Research has an emergency team.

2.9.2.4 Legal risks

Tax laws demand a great deal of effort from the organisation. Topics that were addressed in 2018 include the introduction of the corporate tax at Wageningen Research Foundation, the discussion about a new agreement in relation to the pro rata regulations, and the implementation of the work expense scheme. The VAT audit for the 2010 tax year was completed in 2017. The tax adjustments imposed were lower than forecasted in 2016. The Executive Board recognised that, given the increasing fiscalisation within the domain, investments need to be made to further ensure fiscal accuracy. The developments in the fiscal domain are substantial and can have both positive and negative effects. We are working on getting a better grasp of these.

The public procurement legislation and the increased control make high demands on the quality of the purchasing process. On the one hand, this requires the timely identification and tendering of purchases that should be put out to tender on the basis of EU procurement directives and, on the other, requires careful documentation of the legality of the other purchases. This matter is complex and requires intensive management of the purchasing process. In 2016, the accountant determined that Wageningen University & Research is not sufficiently successful in demonstrating the legitimacy of all its purchases. The majority of sales were conducted legitimately, but there was inadequate proof for a small amount of them. Under the direction of the Purchasing department, an improvement programme has been started with the goal of meeting the requirements established in the control protocols by 2019. A number of procurement packages were examined during 2017 and 2018 and calls for tender were sent out, where necessary. Since it takes a long time to describe the necessary and objective wishes and requirements of the products and/or services put to tender, Wageningen University & Research will not entirely satisfy procurement legislation in 2018 either. Improvements were made in 2018 in comparison to 2017, as new, legal contracts were signed during 2018. Additionally, it has been demonstrated that part of the products and/or services are already legitimate without a European tender.

Compliance with treasury legislation and regulations

Wageningen University & Research complies with the relevant legislations and regulations in relation to investing, lending, and derivatives due to the following measures:

- The policy in relation to treasury issues is established in the treasury charter. This charter is in accordance with legislation and regulations;
- The implementation of the treasury charter is monitored by the treasury committee. This committee held four meetings in 2018;
- There were no derivatives in 2018;
- All investments of surplus resources in 2018 were in compliance with the criteria of the treasury charter and legislation and regulations.

2.9.2.5 Looking ahead to 2019

A number of components in Wageningen University & Research's risk profile will increase significantly over the next few years. In the first place, the strong growth of the organisation leads to an increasing risk profile. The growth needs to happen in a flexible and controlled manner to allow for a timely response to ever-changing exogenous factors, such as available government funding and student intake. The limited labour market causes additional risks in this regard. It is more difficult to find qualified employees, which can put pressure on the remuneration structure and the size of the flex staffing. Additionally, the increasingly stringent conditions and controls stipulated by the major funding providers and the growing legislation and regulations also contribute to a higher risk profile. Compliance with legislation and regulations and the inspection of this by funding providers sets high standards for the quality of the internal operational management. At the same time, society and our own organisation expects the support processes to be as efficient and cost-effective as possible to free up as much funding as possible to be channelled to the primary tasks. At times, these two objectives (more compliance vs. less overhead) are at odds with each other. Therefore, the risk management process must be further developed. As such, it is especially important that risks are detected and discussed by the relevant management transparently and in a timely fashion. To make this possible, the support departments are being developed further.

The most important attention areas for 2019 are:

- Development of IT support control mechanisms Data analysis and automation provide the option to redesign the control of business processes. Continuous monitoring and auditing ensure that processes can be kept track of consistently. Wageningen University & Research aims to invest in the development of these tools and processes, which will make it easier to guarantee the proper performance of business processes.
- Strengthening the management of the EZ subsidies, including the top sectors. The introduction of the new subsidy scheme for the TO2 institutes as well as the coordination with the top sectors regarding financial accountability requires central coordination. On a tactical and operational level, the staff departments Corporate Finance and Strategic Accounts will together shape the coordination with the EZ. This guarantees the coordination of the substantive and financial aspects.
- Strengthening the project control, centralising the development of the project control function, and centralising the internal control of projects. Special attention will be paid to collaborative, complex projects, in which Wageningen University & Research acts as the coordinator and is responsible for the execution involving dozens of partners in Europe and elsewhere in the world. The management of these projects requires a lot of effort from the organisation and carries risks if partners do not meet grant conditions, without adequate compensation.
- Attention to the cultural aspects within the organisation. Organisations in a dynamic environment require an open culture with sufficient, in-built checks and balances. This prevents tunnel vision. For such a culture, it is necessary that management provides sufficient space to the staff departments, and particularly the controller, to make use of their independent opinion in the decision-making. This requires the controller to have a strong role and management to be willing to hear other opinions. The Executive Board is of the opinion that the checks and balances generally function properly, but feels that it is important to also pay additional attention to this in the coming year.
- It is very important for the organisation to have access to accurate financial forecasts in order to be able to make the right management decisions and, in turn, to use its resources in the best possible way. The quality of these forecasts will be given additional attention in 2019.
- Improving compliance with national and EU public procurement rules.

These improvement projects are set up and implemented in close consultation with the financial departments and the operational managers.

2.9.3 Remuneration of executives

2.9.3.1 Remuneration policy

The remuneration for the members of the Executive Board of Wageningen University & Research was established in accordance with the rules of the Standard Remuneration Act for Public and Semi-public Sector Senior Officials (WNT) or have been brought into accordance with the WNT by complying with

the transitional rules. The remuneration of Supervisory Board members is in accordance with the WNT standards.

The compulsory report on the remuneration of executives is included in Section 3.3.

2.9.3.2 Executive expenses and reimbursements

The remuneration for executives from Wageningen University & Research was established in accordance with the rules of the Standard Remuneration Act for Public and Semi-public Sector Senior Officials (WNT) or have been brought into accordance with the WNT by complying with the transitional rules. The remuneration of Supervisory Board members is in accordance with the WNT standards. In compliance with Article 1.1 of the WNT, Wageningen University & Research has summarised the remuneration of the Executive Board members and the Supervisory Board members in the tables below.

Table 2.14 Remuneration for executives

Statement of changes 2018 (amounts in €)		Fresco	Mol	Buchwaldt
A.	Remuneration	209,566	189,000	189,000
	Minus additional tax liability for car	-	-	-
A1.	Remuneration minus additional tax liability	209,566	189,000	189,000
B.	Compensation in the event of termination of contract	-	-	-
C.	Personal expenses			
	Representation costs	2,400	2,400	2,400
	Domestic travel expenses ¹⁾	23,326	13,834	13,003
	International travel expenses	11,254	5,720	3,244
	Other expenses	-	540	-
C1.	Personal expenses	36,980	22,494	18,647
D.	Total expenses	246,546	211,494	207,647
Distribution between WU & WR		Fresco	Mol	Buchwaldt
A.	Remuneration minus additional tax liability			
50.0%	Wageningen University	104,783	94,500	94,500
50.0%	Wageningen Research Foundation	104,783	94,500	94,500
B.	Compensation in the event of termination of contract			
50.0%	Wageningen University			
50.0%	Wageningen Research Foundation			
B.	Personal expenses			
50.0%	Wageningen University	18,490	11,247	9,323
50.0%	Wageningen Research Foundation	18,490	11,247	9,323

¹⁾ In 2018, a late payment of €1,326 was processed in relation to lease costs for a former executive. It is not included in this table.

Table 2.15 Remuneration of executives (amounts in €)

	L.O. Fresco	A.P.J. Mol	L.A.C. Buchwaldt
Job title	President of the Executive Board	Executive Board Member	Executive Board member
Period of employment in 2018	1-1 to 31-12	1-1 to 31-12	1-1 to 31-12
Extent of employment in FTE	1	1	1
(Fictitious) Employment relationship	Yes	Yes	Yes
Remuneration			
Remuneration and taxable expense reimbursements	189,038.76	169,628.16	169,660.92
Remuneration payable for 2017	20,527.80	19,371.84	19,339.08
<i>Subtotal</i>	<i>209,566.56</i>	<i>189,000.00</i>	<i>189,000.00</i>
Individual maximum remuneration	209,566.56	189,000.00	189,000.00
-/- unduly paid amount			
Total remuneration	209,566.56	189,000.00	189,000.00
Reason for exceeding norm and other notes	WNT-1 norm until 30 June 2018	n/a	n/a
Data from 2017			
Period of employment in 2017	1-1 to 31-12	1-1 to 31-12	1-8 to 31-12
Scope of employment in FTE	1	1	1
Remuneration			
Remuneration	210,947.00	162,864.28	67,897.32
Provisions for remuneration payable for 2016	19,527.00	18,135.72	7,519.35
Total remuneration	230,474.00	181,000.00	75,416.67
Individual maximum remuneration	181,000.00	181,000.00	75,871.23

Within our organisation, those who are identified as top level executives with an employment contract do not have an employment contract with any other semi-public (WNT) institution(s) as managing top level executives (who entered employment from 1 January 2018).

Table 2.16 Remuneration for supervisors (amounts in €, excluding VAT)

	M.J. Cohen	B.J. Marttin ¹⁾	R.P. Smith	S. Korver ²⁾	M.A. Verhoef	T. Klimp ³⁾
Job title	Chair	Member	Member	Member	Member	Member
Period of employment in 2018	1-1 to 31-12	1-1 to 31-12	1-1 to 31-12	1-1 to 31-12	1-1 to 31-12	1-9 to 31-12
Remuneration						
Remuneration	17,060.64	11,267.40	11,871.41	11,267.40	11,267.40	0.00
Individual maximum remuneration	28,350.00	18,900.00	18,900.00	18,900.00	18,900.00	6,265.48
-/- unduly paid amount	0.00	0.00	0.00	0.00	0.00	0.00
Total remuneration	17,060.64	11,267.40	11,871.41	11,267.40	11,267.40	0.00
Reason for exceeding norm and other notes	N/A	N/A	N/A	N/A	N/A	N/A
Payment on termination of employment	N/A	N/A	N/A	N/A	N/A	n/a
Data from 2017						
Duration of appointment in 2017	1-1 to 31-12	1-1 to 31-12	1-1 to 31-12	1-1 to 31-12	1-7 to 31-12	
Remuneration						
Remuneration	16,901.04	11,267.40	11,406.55	11,267.40	5,633.70	
Provisions for remuneration payable for 2016	0.00	0.00	0.00	0.00	0.00	
Total remuneration	16,901.04	11,267.40	11,406.55	11,267.40	5,633.70	
Individual maximum remuneration	27,150.00	18,100.00	18,100.00	18,100.00	9,050.00	

¹⁾ No payment to the person concerned in connection with a third party agreement

²⁾ Remuneration to company Korver Beheer en Management

³⁾ Ms. Klimp has, in line with her employer's policy, decided not to accept remuneration for her activities.

Table 2.17 Remuneration and/or dismissal benefits for non-executives (amounts in €1)

	Director	Professor holding a personal chair
Job title		
Period of employment in 2018	1-1 to 31-12	1-1 to 31-12
Extent of employment in FTE	1	1
Remuneration		
Remuneration and taxable expense reimbursements	162,997.38	178,902.37
Provisions for remuneration payable for 2016	26,579.01	18,330.24
Total remuneration	189,576.39	197,232.61
Individual maximum remuneration	189,000.00	189,000.00
Reason for exceeding norm and other notes	Compensation for pension accrual capping	Incidental remuneration related to exceptional achievements
Data from 2017		
Job title	Director	Professor holding a personal Chair
Period of employment in 2017	1-1 to 31-12	1-1 to 31-12
Extent of employment in FTE	1	1
Remuneration		
Remuneration and taxable expense reimbursements	160,093.88	348,115.76
Provisions for remuneration payable for 2016	17,924.40	17,431.74
Total remuneration	178,018.28	365,547.50

2.9.4 Side activities of board members

2.9.4.1 Relevant side activities as of 31 December 2018 - Supervisory Board

Prof. M.J. Cohen (1947) (Chair of Supervisory Board)

Principal appointment: none

Appointed 1 September 2013, end of current term: 1 September 2021

At his request, he honourably stepped down during his second term of office on 1 April 2019.

Membership: Appointment Committee (Chair) and Education and Research Committee

- Chair of the Curatorium VNG
- Chair of Cedris (trade association for social employment)
- Chair of the Supervisory Board of Vfonds (Fonds voor Vrede, Vrijheid en Veteranenzorg)
- Chair of the Committee on Individual Compensation for Victims of WWII Transport by NS
- Chair of the Supervisory Board of Openbare Bibliotheek Amsterdam
- Chair of the Stichting voor Vluchteling-Studenten UAF
- Chair of the Amsterdams 4-5 mei comité
- Vice-chair of the Policy Education Council (Chair of the Knowledge and Research committee)
- Chair of the Advisory Board of Grondrechten Functie-uitoefening Ambtenaren
- Chair of the Co-Ex Foundation (think tank for the prevention of radicalisation)
- Chair NVVE (Dignity in Dying The Netherlands)
- Chair of the Bart Tromp Foundation
- Chair of the Cello Oeuvreprijs Foundation
- Chair of the Board of Cappella Amsterdam
- Chair of the MS Research Nederland Foundation
- Co-chair of OFL (Overlegorgaan Fysieke Leefomgeving)

Prof. S. Korver (1953)

Principal appointment: Professor by special appointment at Tilburg University

Appointed 1 January 2013, end of current term: 1 January 2021

Committees: Appointment Committee and Education and Research Committee (Chair)

- Chair of the Supervisory Board of LTO Bedrijven BV
- Member of the Board of Stichting Administratiekantoor SBT
- Vice chair of the Board of the Diergeneesmiddelen Autoriteit Foundation

T. Klimp (1972)

Principal appointment: Director Finance Paints and Coatings for Commercial and R&D, Akzo Nobel

Appointed 1 September 2018, end of current term: 1 September 2022

Committees: Audit Committee

Relevant side activities: none

B.J. Mr B. J. Marttin MBA (1965)

Principal appointment: Member of the Managing Board of Rabobank

Appointed 1 July 2011, end of current term: 1 July 2019

Committees: audit committee (chair)

- Vice-chairman of the Board of Directors of the American Chamber of Commerce
- Member of the Supervisory Board of IDH (Sustainable Trade Initiative)
- Member of the Dutch Trade & Investment Board (per 1 December 2018 called: Internationaal Strategisch Overleg)
- Member of the Board of Trustees of Hanns R. Neumann Stiftung
- Member of the Supervisory Board of ARISE BV
- Chairman of the Shareholders Council of Rabo Development
- Chairman of the Supervisory Board of De Lage Landen International BV
- Chairman of the Supervisory Board of Obvion NV
- Member of the Board of Directors Rabobank International Holding BV
- Member of the Board of Directors of Rabohypotheekbank NV (until 1 December 2018)
- Member of the Board of Rabobank Australia Ltd

- Member of the Board of Rabobank New Zealand Ltd
- Member of the Board of the Rabobank Foundation
- Member of the North America Board of Directors / Member of the North America Risk Committee

R.P. Smith (1960)

Principal appointment: none

Appointed 1 January 2013, end of current term: 1 January 2021

Committees: Audit Committee

- Member of the board of Vereniging HZPC
- Supervisory Board member at Coöperatie AVEBE U.A.

Ir. M.A. Verhoef (1959)

Principal appointment: Chairman of the Executive Board of Spirit Jeugd en Opvoedhulp

Appointed 1 January 2017, end of current term: 1 January 2021

Committees: Appointment Committee and Education and Research Committee (Chair)

- Member of the Supervisory Board of Nederlands Jeugdinstituut
- Chair of the Associatie voor Jeugd
- Member of the Ministry of Social Affairs and Employment audit committee
- Member of the Social Security Bank audit committee
- Member of the External Integrity Committee of the Dutch Tax and Customs Authority

2.9.4.2 Relevant side activities as of 31 December 2018 - Executive Board

Prof. L.O. Fresco (1952)

Chair

Appointed 1 July 2014, end of current term: 1 July 2018

Reappointed as of 1 July 2018, end of current term: 1 July 2022

- Member of the Trilateral Commission
- Member of the Advisory Board of the World Food Prize
- Member of the Board of the VSNU Nederland Foundation
- Member of the Steering Committee and President of the Innovation Expo 2018
- Member or honorary member of various international academies
- Columnist at NRC
- Editorial staff member of De Gids
- Member of the Advisory Committee of Regio Deal Brainport Eindhoven
- FOLU – the Food and Land Use Coalition: International Ambassador and Member of the Reference Committee
- Member of the Ambassador's Council of the National Holocaust Museum in development
- Member of the Board of the Stichting Het Nationale Ballet Fonds, an ANBI institution for fundraising by the National Opera and Ballet.
- Member of the steering committee Strategy, Public Affairs & Governance VSNU

Prof. A.P.J. Mol (1960)

Vice-President of the Executive Board and Rector Magnificus of Wageningen University

Appointed per 28 May 2015 to 1 June 2019, reappointed per 1 June 2019 to 1 June 2023

- Editor of New Horizons Environmental Politics (Edward Elgar)
- Member of the Board of the Research Committee Environment and Society, International Sociological Association
- Member of the Board of the Sustainable Places Research Institute, Cardiff University, UK
- Editorial staff member of Environmental Policy and Planning, Environmental Sociology, Current Opinion in Environmental Sustainability, Environment and Planning, Nature & Culture, Open Environmental Sciences, The International Journal of Public Policy and Environmental Development
- Member of the General Board of Agrifood Capital Foundation
- Member of the guidance committee of the Netherlands Environmental Assessment Agency
- Member of the Board of Euro League of the Life Sciences ELLS
- Member of the Board of IHE Delft Institute for Water Education
- Member of the Supervisory Board of Wetsus

- Member of the Board of The Sustainability Consortium
- Member of Rectorencollege VSNU
- Vice chair of steering committee Education, Research, and Valorisation VSNU
- Member of the Scientific Advisory Committee of the Amsterdam Institute for Advanced Metropolitan Solutions
- Member of the Board Association of European Life Sciences Universities ICA
- Board member of VSNU
- Member of Regieteam Groenpact 2.0
- Begeleidingscollege Planbureau voor de Leefomgeving: temporary chair instead of member

L.A.C. Buchwaldt MBA (1961)

Portfolio of Finance, Business & Services

Appointed 1 September 2017, end of current term: 1 September 2021

- Member of Member's Council Coöperatie SURF
- Member of the steering committee Operational Management and Finance VSNU
- Member of FoodValley Core Group
- Member of Advisory Board of DUWO
- Member of the Supervisory Committee of Operationeel Programma EFRO 2014–2020 Oost Nederland
- Member of the Steering Committee of the World Food Center
- Member of the Triple Helix Food Valley Region
- Member of the jury for the Agrarische Ondernemer van het Jaar (Agricultural entrepreneur of the year)
- Member of the General Management of FoodValley
- Member of the Board of ACCEZ (ACCElating Circular Economy Zuid-Holland)
- Chair of the Advisory Board of Stichting Belmonte Arboretum

2.9.5 Clarifications

Outsourcing of one or more components of CROHO Registered Study Programme(s) to a Private Organisation (+ costs).

Wageningen University does not outsource activities in the sense referred to above. Any outside expertise contracted for teaching (for example, as a consequence of the earlier "division of duties and concentration" operations) is contracted from higher education institution partners and not from private institutions.

Customised programmes for companies / organisations

Wageningen University does not provide any customised programmes for companies and/or organisations in the form of CROHO registered courses leading to a certificate. Customisation in the form of post-initial courses is provided under the Wageningen University & Research umbrella by the Centre for Development and Innovation (CDI) and Wageningen Academy (WA).

Exchange agreements

Wageningen University has 215 exchange agreements with 176 institutions. The total number of incoming students is 356 and the total number of outgoing students is 464.

Allocation of direct government funding for private activities

Wageningen University allocates a small portion of the direct government funding to the following private activities:

- Post-initial education relating to establishing new study programmes and transferring knowledge to society;
- Student facilities such as sports facilities and training activities;
- Student accommodation for international Master's students. Although the provision of student accommodation is not one of the university's primary duties, the acute accommodation needs nevertheless resulted in the Executive Board's decision in 2009 to invest in temporary accommodation for international students. The Supervisory Board agreed to this, in light of the

state of Wageningen's housing market, particularly for students. Accommodation is rented out at fair market prices. The objective is to achieve break-even operations with these investments. No new investments were made in 2018.

Wageningen University did not invest in spin-offs in 2018.

2.10 Economic performance indicators

2.10.1 Direct economic value

Wageningen University & Research is a non-profit organisation. Positive returns are added to the organisation's reserves. The table below shows the main sources of turnover for Wageningen University & Research, divided between its two legal entities: Wageningen University and Wageningen Research Foundation. More details and a substantiation of these key figures are described in the annual financial report (Chapter 3).

Table 2.18 Key Figures Wageningen University & Research (amounts in €1 million)

	2016	2017	2018
Research turnover Wageningen Research (Wageningen Research Foundation)			
Contract research	92.4	95.2	100.8
Top sectors (including LNV part)	55.4	57.2	57.2
Matching market and NWO	29.2	27.4	26.5
LNV programme research (excluding top sectors)	82.3	77.4	97.1
Wageningen University turnover			
Turnover from direct and indirect government funding	243.0	255.4	272.5
Turnover from contract funding	60.1	59.1	60
Solvency as percentage of total assets			
Wageningen Research	55.5%	58.8%	58.2%
Wageningen University	42.8%	47.3%	51.9%

2.10.1.1 Pensions

The pension provider for the whole of Wageningen University & Research is the ABP. Pension accumulation takes place on the basis of the average earnings system (*middelloonsysteem*). The current coverage decreased in 2018 from 104.4% to 97% at the end of the year as a result of unstable stock markets and decreasing interest in the fourth quarter. The policy coverage (the average of the current coverage ratios across the last twelve months) rose in 2018 from 101.5% to 103.8%, ending up 0.4% under the required minimum. On the one hand, this coverage ratio determines the increase of the pension. Partial indexation is allowed with a coverage ratio of 110% or higher. ABP may index fully starting from 123%. This means that with the current 103.8%, we are still far from this objective. On the other hand, the policy coverage can play a role in decreasing pensions. If this coverage ratio remains below the required level of 104.2% until the end of 2020 and the actual coverage ratio at the end of 2020 is also lower than 104.2%, then a decrease in pensions is unavoidable.

With the price increase (indexation), ABP now expects that it is unlikely that it will be able to increase the pensions in the coming years. ABP estimates the probability that it will have to reduce the pensions in 2020 to be small.

There is no obligation to make up any shortfall as a result of ABP's coverage ratio. This is why no provisions have been recognised.

2.10.1.2 Government funding

Wageningen University & Research receives financial support from the government. The extent of these contributions in 2018 is shown in Table 2.19.

Table 2.19 Overview of government funding – Wageningen University & Research (in € millions)

Legal entity	Type of funding	Income	Government contribution
Wageningen University	Direct government funding	202.5	202.5
	Indirect government funding and research funding, including targeted subsidies	92.2	32.2
	Tuition and course fees	37.7	
	Other income	30.1	2.0
Wageningen Research Foundation	LNV research programmes	136.9	64.3
	Contract research	144.8	8.8
	Other income	43.0	-0.3
Total		687.2	309.5

Funding from the central government consists of funding provided by the government but from which it does not benefit directly. This includes government funding for education and research of Wageningen University, the contribution from the LNV for knowledge base and top sector research, funding via contract research (NWO), and the TKI supplement for top sectors and other subsidies.

2.11 Wageningen University Continuity Section

In accordance with the guidelines set down by the Ministry of Education, Culture and Science (OCW), the Continuity Section is part of Wageningen University's Annual Report. For the financial outlook for Wageningen Research Foundation in 2019, refer to the annual financial report of Wageningen Research.

Table 2.20 Key figures for Wageningen University, forecast for 2019-2023 (excluding Expat Center, price index 2018)

	2018	2019	2020	2021	2022	2023
Direct government funding (in € millions)	202.5	217.5	228.6	236.0	243.8	248.1
Tuition fees (in € millions)	37.7	41.0	42.1	43.2	44.0	44.7
Direct government funding and research funding (including targeted subsidies) (in € millions)	92.2	88.6	88.6	88.6	88.6	88.6
Investments (gross € millions)	17.7	35.8	43.3	35.4	20.1	20.0
Average number of employees (FTE) and allocation	2,818	2,944	3,102	3,117	3,145	3,191
Support staff (%)	5.2	5.5	5.5	5.5	5.5	5.5
Overhead staff (%)	15.9	17.3	17.3	17.3	17.3	17.3
Primary staff (%)	78.9	77.2	77.2	77.2	77.2	77.2
Number of enrolled BSc and MSc students	12,007	12,553	13,130	13,645	14,064	14,419
Number of PhD degrees obtained	295	296	288	275	280	298
Net result excl. valorisations (in € millions)	18.4	-3.0	-1.8	-0.5	-2.5	-1.5
Net result incl. valorisations (in € millions)	27.6	15.0	3.5	-0.1	-2.1	-0.1
Wageningen University CAPITAL						
Capital invested in fixed assets (in € millions)	238.0	243.7	263.2	276.1	268.9	261.1
Internal capital (in € millions)	192.0	207.0	210.5	209.9	207.5	206.0
Total capital (in € millions)	369.6	385.6	389.1	389.1	386.3	384.9
Solvency ratio (%)	51.9	53.7	54.1	53.9	53.7	53.5
Wageningen University LIQUIDITY						
Liquid assets (in € millions)	88.9	96.3	80.3	71.5	75.9	82.3
Current ratio	0,82	0.88	0.78	0.70	0.73	0.77
Wageningen University CAPITAL						

* Amounts in € millions.

2.11.1 Principles of the financial policy

The transition of Wageningen University to the Ministry of Education, Culture and Science and the agreements about the reparation of the shortfall as a result of capping in the past has resulted in more funding for Wageningen University, enabling the costs to increase to a level that is better aligned to the growth in student numbers over the past few years. It is also possible to invest in the priority themes from the recently established Strategic Plan 2019-2023.

With growing uncertainty about additional funding as a result of, among other things, the removal of the funding cap in 2018, the Executive Board has taken action in 2018 to scale up the organisation and to encourage management to move away from risk-evasive behaviour. However, the organisation did not manage to attract sufficient additional staff in 2018, partly due to the tight labour market. Scaling up in the current economic situation requires a relatively large amount of time. This means that part of the funding was not used in 2018.

Wageningen University has budgeted for significant growth in staffing levels from 2019 and a significant increase in costs, resulting in a deficit of €3 million being budgeted. For 2019, it is also possible that the operational results will also be slightly higher than projected for the abovementioned reasons. The Executive Board will also focus on the recruitment of additional staff and the scaling-up of facilities in 2019. Wageningen University expects a substantial growth of the workforce with 126 FTE.

In 2020, there will also be a net inflow. Eventually, the average workforce will grow by about 400 FTE by 2023, in comparison to 2018. As a consequence, the personnel costs will ultimately increase by

about €30-35 million per year. As a result of the scaling-up of facilities, an additional €7-10 million in operational costs are budgeted in the long term as of 2020-2021, for instance as a result of new research facilities and the opening of the third education building in September 2021. In comparison to 2018, the scale-up of both staff and facilities, will cause the structural cost levels to increase by about €40 million from 2023 onwards. Separately, there will be investments in the innovation of the operational management systems.

In particular, the first flow of funds (direct government funding and tuition fees) will increase in the coming years. This increase will cover the increase of the operating budget over time. The deficit in the operating budget will thus decrease in the years after that.

Wageningen University will continue to create value from surplus real estate. Substantial book profits are expected during the planning period. These book profits are used to fund Wageningen University's real estate. The planning period includes investments in a third education building and in the Dialogue Centre.

BALANCE SHEET FOR WAGENINGEN UNIVERSITY, FORECAST 2019-2023 (in € millions)

	2018	2019	2020	2021	2022	2023
Intangible fixed assets	0.9	0.8	0.8	0.8	0.8	0.8
Tangible fixed assets	236.6	242.4	258.7	272.1	265.2	257.7
Financial fixed assets	0.5	0.5	3.7	3.3	2.9	2.6
Total fixed assets	238.0	243.7	263.2	276.1	268.9	261.1
Inventory and current assets	0.1	0.1	0.1	0.1	0.1	0.1
Receivables	42.6	45.5	45.5	45.4	45.4	45.4
Short-term securities	0.0	0.0	0.0	0.0	0.0	0.0
Liquid assets	88.9	96.3	80.3	67.0	71.7	78.0
Total current assets	131.6	141.9	125.9	112.5	117.2	123.5
Total Assets	369.6	385.6	389.1	388.6	386.1	384.6
General reserve	182.1	197.1	200.9	200.0	197.6	196.1
Appropriated reserve	9.9	9.9	9.9	9.9	9.9	9.9
TOTAL EQUITY CAPITAL	192.0	207.0	210.5	209.9	207.5	206.0
Facilities	12.6	12.7	12.7	12.7	12.7	12.7
Long-term Debt	4.8	5.2	5.2	5.2	5.2	5.2
Short-term debt	160.2	160.7	160.7	160.8	160.7	160.7
TOTAL LIABILITIES	369.6	385.6	389.1	388.6	386.1	384.6

PROFIT AND LOSS STATEMENT FOR WAGENINGEN UNIVERSITY, FORECAST 2019-2023 (in € millions)

	2018	2019	2020	2021	2022	2023
INCOME						
Direct government funding	202.5	217.5	228.6	236.0	243.8	248.1
Tuition fees	37.7	41.0	42.1	43.2	44.0	44.7
Research funding and targeted subsidies	32.2	33.7	33.7	33.7	33.7	33.7
Co-funding and subsidies	17.2	17.3	17.3	17.3	17.3	17.3
Top Sectors	1.4	1.4	1.4	1.4	1.4	1.4
Contract research	41.4	36.2	36.2	36.2	36.2	36.2
Secondary activities and other income	20.8	19.9	19.9	19.8	19.9	19.9
Total income	353.2	367.0	379.2	387.6	396.3	401.3
EXPENDITURES						
Personnel costs	217.3	234.1	243.5	245.2	248.0	251.4
Depreciation	22.9	22.0	21.2	22.1	27.0	26.9
Accommodation costs	24.7	26.3	26.7	28.3	28.7	28.7
General costs	31.6	42.3	44.4	47.3	49.3	49.8
Specific costs	38.5	45.1	45.2	45.2	45.8	46.0
Total expenditures	335.0	369.8	381.0	388.1	398.8	402.8
Operating result	18.2	-2.8	-1.8	-0.5	-2.5	-1.5
Financial income and expenditures	0.1	-0.2	0.0	0.0	0.0	0.0
Result from operational activities before tax	18.3	-3.0	-1.8	-0.5	-2.5	-1.5
Third-party share and value added	9.3	18.0	5.3	0.4	0.4	1.4
Net result	27.6	15.0	3.5	-0.1	-2.1	-0.1

2.11.2 Internal risk management

The presence and function of the internal risk management and control system is described in Section 2.9.2.

2.11.3 Risks and uncertainties

The results of Wageningen University will be influenced by several uncertain factors, both exogenous and endogenous, in the years to come.

Development of student numbers (exogenous factor)

The development of the number of students is the most crucial. In recent years, student influx has grown steadily and further growth is expected on the basis of interest from potential students. Wageningen University's multi-year plan is based on accommodating the projected growth of the student population. This means a required growth in the number of lecturers and in the investments in educational spaces. The Executive Board has decided to invest in a third education building. This education building was designed to accommodate the currently expected growth in the number of students which is expected to reach about 14,400 by 2023. The scenario already includes the introduction of the Extended Daytime Schedule per September 2018. Stronger growth than expected in student numbers could lead to a shortage of available classrooms. Wageningen University can temporarily accommodate stronger growth by using additional temporary accommodation (portacabins). The new education building will also be modularly designed, which means that the building can be expanded if the student growth calls for it. Lower growth than planned could lead to vacancies in educational spaces. This is why Wageningen University is cautious about investing in additional educational facilities and will strive to find solutions that offer maximum flexibility in light of the possible scenario of a lower than expected student influx. Due to the planned scale-up period (September 2021), Wageningen University will primarily encounter logistics problems and risks. With

the removal of the funding cap for future growth in student numbers, the risk of the continued growth in student numbers will be partially mitigated.

Development of non-EEA student numbers (exogenous factor)

About 10% of the students participating in study programmes at Wageningen University are non-EEA students who contribute to the general cost coverage by paying institutional tuition fees, which are based on the full costs for this group of foreign students. The annual income that could be directly linked to these international non-EEA students was €19.4 million in 2018. This equals about 5% of the total income and about 22% of the size of the available liquid assets at the end of 2018. Were this category of students to decrease, a number of financially tight years might follow, but the situation will normalise after a few years. A sharp drop in the number of these international students will not happen over the period of one year. If the inflow were to cease, the number of international students would decrease gradually, per graduating cohort. This will provide Wageningen University with the time and space to adapt.

Development of additional resource allocation (exogenous factor)

Assumptions and risks per assumption:

- The increase of the fixed basic amount for research and education as a result of the retrospective removal of the funding cap (€6 million) is confirmed and no longer seems to be under discussion. The gradual further increase of the fixed basic amount for education (by €1 million) and research (by €8 million) from 2020 to 2023, in the same context as the removal of the funding cap, has been included in the ministry's multi-year projections and, therefore, has also been included in our own multi-year projection. However, this allocation of funding needs to be confirmed by the ministry each year, but based on its inclusion in the multi-year budget of the Ministry of Education, Culture and Science, Wageningen University feels sufficiently certain to plan around it.
- Additionally, Wageningen University has included a share of the funding in the sector plans for natural and technical sciences. Provisionally, a share of €4 million is budgeted, but there is a chance that the share will be less.
- The projected additional growth in the funding for the quality agreements (previously the study advancement funds) by the Ministry of Education, Culture and Science has been fully adopted, but the actual allocation of this funding relies to a certain extent on the market share of the student-related funding. A constant market share is assumed.
- A best estimate of the expected wage compensation for 2019 is included as part of the 2019 projection. Price compensation was not included in the income for 2019 and no wage or price compensation was included after 2019. Incidentally, the staff costs after 2019 also do not include any increases in the context of the Collective Labour Agreement. For the years after 2019, it is assumed that the wage compensation offered is in line with the increases in the Collective Labour Agreement.
- Constant prices were used in the OCW macro model. Therefore, it is assumed that the OCW will fully compensate the expected price decrease ("dilution") as a result of the general increase of the EEA student population by means of a reference estimate adjustment. Allocation of the full compensation by the ministry is and will continue to be an uncertain factor.
- Any redistribution of funds as a result of the funding discussion ("Van Rijn committee" and the CHEPS report) has not been taken into consideration.

Valorisation in the planning period (endogenous factor)

The developments in the property market may lead to the accelerated sale and valorisation of the surplus of fixed assets during the plan period. Two significant valorisations are planned: one in 2019 and one in 2020. Some smaller valorisations of fixed assets are planned for the years after 2021. There are still uncertainties regarding both the pace of the realisation and the amount of the valorisations. If the planned valorisations do not happen in 2019-2020, then the cumulative result over these two years will be €23 million less.

Underinvestment of funding (endogenous factor)

There is a possibility that in 2019, Wageningen University will again not manage to spend the funding for upscaling due to the previously mentioned tightness in the labour market.

Wageningen University has sufficient reserves to compensate for any risks. With these projections, Wageningen University has achieved its political desire to utilise less risk-evasive behaviour in budgeting and to draw from its reserves where needed.

2.11.4 Monitoring the implementation

The report from the Supervisory Board is included in Section 2.1.1.

2.12 Report criteria and scope

2.12.1 Consolidated report

The Wageningen University & Research Annual Report presents the organisation's performance, the social impact of this performance and the consolidated financial results. Both Wageningen University and Wageningen Research have a social function. Sustainability and corporate social responsibility are an integral part of the business operations of Wageningen University & Research.

2.12.2 Report criteria

This annual report has been prepared in accordance with the internationally accepted guidelines of the Global Reporting Initiative (GRI). The GRI guidelines state that the purpose of a report is as follows:

"Sustainability reporting involves the measurement and publishing of the performance of an organisation with respect to the goal of sustainable development, as well as the accountability of this to internal and external stakeholders. Sustainability reporting is a broad term considered to be synonymous with other terms that are used to describe reporting on economic, environmental and social consequences."

In its reports, Wageningen University & Research uses the guidelines from the Global Reporting Initiative (GRI). Reporting is done in accordance with the GRI "core" application level. A full overview of GRI indicators and related data is found in the [Wageningen University & Research CSR Report for 2018](#).

The external auditor will provide a report on the accuracy of the financial statements. Reporting on sustainability has not been externally audited. Data collection and accuracy within Wageningen University & Research are preserved through internal audits and (ISO) certification.

2.12.3 Scope

With regards to the accountability for the societal impact of Wageningen University & Research, in setting the limitations and scope of this report, the materiality analysis was leading. In this analysis, relevant and material topics for Wageningen University & Research were determined on the basis of the Strategic Plan for the 2015-2018 period. Through identification, prioritisation and validation, these topics were then assessed on the basis of their significance both for stakeholders and for Wageningen University & Research. This Annual Report focuses on these material topics.

Material topics are topics that are important for the internal and external stakeholders and in which the organisation can make a real difference. As much as possible, the material topics were determined in dialogue with the stakeholders, who are then also invited to comment on the CSR report.

This report covers the 2018 financial year. Because the majority of the activities of Wageningen University and Wageningen Research take place in the Netherlands, the sustainability reporting focuses on the activities in the Netherlands.

3 Abridged Wageningen University & Research Annual Financial Report

3.1 Wageningen University

This annual report includes the abridged Wageningen University Annual Financial Report. This report is directly derived from the full annual accounts for 2018. The abridged annual financial report does not contain all the explanations required by law. The full Wageningen University Annual Financial Report for 2016 can be found on the Wageningen University & Research website.

3.1.1 Results developments

In 2018, Wageningen University recorded a positive result of €27.6 million, which is an increase of €14.4 million in comparison to 2017. This result was much better than was expected in the budget.

The income from the sale of real estate (€9.3 million) in 2018 is a one-off, exceptional amount. There are also exceptional expenses, such as the demolition costs of surplus real estate (€1.5 million). The operational result (without these exceptional items) comes to €19.8 million.

After years of tight budgets, Wageningen University is experiencing some difficulty in the process of scaling-up staff and facilities. In the primary process, Wageningen University has therefore been unable to spend about €12 million in funding, not at the department level and not at the corporate level. It is difficult to find qualified staff and recruitment takes time. This means that the workforce has not expanded in line with the regular increase in funding as a result of the growth of student numbers. The uncertainty about funding, for instance in the context of the funding cap discussion, has also led to restraint in entering into commitments.

Besides the scaling factors, the positive economic circumstances mean the result is €4 million better than budgeted because the costs of WW regulations and reorganisation/werkenderwijs programmes decreased sharply (both Wageningen University and Wageningen Research Foundation have a personal risk responsibility for WW) and the result for projects was better than expected.

Table 3.1 Wageningen University results (in € millions)

	2018	2017
Departments	14.8	1.1
Central departments		
- Operational result	4.0	11.1
- Incidental result	7.8	0.2
- Addition made to the appropriated reserve for project costs in later years	1.0	0.8
Operating result based on the Ministry of Education, Culture and Science guidelines	27.6	13.2

A joint annual result of €14.8 million was achieved, which is an increase of €13.7 million in comparison to 2017. All departments achieved a positive result. These positive results are mostly due to the abovementioned factors.

The operating result of the central departments amounted to €4.0 million. This is €7.1 million lower than in 2017. Early on in the year, the Executive Board decided to provide additional funding to the organisation to encourage chair groups to recruit additional staff. This caused the results of the central departments to decrease. The corporate departments also found it difficult to scale up quickly and to attract additional staff. This means that a positive result was achieved in the (policy) budgets of the corporate departments too.

In addition, the Executive Board and Corporate Staff processed a number of incidental result entries (-€7.8 million). The sale of surplus fixed assets achieved a book profit of €9.3 million. Items which had a negative effect on the result were the addition to the personnel provisions, the demolition costs for Biotechnion and the impairment of assets (Atlas). Additionally, there was a small fiscal windfall.

As prescribed in the regulations, direct government funding is recognised as income by Wageningen University. Income related to project costs that will be incurred in later years is calculated as income in the reporting year and a write-down in later years. The distortion this causes is neutralised via the appropriated reserve. In accordance with this approach, €1.0 million of the result was added to this appropriated reserve in 2018.

3.1.2 Revenue and costs developments

Revenue in 2018 increased by €26.5 million. The basic funding (government funding excluding earmarked funds and tuition fees) rose from €226.9 million to €240.2 million.

Government funding increased by €12.6 million in 2018 in comparison to 2017. As in previous years, there is an agreed maximum increase of 2% of the government funding in relation to the previous year based on increased input parameters (enrolments, degrees, and PhD graduations), the so-called funding cap regulation. The 2% increase translates to a figure of €3.8 million. The funding cap for 2018 was about -€11.8 million. This is €0.1 million higher than the funding cap in 2017. 2018 was the final year of the funding cap regulation. From 2019, the future growth as well as part of the deficit caused by the funding cap in previous years will be compensated. On top of the 2% funding cap, additional Study Advancement Funds were made available from 2018. This translates to a figure of €3.1 million in 2018. Additionally, €4.4 million was allocated for wage and price compensation. Furthermore, to compensate for lost earnings due to the halving of the statutory tuition fee for first year Bachelor's students, a figure of €0.8 million was added to the direct government funding. Other changes came to a total adjustment of €0.3 million.

The income from work for third parties increased by 5% to €92.2 million. This income consists of programme funding (research funding and targeted subsidies), which increased by 13% to €32.2 million; co-funding projects and matching market funding, which decreased by 9% to €17.2 million; and contract research and top sectors, which increased by 7% to €42.8 million.

In comparison to 2017, staff expenses increased by €10.8 million to €217.3 million. This is due to higher staffing levels (+117 FTE), 1.7% higher salary costs per FTE and a decrease of the other staff expenses by €0.8 million. In 2018, the number of staff increased from 2701 FTE to 2818 FTE.

3.1.3 Balance developments

The liquidity of Wageningen University increased in 2018 from €53.9 million to €88.9 million. The factors that affected this increase in liquidity are listed in Table 3.2.

Table 3.2 Wageningen University liquidity overview

	2018
Result	27.6
Decrease in fixed assets (investments minus depreciation and sales)	9.4
Decrease in short-term debt and receivables	3.6
Decrease in provisions	-4.4
Decrease in long-term debt	-1.2
Total	35.0

The decrease in fixed assets is caused by the sale of surplus fixed assets and the fact that there are no large investment projects. The decrease in short-term debt and receivables is caused by the decrease of the debtor position and the issue of lower advancements. The total liquidity of

€88.9 million includes advances of €112.8 million, of which €5.9 million are funds to be passed on to partners. These funds to be passed on to partners were received due to Wageningen University being the lead party for a number of consortia. These funds will be passed on to partners in 2018.

Wageningen University's solvency ratio was 52.0% on 31 December 2018. This was 47.3% in 2017.

3.1.4 Outlook

For 2019, Wageningen University expects to achieve an operational result (excluding exceptional income) of -€3 million. The result will decrease sharply compared to 2018 due to the additional expenses in relation to the continually increasing number of students. The additional staff, which were recruited towards the end of 2018, will be fully included in the budget for 2019.

Turnover is expected to increase to €367.0 million in 2019. This €4.5 million increase is caused by an increase in basic funding of €18.3 million to a total of €258.5 million and a decrease in research funding and contract research funding of €3.6 million to a total of €88.6 million. The other income (excluding exceptional income) will decrease by €1 million to €19.9 million.

Government funding will increase by €14.7 million to €217.2 million. From 2019, the 2% funding cap in regard to the annual increase in direct government funding will no longer apply. Additionally, the Ministry of Education, Culture and Science has made additional funding available, (partly) to compensate for the existing funding cap during the transition from the Ministry of Economic Affairs and Climate (EZK) to the Ministry of Education, Culture, and Science (OCW), and to compensate for the halving of the statutory tuition fee for first year Bachelor's students. Additional funding to cover salary and price increases that has not been received yet has been taken into consideration.

Tuition fees will increase by €3.3 million to €41.0 million due to the rise in student numbers. The total number of Bachelor's and Master's students will increase from 12,007 students in October 2018 to an estimated 12,550 students in October 2019.

Direct personnel costs will increase by €16.8 million to €234.1 million. This is caused by an increase in the staffing level of 158 FTE to a total of 2976 FTE and a 3.8% rise in the average salary costs due to increases and wage costs development.

Liquidity will increase by €7.6 million to €96.3 million. With a cash position of €96.3 million, the continuity of business operations in 2018 is guaranteed. However, should an additional need for liquidity arise, Wageningen University also has the option of requesting collegial funding from Wageningen Research Foundation.

The investment activities for Wageningen University have been budgeted at €35.8 million. It relates mainly to investments in the third education building (€12.3 million), Dialogue Centre (€6.9 million), and the refurbishment of the Atlas building (€1.1 million). Facilities and Services will invest €6.2 million, of which €3.7 million will be reserved for IT hardware and €1.0 million for laboratory equipment. Decentralised investments are budgeted at €7.3 million. Of this, Shared Research Facilities will invest €4.3 million in laboratory equipment.

For further information on the development of the results in the coming four years, we refer to the continuity section in the Annual Report.

3.1.5 Abridged Wageningen University Annual Financial Report

CONSOLIDATED BALANCE SHEET AFTER THE ALLOCATION OF THE NET RESULT

	31-12-2018	31-12-2017
ASSETS		
FIXED ASSETS		
(1) Intangible fixed assets	876	1,473
(2) Tangible fixed assets	236,600	245,454
(3) Financial fixed assets	501	500
Total fixed assets	237,977	247,427
CURRENT ASSETS		
(4) Inventory	62	75
(5) Receivables and accrued assets	42,671	46,626
(6) Liquid assets	88,858	53,867
Total current assets	131,591	100,568
TOTAL ASSETS	369,568	347,995
CAPITAL AND LIABILITIES		
EQUITY CAPITAL		
General reserve	182,161	155,548
Designated reserve	9,876	8,886
(7) EQUITY CAPITAL	192,037	164,434
(8) EQUALISATION ACCOUNT	4,776	6,003
(9) PROVISIONS	12,544	16,996
(10) LONG-TERM DEBT	0	0
(11) SHORT-TERM DEBT	160,211	160,562
TOTAL LIABILITIES	369,568	347,995

CONSOLIDATED PROFIT AND LOSS STATEMENT

	Results for 2018	Budget for 2018	Result 2017
(12) INCOME			
Direct government funding	202,498	197,700	189,924
Tuition fees	37,756	41,300	36,944
Research funding and targeted subsidies	32,208	29,800	28,554
Co-funding and matching market revenue	17,206	15,700	18,878
Top Sectors	1,350	900	1,144
Bilateral market	41,437	33,600	39,033
Secondary activities	16,385	22,400	18,020
Other income	13,666	3,300	3,535
Total income	362,506	344,700	336,032
EXPENDITURES			
(13) Personnel costs	217,279	210,600	206,540
(14) Depreciation	22,882	21,500	23,830
(15) Accommodation costs	24,701	31,800	23,909
(16) General costs	31,587	38,700	30,826
(17) Specific costs	38,504	44,000	37,703
Total expenditures	334,953	346,600	322,808
OPERATING RESULT	27,553	-1,900	13,224
(18) Financial income and expenditures	54	-100	2
RESULT FROM OPERATIONAL ACTIVITIES BEFORE TAX	27,607	-2,000	13,226
Taxation on operational activities	0	0	0
(19) Result from participating interests	-4	0	13
RESULT FROM OPERATIONAL ACTIVITIES AFTER TAX	27,603	-2,000	13,239
Third-party share	0	0	0
Exceptional income and expenditures	0	0	0
NET RESULT	27,603	-2,000	13,239

CONSOLIDATED CASH FLOW STATEMENT

	2018	2017
OPERATIONAL ACTIVITIES		
Operating result	27,553	13,224
Depreciation and impairments	22,882	23,830
	50,435	37,054
Change in provisions	-4,452	-5,067
Change in inventory	13	-7
Change in receivables	3,955	2,839
Change in short-term debt	-351	-12,140
Cash flow from investment activities	49,600	22,679
Interest received	109	27
Interest paid	-55	-25
Cash flow from operational activities	49,654	22,681
INVESTMENT ACTIVITIES		
Investments in intangible assets	-71	-518
Investments in buildings and land (incl. WIU)	-6,665	-5,702
Investments in other tangible assets	-10,914	-6,792
Investments in participating interests and members' capital	-36	-219
Divestments of fixed assets	4,250	654
Cash flow from investment activities	-13,436	-12,577
FINANCING ACTIVITIES		
Newly acquired loans	0	0
Repayment of long-term debt	0	0
Changes to equalisation account	-1,227	-1,104
Cash flow from financing activities	-1,227	-1,104
CASH FLOW	34,991	9,000
CHANGE IN LIQUID ASSETS		
Balance of liquid assets on 1 January	53,867	44,867
Balance of liquid assets on 31 December	88,858	53,867
Change in liquid assets	34,991	9,000

Staffing position (FTE)

STAFFING POSITION

	2018	2017
FACULTY		
Academic staff:		
Professor	98.1	97.2
Associate Professor	211.9	200.5
Assistant Professor	248.8	252.1
Researchers	308.8	287.2
Lecturers and other academic staff	109.1	84.5
Trainee research assistants	606.2	603.4
TOTAL ACADEMIC STAFF	1,582.9	1,524.9
Support and administrative staff:		
Job grades 13+	11.1	7.9
Job grades 9 - 12	208.3	190.7
Lower than job grade 9	329.6	295.7
TOTAL SUPPORT AND ADMINISTRATIVE STAFF	549.0	494.3
TOTAL FACULTY	2,131.9	2,019.2
GENERAL SERVICES		
Job grades 13+	43.2	40.7
Job grades 9 - 12	265.0	243.1
Lower than job grade 9	176.6	187.8
TOTAL GENERAL SERVICES	484.8	471.6
Total employees with a Wageningen University contract	2,616.7	2,490.8*
Employees with a Wageningen Research Foundation contract	201.4	210.4
Total staffing level	2,818.1	2,701.2

* FTE including other personnel (such as sandwich PhD's).

3.1.6 Accounting Principles

General

The annual financial report was prepared and validated by the Executive Board on 6 May 2019 and approved by the Supervisory Board on 20 May 2019. The annual financial report was prepared in accordance with the below accounting principles. Any departure from these principles is stated alongside the relevant financial information.

The settlements and debt ratios between the various members of the group (which are referred to as inter-group payments) have been eliminated. The figures for the previous financial year are in accordance with the figures in the annual financial report of the relevant year. Variations may arise as a result of corrections, shifts between items or changes in the rounding-off method. Variances of relevant significance are indicated in the annual accounts.

General accounting principles for the preparation of the annual financial accounts

Wageningen University is part of a group that also comprises Wageningen University Holding B.V., Spinterest B.V., ISRIC Foundation and Expat Center Foundation.

The annual financial accounts are prepared according to the historical cost model. Unless otherwise stated, assets and liabilities are calculated at nominal value.

Monetary assets and liabilities in foreign currencies are converted at the exchange rate on the balance sheet date.

Exchange rate differences are included in the profit and loss statement. Revenues and expenses in foreign currency are included in the profit and loss statement at the exchange rate on the date of receipt or payment.

The annual financial accounts were prepared in accordance with *Regeling Jaarverslaggeving Onderwijs* (annual accounts regulations for educational institutions), the Dutch Civil Code, Book 2, Title 9 and the *Richtlijnen voor de Jaarverslaggeving* (guidelines for annual reporting).

Use of estimates

The preparation of the annual financial accounts demands that the board draw conclusions and makes estimates and motivations that affect the accounting principles and reported value of fixed assets and obligations, as well as of income and expenditures. The actual outcome will deviate from these estimates. The estimates and underlying motivations are continually evaluated. Adjustments to estimates are implemented in the period during which the adjustment is made as well as the following periods that are affected by this adjustment. The principal items subject to estimates are:

- Valuation and life span of fixed assets
- Provisions for receivables and projects
- Provisions
- Claims

Consolidation

The consolidated reports incorporate the annual accounts of the institution, its subsidiaries and other organisations over which the institution exercises control (pursuant to the actual situation) or central management. The subsidiaries are legal entities directly or indirectly controlled by Wageningen University, given that the institution possesses the majority of the voting rights or can control the financial and operational activities in some other manner. Also taken into account are potential voting rights that may be exercised directly on the balance sheet date.

The annual accounts of Wageningen University, its subsidiaries and other organisations over which the institution exercises control (pursuant to the actual situation) or central management are fully incorporated into the consolidated financial report. Third party shares with respect to the group capital and the group result are reported separately.

Table 3.3 Consolidated participating interests

	Shareholder	Registered office	% ownership	
			31-12-2017	31-12-2018
Wageningen Universiteit Holding B.V.	Wageningen University	Wageningen	100	100
Spinterest B.V.	WUH B.V.	Wageningen		100
ISRIC Foundation	N/A	Wageningen	N/A	N/A
Restaurant van de Toekomst Foundation	N/A	Wageningen	N/A	
Expat Center Foundation	N/A	Wageningen	N/A	N/A

Table 3.4 Non-consolidated participating interests

	Registered office	% ownership	
		31-12-2017	31-12-2018
Ceradis B.V.	Wageningen	7	3
Bio-Product B.V.	Wageningen	5	5
Surfix B.V.	Wageningen	13	12
Green Dino B.V.	Wageningen	11	11
KLV Professional Match B.V.	Wageningen	5	5
A-Mansia Biotech SA	Louvain-la-neuve	20	20
Innovation Industries	Amsterdam	0	0
Caribou Biosciences Inc.	Delaware	1	1

Accounting policies for asset and liability valuation

Intangible Fixed Assets

Development costs, patents and licences, software, goodwill and production rights are not capitalised unless they are purchased from third parties or the production costs can be reliably established. In addition, the intangible fixed asset must be capable of generating future economic benefits. Intangible fixed assets are valued at acquisition or production cost. Amortisation is applied in proportion to the realisation of the forecast revenue over five years. When revenue realisation cannot be reliably determined, the straight line method is used. Pursuant to statutory obligations, a statutory reserve is maintained for the capitalised amount of development costs. Write-offs as a result of impairment, sale, loss or discontinuation are listed separately.

Tangible fixed assets

Tangible fixed assets are valued at acquisition price or production cost minus accumulated depreciation. Depreciation is applied using the straight line method on the basis of the estimated useful life and the residual value. Depreciation is proportionally applied in the purchase year. Tangible fixed assets under construction or in production are valued at the acquisition price or for the amount that has already been invoiced to the company by third parties. Investments of less than €5,000 are charged directly to the profit and loss statement.

Table 3.5 Depreciation periods

Asset type	Linear depreciation in years
Company property / Work in progress	None
Site layout and infrastructure	60 years straight line
Buildings	
Shell	60 years straight line
Fittings	30 years straight line
Built-in equipment / furnishings	15 years straight line
Greenhouses, sheds, sundry buildings/structures	15 years straight line
Machinery and equipment	
Office furniture / machines and equipment / inventory of restaurant facilities / fiber optic network / other inventory	10 years straight line
Laboratory equipment / audio-visual equipment / vehicles / PR and information material	5/8 years straight line
ICT equipment including software (network hardware)	5 years straight line
ICT equipment including software (other hardware)	4 years straight line

Acquired investment subsidies and amounts from externally-financed projects are deducted from the capitalised amount in the year of purchase. Subsidies received for the purchase of assets required for the primary operations are shown as liabilities and are released during the useful life of the asset.

The institution carries out an evaluation on each balance sheet date to determine whether there are indications that a fixed asset may be subject to an impairment. Should there be any such indications, then the realisable value of the asset is determined. If the realisable value of the individual asset cannot be determined, then the realisable value of the cash flow generating unit to which the asset belongs is determined. An impairment is applicable when the book value of an asset is higher than the realisable value, where the realisable value is higher than the market value and the business value.

When it is determined that an impairment that was included in the past no longer exists or has decreased, then the increased book value of the asset is set no higher than the original book value would have been without the application of the impairment of the asset. Fixed assets that are no longer usable for the primary operations are not depreciated. Write-offs as a result of impairment, sale, loss or discontinuation are listed separately.

The proceeds from the sale of (education) buildings is used to fund new (education) buildings in the future.

Financial fixed assets

Participating interests and capital of members over whose business and financial policy the institution exerts a significant influence are valued at net asset value. This value is determined on the basis of the group's accounting principles for the valuation and determination of the result. Participating interests and capital of members over whose business and financial policy the institution does not exert a significant influence are valued at acquisition cost. The valuation of these assets takes into account any permanent decline in value, where relevant.

Inventory

This item is comprised of the trading stock, finished product, livestock and stock of harvested agricultural produce. The trading stock and finished product are valued in accordance with the FIFO method at the acquisition cost or production cost increased by a margin for indirect costs. The valuation of livestock and stock of harvested agricultural produce is based on market prices. The value of unmarketable stock or stock with a lower market value is decreased accordingly. On the basis of the average annual use in the last ten years, antisera were found that according to this calculation had been in stock longer than three years.

The stock of finished product is valued in accordance with the FIFO method at the acquisition cost or production cost increased by a margin for the indirect costs.

Receivables and prepayments

Receivables are valued at nominal value minus a provision for uncollectible debts, where relevant.

Work in progress

Work in progress for third parties is valued at the cost of the direct material use and labour, including a supplement for indirect costs. Invoiced instalments and forecast losses on projects are deducted from this balance. The result is allocated in proportion to the progress (proportion of actual costs incurred) of a project. After accounting for the prepayments that have been received, projects with a debit balance are then included under short-term receivables. Projects with a negative balance are included under the prepayments item of short-term debt.

Equity capital

Wageningen University does not distinguish between private and public capital.

- General reserve

This reserve is credited with the operating result in any year in which the result is not allocated to a specific use.

- Designated reserve

Two designated reserves are formed within the equity capital at corporate level:

- The innovation fund
- Reserve in relation to projects to be carried out in the future.

Facilities

The provisions are valued at nominal value, with the exception of the personnel provisions formed on the basis of RJ 271. The determination of the amount of the obligations accounts for future indexation and price increases. The amount of the provision recognised is the best estimate of the amount that will be required to settle the relevant obligations and losses on the balance sheet date.

Provisions are created for:

- Legally enforceable obligations or actual obligations that exist on the balance sheet date.
- It is probable that the settlement of obligations will probably require an outflow of funds.
- A reliable estimate can be made of the extent of those obligations.

Provision for unemployment insurance obligations

Provisions for unemployment insurance obligations are determined as the cover required for the unemployment insurance obligations on the balance sheet date and the expected future obligations in relation to personnel that have already left and personnel with a temporary employment contract.

Return to Work Scheme for the Partially Disabled (WGA) provisions

The provision for Resumption of Work (Partially Disabled Persons) Act obligations covers the obligations pursuant to the Act as anticipated on the balance sheet date.

Other personnel provisions – service bonuses

The anticipated obligation arising from future service (anniversary) bonuses is determined on the basis of historical information and withdrawals are made on a realisation basis. The present value is determined on the basis of the prevailing market rate of interest for Wageningen University.

Other personnel provisions - pensions

The pension provider for the whole of Wageningen University & Research is the ABP. Pension accrual takes place on the basis of the average earnings system (*middelloodsysteem*). The current coverage decreased in 2018 from 104.4% to 97% at the end of the year as a result of unstable stock markets and decreasing interest in the fourth quarter.

The policy coverage (the average of the current coverage ratios across the last twelve months) rose in 2018 from 101.5% to 103.8%, ending up 0.4% under the required minimum. This coverage will on the one hand be decisive in increasing pensions. Partial indexation is possible with a policy coverage of 110% or higher. ABP may index fully starting from 123%. This means that with the current 103.8%, we are still far from this objective. On the other hand, the policy coverage can play a role in decreasing pensions. If this policy coverage until 2020 were to remain below the required level of

104.2% and the current coverage ratio at the end of 2020 is also lower than 104.2%, a lowering of pensions is inevitable.

With the price increase (indexation), ABP now expects that it is unlikely that it will be able to increase the pensions in the coming years. ABP estimates the probability that it will have to reduce the pensions in 2020 to be small.

There is no obligation to make up any shortfall as a result of ABP's coverage ratio. This is why no provisions have been recognised.

Provisions for reorganisation expenses

This provision was formed to cover anticipated costs incurred as a result of decisions regarding current or intended reorganisations that have been made and announced within the organisation.

Provision for product and contract risks

This provision covers the expected cost of loss-making contracts, guarantees and claims arising from services and products delivered to third parties.

Long-term Debt

Long-term debt concerns liabilities that are due in more than one year from the end of the relevant financial year.

Short-term debt

Short-term debt concerns liabilities that are due within one year from the end of the relevant financial year.

Accounting policies to determine income and expenditure

General

Income and expenditures are the proceeds and costs which can be allocated to the relevant financial year or activity, regardless of whether they have resulted in receipts and payments during the annual reporting period.

Income is recognised in the year in which the products were delivered or the services provided to clients. Losses and risks arising before the end of the financial year are taken into account if they are known before preparation of the annual financial report.

Direct government funding and other payments

Direct government funding is included as income in the year in which the funding is received. Components of direct government funding that can be considered to have been specifically allocated are added as income to the extent to which costs have been incurred for the activity in question. Other payments are included in the result in the year in which the project is carried out or the costs are incurred.

Tuition and course fees

The tuition fees for the reporting year include the statutory tuition fees and the institutional tuition fees applicable for that year. The payments for courses for professionals are included under course fees.

Income from third-party contract research

The proceeds from contract activities are included under "Income from third party contract research". The income is determined on the basis of the direct costs, including a supplement for indirect costs to a maximum of the rate to be paid by the finance provider. Results are calculated in proportion to the progress of the project. The proceeds of work contracts are broken down according to programme funding (government funding and targeted subsidies), co-funding and matching market revenues and top sectors and bilateral market.

Accounting principles for the preparation of the cash flow statement

The cash flow statement was prepared using the indirect method.

System changes

Not applicable.

3.1.7 Auditor's report by the independent auditor

To: the Executive Board and the Supervisory Board of Wageningen University

Our opinion

The abridged annual financial report of Wageningen University included in Chapter 3.1 of the Wageningen University Annual Report 2018 (hereinafter: the abridged annual financial report) is directly derived from the full audited Wageningen University Annual Financial Report 2018. In our opinion, the abridged annual financial report included in Chapter 3.1 of the Wageningen University & Research Annual Report 2018 is consistent with the audited Wageningen University Annual Financial Report 2018 in all materially relevant aspects.

Abridged annual financial report

The abridged annual financial report does not contain all the explanations required on the basis of the Annual Accounts Regulations for Educational Institutions (*Regeling Jaarverslaggeving Onderwijs*) and the Standard Remuneration Act for Public and Semi-public Sector Senior Officials (*Beleidsregels WNT 2018*). Consulting the abridged annual financial report of Wageningen University and our accompanying report, therefore, cannot take the place of consulting the audited and approved Wageningen University Annual Financial Report and our accompanying audit report. The abridged annual financial report and audited annual financial report do not include the events that took place after the date of the auditor's report on 28 May 2019.

The audited annual financial report and our auditor's report are included

We approved the audited Annual Financial Report 2018 of Wageningen University in our auditor's report from 28 May 2019.

Responsibilities of the Executive Board and the Supervisory Board regarding the abridged annual financial report

Management is responsible for the preparation of the abridged annual financial report in accordance with the basic principles as described in the audited Wageningen University Annual Financial Report. The Supervisory Board is responsible for overseeing the financial reporting process of the institution.

Our responsibilities

Our responsibility is to draw a conclusion about whether this abridged annual financial report is in all materially relevant aspects, consistent with the audited annual financial report based on our audit, which was conducted in accordance with Dutch law, including the Dutch Standards on Auditing 810, "Opdrachten om te rapporteren betreffende samengevatte financiële overzichten".

Eindhoven, 25 June 2019
Ernst & Young Accountants LLP
H.E. Oostdijck RA

3.2 Wageningen Research Foundation

This annual report includes the abridged Wageningen Research Annual Financial Report. This report is directly derived from the full Wageningen Research Annual Financial Report for 2018. The abridged annual financial report does not contain all the explanations required by law. The full Wageningen Research Annual Financial Report for 2016 can be found on the Wageningen University & Research website.

3.2.1 Results developments

Wageningen Research Foundation obtained a positive net result of €10.4 million in 2018. This result is €6.2 million higher than the net result for 2017 (€4.2 million). The pre-tax result amounts to €13.8 million.

For 2018, Wageningen Research Foundation achieved this significant positive result before taxes by a significant increase of the research revenue, exceptionally high productivity, and efficient use of facilities. Finding additional experienced staff is difficult in the current tight labour market. This has led to exceptionally high productivity and work pressure. The productivity effect was calculated to be about €4 million. At the same time, the growth has created a temporary scale advantage for the current infrastructure (effect of about €2 million). Finally, there was also more incidental other income than expected from the sale of licences and products/analyses and from the results of spin-offs, resulting in an effect of about €2 million. On the other hand, Wageningen Research Foundation had reduced expenses in relation to the outflow of personnel and personal risk responsibility for WW than was the case in the last few years. This is also due to an improvement in the labour market. This effect was calculated to be about €4 million.

Table 3.6 Breakdown of the result of Wageningen Research Foundation (in € millions)

	2018	2017
Result from institutes and primary process	9.2	1.8
Result from housing and internal WW/BW premiums including cost of capital	9.0	7.8
Central departments:		
Incidental result	-2.9	-3.7
Operational	-1.5	-1.8
Result before tax Wageningen Research	13.8	4.1
Corporate tax	-3.4	0.1
Net result Wageningen Research	10.4	4.2

The departments achieved a positive joint annual result of €9.2 million, which is an increase of €7.4 million in comparison to 2017. The positive results of the institutes are mostly due to the abovementioned factors. The result for 2018 is adversely affected by a number of incidental components, totalling -€2.9 million:

- Reorganisation and "werkenderwijs" programmes and other provisions € 0.9 million
- Layoffs and impairments of fixed assets: € -2.3 million
- Sale of fixed assets € 0.3 million

3.2.2 Revenue and costs developments

The turnover of 2018 was €323.1 million, an increase of 7.9% as a result of growing demand. For 2017, the total turnover was €299.4 million. The growth of research turnover within the total turnover was 9%. The research turnover increase follows over a decade of decline. Wageningen Research Foundation's largest client is the Ministry of Agriculture, Nature and Food Quality (LNV), which generates approximately 42% of the total turnover (49% of research turnover). LNV's research programme has increased by €22.8 million in comparison to 2017, to a total of €136.9 million and, thus, is the main driver behind the turnaround. Another important development is the €4.2 million increase in the turnover

from the bilateral market to a level of €99.4 million. Furthermore, the turnover from co-funding and the subsidy market decreased by €1.7 million to €24.3 million.

In comparison to 2017, staff expenses increased by €11.9 million to €187.8 million. There are two underlying developments: the number of FTEs excluding interns increased by 63 and there was a salary increase of 2.4%. The expenses for temporary employees and contracted personnel are higher than in 2017.

3.2.3 Balance developments

At the end of 2018, liquidity had increased by €24.0 million compared to 2017 (€93.8 million), reaching a level of €117.7 million. The following are the factors that explain the increase:

Table 3.7 Wageningen Research Foundation liquidity development (in € millions)

	2018
Net result	+10.4
Net increase in fixed assets (investments minus depreciation and sales)	-6.9
Increase in short-term debt and receivables	+25.1
Decrease in provisions	-1.7
Decrease in long-term debt and receivables	-2.9
Total change in cash and cash equivalents	+24.0

The change in fixed assets is composed of €17.5 million of building and inventory depreciation and impairments; investment expenditures of -€25.4 million (including interest and members' capital) including HCU and CVI Unilocatie and various F&S infrastructure projects; and divestments of +€1.0 million.

The amount of the advances received, including funds to be passed on to partners, amounted to €77.0 million on the balance sheet date. Despite the positive result, solvency decreased slightly to 58.1% as a result of the increase in short-term debts. In 2017, solvency was 58.8%.

3.2.4 Outlook

Wageningen Research Foundation is expected to have a positive result of €3.0 million in 2019. The expectation is that the turnover will remain at this high level in 2019, partly due to the well-filled order portfolio. Additionally, investments have been made in the organisation and in domain development (in accordance with the strategic plan). They are bearing fruit and will continue to be necessary in the coming years to ensure that we are prepared for the future. A future in which Wageningen Research Foundation benefits from the continued importance of the domain. This will cause a gradual increase of personnel costs as Wageningen Research Foundation needs to structurally balance the personnel with the growing quantity of projects and assignments.

Total revenue for 2019 is forecasted to be €335 million. This is €12 million higher than in 2018. Most of this increase is from contract research (+€12 million), followed by the top sectors (both the LNV and the business community) with an increase of +€6 million. Co-financing and the subsidy market also increased by +€3 million. The knowledge base decreased by €2.0 million. Programme funding (including SRT) dropped by €1.0 million. Other income is €2.0 million lower and the secondary activities are budgeted to be €4.0 million lower.

Investment activities are budgeted at €23.5 million and are, therefore, €6.5 million higher than the budgeted depreciation. The most important investments are in greenhouses for Unifarm (€10 million) and thermal energy storage systems on Campus-Noord (€3 million). Wageningen Research Foundation expects a liquid assets balance of €85.0 million for 2019. This is €32.7 million lower than this figure in 2018. The budgeted decrease is mostly due to the investment activities and the payment of project funds to partners. At the end of 2018, the payment of project funds amounted to €21.3 million.

Solvency will increase from 58,1% in 2018 to 61% in 2019.

3.2.5 Abridged Wageningen Research Annual Financial Report

CONSOLIDATED BALANCE SHEET AFTER THE ALLOCATION OF THE NET RESULT

	31-12-2018	31-12-2017
ASSETS		
FIXED ASSETS		
(20)	Intangible fixed assets 566	940
(21)	Tangible fixed assets 296,659	289,782
(22)	Financial fixed assets 42,317	45,360
	Total fixed assets	339,542
CURRENT ASSETS		
(23)	Inventory 3,869	4,209
(24)	Receivables and accrued assets 86,776	91,035
(25)	Liquid assets 117,721	93,754
	Total current assets	208,366
	TOTAL ASSETS	547,908
CAPITAL AND LIABILITIES		
EQUITY CAPITAL		
	Issued capital 0	0
	General reserve 0	0
	Statutory reserve 0	0
	Other reserves 319,147	308,705
(26)	TOTAL EQUITY CAPITAL	319,147
(27)	THIRD-PARTY SHARE 0	0
	GROUP CAPITAL	319,147
	EQUALISATION ACCOUNT 0	0
(28)	PROVISIONS 25,289	27,034
(29)	LONG-TERM DEBT 47,332	54,118
(30)	SHORT-TERM DEBT 156,140	135,223
	TOTAL LIABILITIES	547,908

CONSOLIDATED PROFIT AND LOSS STATEMENT

	Results for 2018	Result 2017	
	INCOME		
	Basic funding	24,487	13,569
	Programme funding	74,838	65,195
	Co-funding and subsidies	24,298	26,029
	Top Sectors	57,249	57,236
	Bilateral market	99,351	95,150
	Secondary activities	37,261	35,197
	Other income	5,644	7,038
(31)	Total income	323,128	299,414
	EXPENDITURES		
(32)	Personnel costs	187,831	175,896
(33)	General costs	63,685	67,315
(34)	Specific costs	54,298	47,914
	Total expenditures	305,814	291,125
(35)	Other income and expenditures	0	0
	OPERATING RESULT	17,314	8,289
(36)	Financial income and expenditures	-3,881	-4,689
	RESULT FROM OPERATIONAL ACTIVITIES BEFORE TAX	13,433	3,600
(37)	Taxation on operational activities	-3,433	94
(38)	Result from participating interests	442	514
	RESULT FROM OPERATIONAL ACTIVITIES AFTER TAX	10,442	4,208
(39)	Third-party share	0	0
	Exceptional income and expenditures	0	0
	NET RESULT	10,442	4,208

CONSOLIDATED CASH FLOW STATEMENT

	Results for 2018	Result 2017
OPERATIONAL ACTIVITIES		
Net result	10,442	4,208
Depreciation and impairments	17,451	14,983
	27,893	19,191
Change in provisions	-1,745	-506
Change in inventory	340	-920
Change in receivables	3,078	-2,649
Change in short-term debt	22,098	-2,891
Result from non-consolidated participating interests	-442	-515
	23,329	-7,481
Cash flow from operational activities	51,222	11,710
INVESTMENT ACTIVITIES		
Investments in intangible assets	4	-85
Investments in buildings and land (incl. WIU)	-17,791	-16,648
Investments in other tangible assets	-7,228	-5,485
Investments in participating interests and members' capital	-459	-212
Divestments of fixed assets	1,061	3,625
Cash flow from investment activities	-24,413	-18,805
FINANCING ACTIVITIES		
Change in long-term receivables from the LNV	3,944	3,674
Change in long-term debt to the LNV	-6,104	-19,011
Change in other long-term debt	-682	418
Decrease in lease obligations	0	0
Change in equity capital	0	0
Change in third-party share	0	0
Cash flow from financing activities	-2,842	-14,919
CASH FLOW	23,967	-22,014
CHANGE IN LIQUID ASSETS		
Balance of liquid assets on 1 January	93,754	115,768
Balance of liquid assets on 31 December	117,721	93,754
Change in liquid assets	23,967	-22,014

3.2.6 Accounting Principles

General

The Wageningen Research Foundation has its registered office in Wageningen and is registered in the commercial register under number 09098104. The annual financial report was prepared and validated by the Executive Board on 6 May 2019 and approved by the Supervisory Board on 20 May 2019. The annual financial report was prepared in accordance with the below accounting principles. Any departure from these principles is stated alongside the relevant financial information. The settlements and debt ratios between the various members of the group (which are referred to as inter-group payments) have been eliminated. The figures for the previous financial year are in accordance with the figures in the annual financial report of the relevant year. Variations may arise as a result of corrections, shifts between items or changes in the rounding-off method. Variances of relevant significance are indicated in the annual accounts.

General accounting principles for the preparation of the annual financial accounts

Wageningen Research Foundation, Wageningen Research Holding B.V. and a number of subsidiaries are grouped together. Staff are employed by Wageningen Research Foundation and are allocated to the various operating companies on the basis of the actual wage costs incurred. Wageningen Research Foundation owns the real estate used by the operating companies pursuant to contracts for use.

The annual financial accounts are prepared according to the historical cost model. Unless otherwise stated, assets and liabilities are calculated at nominal value.

Monetary assets and liabilities in foreign currencies are converted at the exchange rate on the balance sheet date.

Exchange rate differences are included in the profit and loss statement. Revenues and expenses in foreign currency are included in the profit and loss statement at the exchange rate on the date of receipt or payment.

The annual financial accounts are prepared pursuant to the Netherlands Civil Code, Book 2, Title 9, and the accounting standards issued by the Dutch Accounting Standards Board.

Use of estimates

The preparation of the annual financial accounts demands that the board draw conclusions and makes estimates and motivations that affect the accounting principles and reported value of fixed assets and obligations, as well as of income and expenditures. The actual outcome will deviate from these estimates. The estimates and underlying motivations are continually evaluated. Adjustments to estimates are implemented in the period during which the adjustment is made as well as the following periods that are affected by this adjustment. The principal items subject to estimates are:

- Valuation and life span of fixed assets
- Provisions for receivables and projects
- Provisions
- Claims

Consolidation

The consolidated reports incorporate the annual financial accounts of Wageningen Research Foundation, its subsidiaries and other organisations over which the institution exercises control (pursuant to the actual situation) or central management. The subsidiaries are legal entities directly or indirectly controlled by Wageningen Research Foundation, given that the institution possesses the majority of the voting rights or can control the financial and operational activities in some other manner. Also taken into account are potential voting rights that may be exercised directly on the balance sheet date.

The annual financial accounts of Wageningen Research Foundation, its subsidiaries and other organisations over which the institution exercises control (pursuant to the actual situation) or central management are fully incorporated into the consolidated financial report. Third party shares with respect to the group capital and the group result are reported separately.

Table 3.8 Consolidated participating interests

	Shareholder	Registered office	% 31-12-2017	% ultimo 2018
Agri New ventures B.V.	WBG	Wageningen	100%	100%
Wageningen Research Holding B.V.	Wageningen Research	Wageningen	100%	100%
Exploitiemaatschappij Windmolenparken Lelystad B.V.	WBG	Wageningen	100%	100%
Wageningen Business Generator B.V.	Holding	Wageningen	100%	100%
Windmolenpark Neushoortocht B.V.	WBG	Wageningen	100%	100%
Windmolenpark Mammoethocht B.V.	WBG	Wageningen	100%	100%

Table 3.9 *Non-consolidated participating interests valued at acquisition cost*

	Shareholder	Registered office	% 31-12-2017	% ultimo 2018
Bfactory B.V.	WBG	Wageningen	17%	17%
Isolife B.V.	WBG	Wageningen	5%	5%
Telemetronics Biometry B.V.	WBG	Heteren	4%	4%
Wageningen Science & Technology Consulting Services Ltd.	Holding	Beijing	100%	100%

Table 3.10 *Non-consolidated participating interests valued at net asset value*

	Shareholder	Registered office	% 31-12-2017	% ultimo 2018
CoVaccine B.V.	WBG	Lelystad	25%	25%
Fresh Forward Holding B.V.	WBG	Wageningen	49%	49%
Knowhouse B.V.	WBG	Horst	30%	30%
VOF Oostwaardhoeve	ANV	Slootdorp	50%	50%

Accounting policies for the valuation of assets and liabilities

Intangible Fixed Assets

Development costs, patents and licences, software, goodwill and production rights are not capitalised unless they are purchased from third parties or the production costs can be reliably established. In addition, the intangible fixed asset must be capable of generating future economic benefits. Intangible fixed assets are valued at acquisition or production cost. Amortisation is applied in proportion to the realisation of the forecast revenue over five years. When revenue realisation cannot be reliably determined, the straight line method is used. Pursuant to statutory obligations, a statutory reserve is maintained for the capitalised amount of development costs. Write-offs as a result of impairment, sale, loss or discontinuation are listed separately.

Tangible fixed assets

Tangible fixed assets are valued at acquisition price or production cost minus accumulated depreciation. Depreciation is applied using the straight line method on the basis of the estimated useful life and the residual value. Depreciation is proportionally applied in the purchase year.

Tangible fixed assets under construction or in production are valued at the acquisition price or for the amount that has already been invoiced to the company by third parties. Investments of less than €5000 are charged directly to the profit and loss statement.

Table 3.11 *Depreciation periods*

Asset type	Linear depreciation in years
Company property / Work in progress	None
Site layout and infrastructure	60 years straight line
Buildings	
Shell	60 years straight line
Finishings (limited to company building end date)	30 years straight line
Fittings and furnishings/interior of company buildings (limited to company building end date)	15 years straight line
Greenhouses, sheds, sundry buildings/structures	15 years straight line
Machinery and equipment	
Office furniture / machines and equipment / inventory of restaurant facilities / fiber optic network / other inventory	10 years straight line
Laboratory equipment / audio-visual equipment / vehicles / PR and information material	5/8 years straight line
ICT equipment including software (network hardware)	5 years straight line
ICT equipment including software (other hardware)	4 years straight line

Acquired investment subsidies and amounts from externally-financed projects are deducted from the capitalised amount in the year of purchase. Subsidies received for the purchase of assets required for the primary operations are shown as liabilities and are released during the useful life of the asset.

The institution carries out an evaluation on each balance sheet date to determine whether there are indications that a fixed asset may be subject to an impairment. Should there be any such indications, then the realisable value of the asset is determined. If the realisable value of the individual asset cannot be determined, then the realisable value of the cash flow generating unit to which the asset belongs is determined. An impairment is applicable when the book value of an asset is higher than the realisable value, where the realisable value is higher than the market value and the business value.

When it is determined that an impairment that was included in the past no longer exists or has decreased, then the increased book value of the asset is set no higher than the original book value would have been without the application of the impairment of the asset.

Fixed assets that are no longer usable for the primary operations are not depreciated. Write-offs as a result of impairment, sale, loss or discontinuation are listed separately.

Financial fixed assets

Participating interests and capital of members over whose business and financial policy the institution exerts a significant influence are valued at net asset value. This value is determined on the basis of the group's accounting principles for the valuation and determination of the result.

Participating interests and capital of members over whose business and financial policy the institution does not exert a significant influence are valued at acquisition cost. The valuation of these assets takes into account any permanent decline in value, where relevant.

Inventory

This item is comprised of the trading stock, finished product, livestock and stock of harvested agricultural produce. The trading stock and finished product are valued in accordance with the FIFO method at the acquisition cost or production cost increased by a margin for indirect costs. The valuation of livestock and stock of harvested agricultural produce is based on market prices. The value of unmarketable stock or stock with a lower market value is decreased accordingly. On the basis of the average annual use in the last ten years, antisera were found that according to this calculation had been in stock longer than three years.

The stock of finished product is valued in accordance with the FIFO method at the acquisition cost or production cost increased by a margin for the indirect costs.

Receivables and accrued assets

Receivables are valued at nominal value less a provision for uncollectible debts, where relevant.

Project costs yet to be invoiced

Project costs yet to be invoiced are valued at the cost of direct material use and labour, increased by a margin for indirect costs. Invoiced instalments and forecast losses on projects are deducted from this balance. The result is allocated in proportion to the progress (proportion of actual costs incurred) of a project. After accounting for the prepayments that have been received, projects with a debit balance are then included under short-term receivables. Projects with a negative balance are included under the prepayments item of short-term debt.

Equity capital

- Issued capital:
The nominal value of issued and paid-in capital is included under this item.
- Statutory reserve:
The mandatory maintenance of a statutory reserve for research and development costs capitalised in the balance sheet.

-
- General reserve:

This reserve is credited with the operating result in any year in which the result is not allocated to a specific use.

Third-party share

The share of third parties in a participating interest consolidated in full by the group is included in the "Third-party share" item in the annual financial report.

Provisions

Unless otherwise stated, provisions are valued at nominal value. The amount of the provision recognised is the best estimate of the amount that will be required to settle the relevant obligations and losses on the balance sheet date.

Provisions are created for:

- Legally enforceable obligations or actual obligations that exist on the balance sheet date
- It is probable that the settlement of obligations will probably require an outflow of funds
- A reliable estimate can be made of the extent of those obligations

Provision for unemployment insurance obligations

Provisions for unemployment insurance obligations are determined as the cover required for the unemployment insurance obligations on the balance sheet date and the expected future obligations in relation to personnel that have already left and personnel with a temporary employment contract.

Provision for WGA/ZW-flex

The provision for Resumption of Work for Partially Disabled Persons Act (WGA) and Sickness Benefits Act (ZW-flex) covers the obligations for which the organisation bears the risk as of 1 January 2016, as anticipated on the balance sheet date.

Other personnel provisions – service bonuses

The anticipated obligation arising from future service (anniversary) bonuses is determined on the basis of historical information and withdrawals are made on a realisation basis. The present value is determined on the basis of the prevailing market rate of interest for Wageningen Research Foundation.

Other personnel provisions - pensions

The pension provider for the whole of Wageningen University & Research is the ABP. Pension accrual takes place on the basis of the average earnings system (*middelloodsysteem*).

The current coverage decreased in 2018 from 104.4% to 97% at the end of the year as a result of unstable stock markets and decreasing interest in the fourth quarter. The policy coverage (the average of the current coverage ratios across the last twelve months) rose in 2018 from 101.5% to 103.8%, ending up 0.4% under the required minimum. This coverage will on the one hand be decisive in increasing pensions. Partial indexation is possible with a policy coverage of 110% or higher. ABP may index fully starting from 123%. This means that with the current 103.8%, we are still far from this objective. On the other hand, the policy coverage can play a role in decreasing pensions. If this policy coverage until 2020 were to remain below the required level of 104.2% and the current coverage ratio at the end of 2020 is also lower than 104.2%, a lowering of pensions is inevitable.

With the price increase (indexation), ABP now expects that it is unlikely that it will be able to increase the pensions in the coming years. ABP estimates the probability that it will have to reduce the pensions in 2020 to be small.

There was no obligation to make up any shortfall as a result of ABP's coverage ratio. This is why no provisions have been recognised.

Provisions for reorganisation expenses

This provision was formed to cover anticipated costs incurred as a result of decisions regarding current or intended reorganisations that have been made and announced within the organisation.

Provision for product and contract risks

This provision covers the expected cost of loss-making contracts, guarantees and claims arising from services and products delivered to third parties.

Long-term debt

Long-term debt concerns liabilities that are due in more than one year from the end of the relevant financial year.

Short-term debt

Short-term debt concerns liabilities that are due within one year from the end of the relevant financial year.

Accounting policies to determine income and expenditure**General**

Income and expenditures are the proceeds and costs which can be allocated to the relevant financial year or activity, regardless of whether they have resulted in receipts and payments during the annual reporting period.

Income is recognised in the year in which the products were delivered or the services provided to clients. Losses and risks arising before the end of the financial year are taken into account if they are known before the preparation of the annual financial report.

The income from contract research is determined on the basis of the direct costs, including a supplement for indirect costs to a maximum of the rate to be paid by the finance provider. Results are calculated in proportion to the progress of the project.

Revenue from the Ministry of Agriculture, Nature and Food Quality (LNV) falling under the ministry's funding regulation is determined on the basis of the direct costs, including a supplement for indirect costs. The margin for indirect costs is determined once a year in accordance with the prevailing system for calculating the margin. Results are calculated in proportion to the progress of the project.

Taxation on the profits includes the corporate tax (payable and deductible) for the entire financial year. The payable and deductible corporate income tax for the financial year is the corporate income tax expected to be payable for the taxable profit in the financial year, taking into account the fiscal legislation and facilities, calculated on the basis of tax rates set on the reporting date, and any corrections to the taxes owed for prior years, such as fiscally compensable losses from prior financial years.

Wageningen Research Foundation does not take into account deferred tax due to a difference in fiscal and commercial valuation of assets and liabilities. Due to the lack of a long-term profit target and the very long duration of the differences, there is insufficient assurance that the deferred tax can be realised.

Accounting principles for the preparation of the cash flow statement

The cash flow statement was prepared using the indirect method.

System changes

Not applicable.

3.2.7 Other information

Appendix 1 Overview of property sales and purchases (* in €1,000)

Subtotal ground and infrastructure	Ha	Purchase	Sale
Purchase of land Violierenweg Bleiswijk	2.00	2,335	
Sale of land Binnenveld Oost Wageningen	17.03		427
Sale of land Kortenoord Wageningen	3.36		0
Subtotal ground and infrastructure		2,335	427

Buildings	Purchase	Sale
Subtotal buildings	0	0

Total	2,335	427
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Sales breakdown	Sales proceeds	Book value	Book profit
Sale of land Binnenveld Oost Wageningen	695	427	268
Sale of land Kortenoord Wageningen	0	82	-82
Total	695	509	186

Appendix 2 Other information

Wageningen Research funding 2018		in € 1,000
Project and programme funding		
Knowledge base	24,545	
Kennis Online	248	
Policy-supporting research	9,283	
Knowledge/expertise development	6,736	
Top sector Agri Food	26,970	
Top Sector Horticulture	11,860	
Arnhem, 26 May 2014	44,447	
Additional projects		
Climate portfolio including consortium co-partners	7,128	
Afghanistan project	13,547	
HCU	1,827	
Nature and Environment	1,200	
	2,230	
Total received project and programme funding	150,021	
Other contributions		
- Compensation for loan repayments	2,800	
- Compensation for PO loan repayments	957	
- Compensation for IAC/ILRI loan	188	
- Correction of decline in demand due to waiver of loan	-56	
- VAT Wageningen Research	30,340	
- Payment via laser/honingregeling (literally, honey scheme)	-149	
Total funding to Wageningen Research 2018	184,101	letter with reference number DGAN-ANK18277612 dated 03 December 2018
Ministry of Agriculture, Nature and Food Quality (LNV) funding processed through the balance sheet		
Compensation for the LNV portion of Wageningen Research Foundation loan repayments	2,800	Balance sheet item receivables from Ministry of Agriculture, Nature and Food Quality (LNV)
Compensation for the LNV portion of PO loan repayments	957	Balance sheet item receivables from Ministry of Agriculture, Nature and Food Quality (LNV)
Compensation for the LNV portion of IAC/ILRI loan repayments	188	Balance sheet item receivables from Ministry of Agriculture, Nature and Food Quality (LNV)
VAT Wageningen Research Foundation	30,340	On balance sheet end date
Climate portfolio consortium co-partners	2,674	On balance sheet end date
"Duik in de bodem" (dive into the soil) / nitrate guidelines consortium co-partners	212	On balance sheet end date
Completion	-2	On balance sheet end date
Ministry of Agriculture, Nature and Food Quality (LNV) funding processed through the balance sheet	37,168	
LNV income accounted for	146,932	
Increase in the LNV programme research yet to be carried out	-6,199	Changes to Ministry of Economic Affairs research still to be carried out
Increase in advance payments of HCU operating contribution	-1,375	Balance sheet item HCU operation
LNV demo greenhouses	-2,477	Balance sheet item demo greenhouses
Income accounted for Wageningen Research Annual Financial Report	136,881	

To supplement the above accounts, in 2018, an amount of €1,782,247 (2017: €1,798,806, 2016: €1,883,156, 2015: €2,608,552, 2014: €6,219,696, 2013: €4,004,000, 2012: €2,452,000 and 2011: €42,500) was spent on the Agriculture ATVET Afghanistan project, the main phase of which started on 1 November 2011 and will continue until 31 October 2021.

3.2.8 Auditor's report by the independent auditor

To: the Executive Board and the Supervisory Board of Wageningen Research

Our opinion

The abridged annual financial report of Wageningen University & Research for 2018 included in Chapter 3.2 of the Wageningen University & Research Annual Report 2018 (hereinafter: the abridged annual financial report) is derived from the audited Wageningen Research Foundation Annual Financial Report 2018.

In our opinion, the abridged annual financial report included in Chapter 3.2 of the Wageningen University & Research Annual Report 2018 is consistent with the audited Wageningen Research Foundation Annual Financial Report 2018.

Abridged annual financial report

The abridged annual financial report does not contain all the explanations required on the basis of Title 9, Book 2 of the Dutch Civil Code, the subsidy regulations for the DLO Foundation (*Regeling Subsidie Stichting Dienst Landbouwkundig Onderzoek*), and the Standard Remuneration Act for Public and Semi-public Sector Senior Officials (*Beleidsregels WNT 2018*).

Consulting the abridged annual financial report and our accompanying report, therefore, cannot take the place of consulting the audited and approved Wageningen Research Foundation Annual Financial Report and our accompanying audit report. The annual financial report and this summary of it do not include the events that took place after the date of the auditor's report on 28 May 2019.

The audited annual financial report and our auditor's report are included

We approved the audited Annual Financial Report 2018 of Wageningen Research Foundation in our auditor's report from 28 May 2018.

Responsibilities of the Executive Board and the Supervisory Board regarding the abridged annual financial report

Management is responsible for the preparation of the abridged annual financial report in accordance with the basic principles as described in the audited Wageningen Research Foundation Annual Financial Report.

The Supervisory Board is responsible for overseeing the financial reporting process of the institution

Our responsibilities

Our responsibility is to draw a conclusion about whether this abridged annual financial report is in all materially relevant aspects, consistent with the audited annual financial report based on our audit, which was conducted in accordance with Dutch law, including the Dutch Standards on Auditing 810, "Opdrachten om te rapporteren betreffende samengevatte financiële overzichten".

Eindhoven, 25 June 2019
Ernst & Young Accountants LLP
H.E. Oostdijck RA

Appendix 1

Education at Wageningen University

Table B1.1 List of Bachelor's and Master's programmes, 2018-2019⁴

Bachelor's	Master's
WO Development Studies	
<i>Internationale Ontwikkelingsstudies</i> (International Development Studies)	International Development Studies
WO Health Sciences	
<i>Gezondheid en Maatschappij</i> (Health and Society)	
WO Leisure and Tourism	
Tourism ⁵ (joint degree)	Leisure, Tourism and Environment
WO Environmental Sciences	
Environmental Sciences*	Environmental Sciences Urban Environmental Management
WO Earth Sciences	
Soil, Water, Atmosphere*	Earth and Environment
WO Management Studies Group	
<i>Bedrijfs- en Consumentenwetenschappen</i> (Management and Consumer Studies)	Management, Economics and Consumer Studies
WO Communication Science	
<i>Communicatie en Life Sciences</i> (Communication and Life Sciences)	Communication, Health and Life Sciences
WO Chemistry	
<i>Moleculaire levenswetenschappen</i> (Molecular Life Sciences)	Molecular Life Sciences
WO Life Sciences and Natural Resources	
<i>Agrotechnologie</i> (Biosystems Engineering)	Animal Sciences
<i>Biotechnologie</i> (Biotechnology)	Aquaculture and Marine Resource Management
<i>Bos- en Natuurbeheer</i> (Forest and Nature Conservation)	Bioinformatics
Animal Sciences*	Biosystems Engineering
International Land and Water Management*	Biotechnology
<i>Landschapsarchitectuur en Ruimtelijke Planning</i> (Landscape Architecture and Planning)	Climate Studies
Food Technology*	Development and Rural Innovation
<i>Plantenwetenschappen</i> (Plant Sciences)	Food Quality Management
<i>Voeding en Gezondheid</i> (Nutrition and Health)	Food Safety
	Food Technology
	Forest and Nature Conservation
	Geo-information Science
	International Land- and Water Management
	Landscape Architecture and Planning (MLP)
	Nutrition and Health
	Organic Agriculture
	Plant Biotechnology
	Plant Sciences
	Water Technology (joint degree)
WO Biology	
<i>Biologie</i> (Biology)	Biology
WED Economics Group 1	
<i>Economie en Beleid</i> (Economics and Governance)	
New degree programmes, not yet assigned to a visitation cluster	
	<i>Metropolitan Analysis, Design and Engineering (joint degree)</i> ⁶
	<i>Biobased sciences</i> ⁷

⁴ Programme selection for 2017/2018 was identical, taking into account footnotes 3 and 4.

⁵ Completely taught in English.

* Completely taught in English.

⁶ Started in 2017/2018.

⁷ Started in 2018/2019.

Table B1.2 Number of enrolled students at Wageningen University by type of enrolment and gender on 1 October 2018

Type of Enrolment	First-year			All enrolments		
	Male	Female	Total	Male	Female	Total
Students						
Contract education participants	5	3	8	8	6	14
Second enrolment students	54	84	138	82	118	200
Erasmus double degree	5	7	12	5	7	12
Erasmus students	57	102	159	60	104	164
Exchange students Landscape Architecture and Planning (BLP)	13	28	41	13	29	42
Total						

Table B1.3 Number of students, first-year and total, at Wageningen University by study phase and gender on 1 October 2018

Types of Enrolment	First-year			All students		
	Male	Female	Total	Male	Female	Total
BSc	751	983	1,734	2,707	3,195	5,902
MSc	499	760	1,259	2,540	3,565	6,105
Total	1,250	1,743	2,993	5,247	6,760	12,007

Table B1.4 Number of Bachelor's students at Wageningen University by programme and gender on 1 October 2018

Programme	First-year			All students		
	Male	Female	Total	Male	Female	Total
Agrotechnology (BAT)	46	6	52	142	20	162
Business and consumer studies (BBC)	63	72	135	301	283	584
Biology (BBI)	88	89	177	324	266	590
Forest and nature conservation (BBN)	38	43	81	139	132	271
Biotechnology (BBT)	68	29	97	253	111	364
Soil, water, and atmosphere (BBW)	49	39	88	176	100	276
Communications and life sciences (BCL)	4	22	26	24	70	94
Veterinary science (BDW)	36	94	130	91	262	353
Economics and policy (BEB)	32	17	49	127	62	189
Health and society (BGM)	8	57	65	25	190	215
International land and water management (BIL)	48	45	93	182	124	306
International development studies (BIN)	10	52	62	67	210	277
Landscape architecture and spatial planning (BLP)	41	39	80	138	119	257
Food technology (BLT)	69	108	177	222	348	570
Molecular life sciences (BML)	34	23	57	152	98	250
Environmental sciences (BMW)	32	46	78	92	117	209
Plant sciences (BPW)	60	43	103	174	124	298
Tourism (joint degree) (BTO)	8	30	38	24	84	108
Food and health (BVG)	17	129	146	54	475	529
Total number of enrolled students	751	983	1,734	2,707	3,195	5,902

Table B1.5 Number of Master's students, first-year and total, at Wageningen University by programme and gender on 1 October 2018

Programme	First-year			All students		
	Male	Female	Total	Male	Female	Total
Biosystems Engineering (MAB)	14	6	20	95	19	114
Aquaculture and Marine Resource Management (MAM)	13	4	17	58	52	110
Animal Sciences (MAS)	29	51	80	101	285	386
Bioinformatics (MBF)	13	9	22	41	37	78
Biology (MBI)	10	11	21	126	143	269
Biobased Sciences (MBS)	6	4	10	8	6	14
Biotechnology (BBT)	23	22	45	216	148	364
Communication, Health and Life Sciences (MCH)		12	12	22	150	172
Climate Studies (MCL)	11	11	22	41	56	97
Development and Rural Innovation (MDR)	6	16	22	27	47	74
Earth and Environment (MEE)	10	14	24	122	71	193
Environmental Sciences (MES)	41	62	103	136	197	333
Forest and Nature Conservation (MFN)	24	26	50	150	147	297
Food Quality Management (MFQ)	7	25	32	32	76	108
Food Safety (MFS)	12	39	51	44	134	178
Food Technology (MFT)	56	125	181	212	421	633
Geo-information Science (MGI)	26	12	38	103	39	142
International Development Studies (MID)	20	60	80	66	221	287
International Land and Water Management (MIL)	9	17	26	69	73	142
Leisure, Tourism and Environment (MLE)	4	19	23	15	52	67
Landscape Architecture and Planning (MLP)	2	2	4	55	78	133
Metropolitan Analysis, Design and Engineering (joint degree) (MMD)	20	16	36	29	28	57
Management, Economics and Consumer Studies (MME)	14	10	24	175	186	361
Molecular Life Sciences (MML)	9	3	12	72	45	117
Nutrition and Health (MNH)	16	76	92	63	414	477
Organic Agriculture (MOA)	26	35	61	86	114	200
Plant Biotechnology (MPB)	17	13	30	89	50	139
Plant Sciences (MPS)	42	32	74	219	185	404
Urban Environmental Management (MUE)	8	21	29	43	77	120
Water Technology (joint degree) (MWT)	11	7	18	25	14	39
Total number of enrolled students	499	760	1,259	2,540	3,565	6,105

Table B1.6 Success rate of the MSc programmes for the starting class of 2014-2015 to 2016-2017

Programme	Class of 2014			Class of 2015			Class of 2016		
	N	%			N	%		N	%
		After 2 yrs	After 3 yrs	After 4 yrs		After 2 yrs	After 3 yrs		
MAB	23	48	83	100	44	36	89	29	21
MAM	32	25	81	91	46	33	83	43	33
MAS	151	54	92	95	131	47	83	137	45
MBF	22	59	82	82	25	68	92	20	30
MBI	93	31	75	89	103	28	70	92	27
MBT	110	45	83	90	127	46	88	158	49
MCH	62	40	84	87	67	46	81	67	40
MCL	27	22	78	89	29	24	69	25	44
MDR	18	56	78	83	14	57	79	31	39
MEE	47	23	85	96	83	29	76	75	24
MES	99	52	80	83	133	64	92	137	69
MFN	94	44	80	85	83	36	77	98	40
MFQ	29	69	90	90	30	57	80	40	48
MFS	70	54	87	90	63	54	89	91	48
MFT	182	52	90	95	189	47	91	237	53
MGI	39	33	67	79	35	26	74	44	27
MID	104	20	66	85	93	16	67	73	8
MIL	63	40	78	87	56	34	84	47	38
MLE	28	46	86	86	23	26	70	21	48
MLP	40	13	55	75	54	24	59	35	11
MME	148	49	78	86	155	43	79	126	40
MML	47	40	83	87	47	43	79	37	43
MNH	120	48	85	93	195	37	84	182	46
MOA	57	47	74	79	58	60	90	69	46
MPB	32	63	88	91	44	45	89	56	30
MPS	112	48	89	94	116	60	84	137	50
MUE	39	44	85	92	60	38	72	49	57
MWT	16	81	94	94	20	90	90	20	65
Total for all programmes	1,904	44	82	89	2,123	43	82	2,176	43
Total including programme transfers	1,904	44	83	91	2,123	42	83	2,176	43

Table B1.7 Success rate of the BSc programmes on the basis of re-enrolments in the second year (N $t+1$) for the starting class of 2013-2014 to 2015-2016 (N and N $t+1$ in absolute numbers, after x year in %)

Programme	Class of 2013					Class of 2014				Class of 2015		
	N		%			N		%		N		
	t	t+1	After 3 yrs	After 4 yrs	After 5 yrs	t	t+1	Dur: 3 yrs	After 4 yrs	N	N t+1	After 3 yrs
BAT	37	33	30	61	73	42	40	40	65	29	27	26
BBC	154	143	41	78	87	139	133	26	71	168	160	29
BBI	122	111	39	71	80	136	117	32	68	133	109	40
BBN	61	54	30	72	85	63	52	42	79	58	48	35
BBT	87	72	33	67	78	78	63	40	83	108	85	40
BBW	66	56	46	77	86	57	51	45	76	66	62	31
BCL	13	12	50	92	92	8	7	29	86	13	9	22
BDW	129	108	54	84	89	113	88	49	76	82	70	51
BEB	31	23	30	65	74	42	35	20	80	44	37	16
BGM	68	63	59	89	95	63	56	57	93	80	68	54
BIL	62	57	28	75	84	58	53	40	74	65	55	15
BIN	98	82	44	77	87	104	84	46	86	81	71	38
BLP	46	37	14	59	81	57	50	24	66	55	51	29
BLT	107	97	52	77	86	136	120	44	75	136	119	58
BML	58	45	42	67	80	62	44	48	91	92	72	35
BMW	32	28	54	79	89	36	33	52	79	35	30	37
BPW	26	24	42	75	88	52	46	30	74	66	57	42
BTO	24	19	68	84	84	43	30	83	87	22	20	70
BVG	177	154	42	78	90	130	122	57	86	138	129	37
Total for all programmes	1,398	1,218	42	76	85	1,419	1,224	42	78	1,471	1,279	38
Total including programme transfers	1,398	1,262	41	75	86	1,419	1,275	41	76	1,471	1,340	37

Appendix 2

Knowledge valorisation indicators

1 Indicators for the VSNU domain "People"

1.1 Research into entrepreneurship

Table B2.1 Percentage of MSc graduates who find employment per sector

	2016	2017	2018
Business community ¹⁾	19%	19%	19%
Business services ²⁾	15%	14%	10%
Government ³⁾	9%	8%	12%
Other non-academic sectors ⁴⁾	38%	38%	39%
Universities ⁵⁾	19%	21%	20%

Source: National Alumni Survey

1) Industry, trade, transport.

2) Information and communication, financial services, legal services, human resources, press and information, other business services.

3) Government.

4) Research institutes, universities of applied sciences, other education sectors, hospitals (including academic medical centres), health and well-being institutions, other healthcare, other sectors.

5) Academic universities (not including academic medical centres).

1.2 Entrepreneurship

Table B2.2 Entrepreneurship education; number of students per course

Course code	Course name	2015/2016	2016/2017	2017/2018
BEC-51806	Agricultural Business Economics	71	68	56
BEC-52306	Financial and Business Management	112	85	81
CPT-22806	Innovation Management and Transdisciplinary Design	90	101	96
MST-24306	Management and Marketing	290	241	233
MST-51306	Economics of Science and Technology	34	23	29
MST-35306	Principles of Entrepreneurship	60	68	70
	Sub-total of minor courses	657	586	565
AEP-52306	Business Cases Agri-Food Entrepreneurship	46	44	67
ELS-51306	Competence Management for Building Entrepreneurial Teams	10	16	23
ELS-66100	Entrepreneurial Skills	74	23	33
ELS-66700	Pursuing and Realising Entrepreneurial Projects	47	76	66
MST-23406	New Venture Creation: from Idea to Business Plan	45	64	39
MST-32306	Strategic Change Management & Innovation	107	107	113
MST-33806	Circular Economy: Theory and Practice	51	28	40
MST-53806	Business and Society	19	24	14
YSS-32306	Technology and Business Model Innovation	27	81	88
	Sub-total of other courses	426	463	483
	TOTAL	1,083	1,049	1,048

1.3 Lifelong Learning

Table B2.3 Courses for professionals

Wageningen Academy (Wageningen University)	2016	2017	2018
Number of open registrations	752	943	1,030
Number of open enrolment courses	39	42	40
Number of course participants in in-company courses	394	606	992
Number of in-company courses	26	25	36

CDI (Wageningen Research Foundation)	2016	2017	2018
Course participants open registrations	806	816	840
Number of courses given	32	33	31

2 Indicators for the VSNU domain "Results"

2.1 Patents

Table B2.4 Number of new patents for Wageningen University & Research

	2016	2017	2018	Total number of applications in Wageningen University & Research's portfolio
Wageningen University	10	6	12	47
Wageningen Research Foundation	7	4	10	110
Wageningen University & Research new applications	17	10	22	157

2.2 Licences

Table B2.5 Number of licenses for patents, breeds, models and materials in 2018

	Number of licenses
Wageningen University	24
Wageningen Research Foundation	83
Total for Wageningen University & Research	107

2.3 Entrepreneurship

Table B2.6 Number of new spin-offs and student or staff start-ups

	2016	2017	2018
Number of spin-offs	2	4	2
Number of start-ups	4	5	6

2.4 Client satisfaction and knowledge utilisation Wageningen Research Foundation

Table B2.7 *Customer satisfaction in 2018*

Customer satisfaction	Number	Score	Total	Final score
Very satisfied	161	10	1,610	
Satisfied	178	8	1,424	
Neutral	23	6	138	
Dissatisfied	4	4	16	
Very dissatisfied	4	2	8	
Total number of respondents	370		3,196	8.6

Table B2.8 *Knowledge utilisation in 2018*

Assessment of project results	Percentage
Useful	97%
Not useful	1%
No comment	2%

Of these, 97% the project results were used for:

Knowledge utilisation	Percentage
New/renewed product	13.6%
New/renewed process	18.6%
Policy formation	14.3%
Strategic decision-making	2%
Legal obligation	34.5%
Basic knowledge	4%
Follow-up research	2%
Not yet known	11%

3 Indicators for the VSNU domain “Collaboration”

3.1 Collaboration

Table B2.9 Number of research projects funded for the benefit of societal, non-affluent organisations

Initiative	Target group	Number of research projects funded by the Science Shop in 2018	Number of students involved (Bachelor’s and Master’s)	Number of WU/WR employees involved (including project leaders)	Number of external stakeholders involved in projects
Science Shop	Societal organisations	14	126	26	52

Table B2.10 Number of student projects carried out in response to requests from various societal stakeholders

Initiative	Target group	Number of student projects conducted in 2017	Number of students involved (Bachelor’s and Master’s)	Number of WU/WR employees involved in supervision
Education Project	SMEs & start-ups	61		
Services	PPP consortiums	12		
	Government	9	1,349	360
	Societal organisations	16		
	Knowledge institutes	47		
	Other	30		

Table B2.11 Contribution to other education: number of pupils and teachers reached, number of Wageningen University employees involved and teaching product selection

Initiative	Target group	Number of pupils reached	Number of teachers reached	Number of WU employees involved	Total selection of teaching materials
Smaaklessen support point & EU Schoolfruit - Curriculum - Smaaklessen	Primary education	330,000	16,000	6	7
EU Schoolfruit and vegetables programme	Primary education	524,000	25,000	6	3
<i>Wetenschapsknooppunt</i>	Primary education	7,942	541	38	14
FoodValley Network VO-HO	Secondary education (senior)	13,160	1,470	58	27
National Biology Olympiade	Secondary education (senior)	9,000	300	15	n/a

Table B2.12 Capacity utilisation of the Shared Research Facilities equipment portfolio as well as the share of external companies and institutions

Shared Research Facilities equipment portfolio	2018
Average utilisation (%)	60%
Of which from external users (%)	24%
Number of external users	36

Table B2.13 Number of temporary exchanges/secondments with the business community

	2016	2017	2018
Number of Wageningen University & Research employee secondments with the business community	8	5	9

3.2 Funds

Table B2.14 Wageningen University & Research turnover from the business community (in € millions)

	2016	2017	2018
Wageningen University			
Business community contribution to top sector research	0.0	0.0	0.0
Contract research for the business community	15.1	15.0	15,9
Total business community contribution to research at Wageningen University	15.1	15.0	15,9
Wageningen Research Foundation			
Business community contribution to top sector research	9.0	11.5	10,9
Contract research for the business community	42.2	42.7	47,5
Total business community contribution to research at Wageningen Research Foundation	51.2	54.2	58.3
TOTAL BUSINESS COMMUNITY CONTRIBUTION TO RESEARCH at Wageningen University & Research	66.3	69.2	74.2

Table B2.15 Wageningen University & Research turnover from EU grant programmes (in € millions)

	2016	2017	2018
Wageningen University	15.8	15.5	15.4
Wageningen Research Foundation	22.2	21.7	20.3
Total EU Turnover Wageningen University & Research	38.0	37.2	35.7

3.3 Publications

Table B2.16 Number of public-private Wageningen University & Research co-publications

	2016	2017	2018
Corporate (business community)	162	136	213
Academic	2,484	2,519	2,755
Government	818	772	870
Medical	49	58	55
Other	224	216	273
Total publications (co-authored & other)	2,690	2,707	2,966

Source: Scopus, Elsevier B.V. All rights reserved. SciVal ®

Table B2.17 Number of professional publications, publications for the general public, other publications

Type of publication	Wageningen University			Wageningen Research Foundation		
	2016	2017	2018	2016	2017	2018
PROFESSIONAL PUBLICATIONS						
a. Journal articles	153	102	90	173	219	171
b. Books	9	5	2	7	7	4
c. Book chapters	24	22	24	24	7	19
d. Annotations	0	0	0	0	0	0
e. Conference papers	10	6	1	19	6	0
f. Protocols	0	0	0	0	0	0
g. Reports	167	136	164	758	567	692
PUBLICATIONS FOR THE GENERAL PUBLIC						
a. Books	2	0	0	1	0	0
b. Book chapters	7	0	1	4	0	0
c. Article in newspaper/magazine/journal	32	30	2	46	10	3
OTHER PUBLICATIONS						
a. Book reviews	15	7	10	1	0	0
b. Book editorships	18	18	19	8	7	2
c. Journal editorships	67	37	36	17	4	1
d. Inaugural speeches	11	2	2	0	0	0
e. Abstracts	475	258	275	215	86	141
f. Designs	0	0	0	0	0	0
g. TV or radio appearances	64	34	24	47	25	36

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Appendix 3

Corporate Social Responsibility Report

The Wageningen University & Research Corporate Social Responsibility Report contains information about the total staff at Wageningen University & Research, such as the relationship between permanent and temporary staff, the number of full-time and part-time workers, data on target groups, and information on sick leave.

The growing economy and the growth in student numbers has resulted in a clear increase of the number of employment contracts in 2018. This increase was 129 IER (Individual Employment Relationships) at Wageningen Research Foundation, while the increase at Wageningen University was 135 IER.

Wageningen Research Foundation staff on 31 December 2018 in IER and FTE

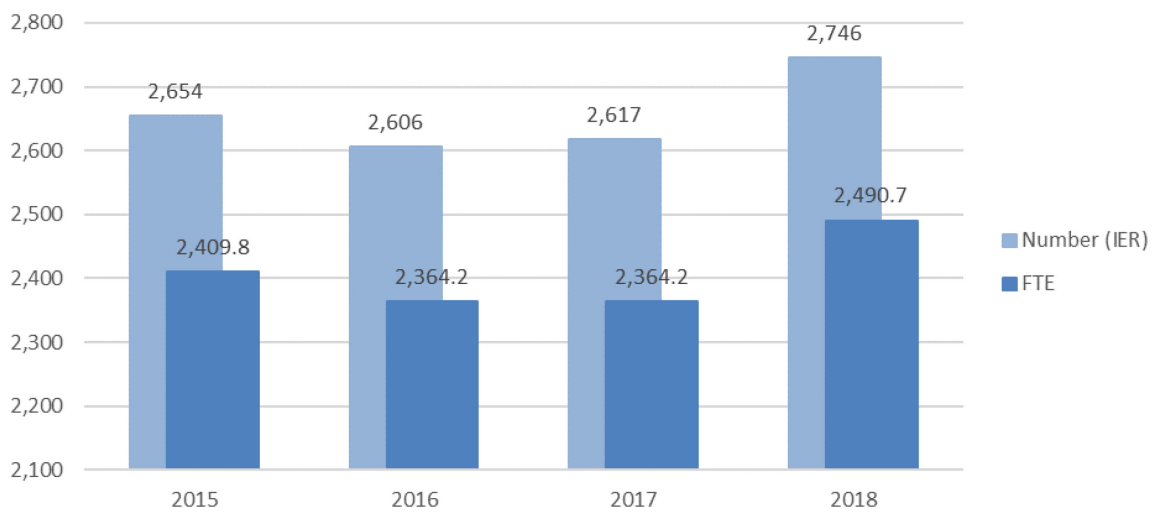


Figure B3.1 Wageningen Research Foundation staff in IER and FTE

Wageningen University staff on 31 December 2018 in IER and FTE

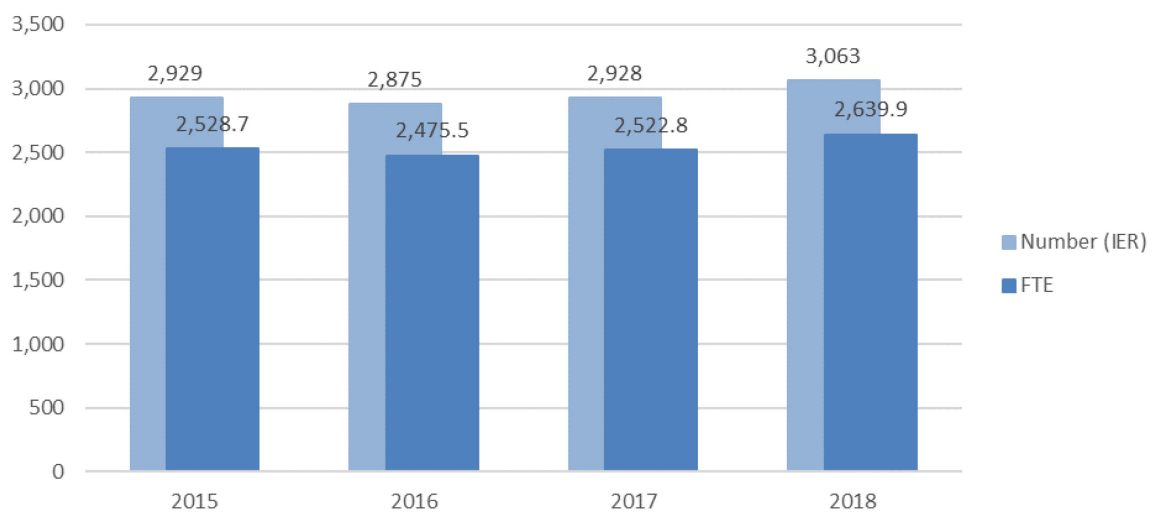


Figure B3.2 Wageningen University staff in IER and FTE

The increase in the number of employment contracts also has consequences for the proportion of temporary/permanent employees, age distribution, and employment structures at Wageningen University & Research.

Proportion of temporary and permanent employees

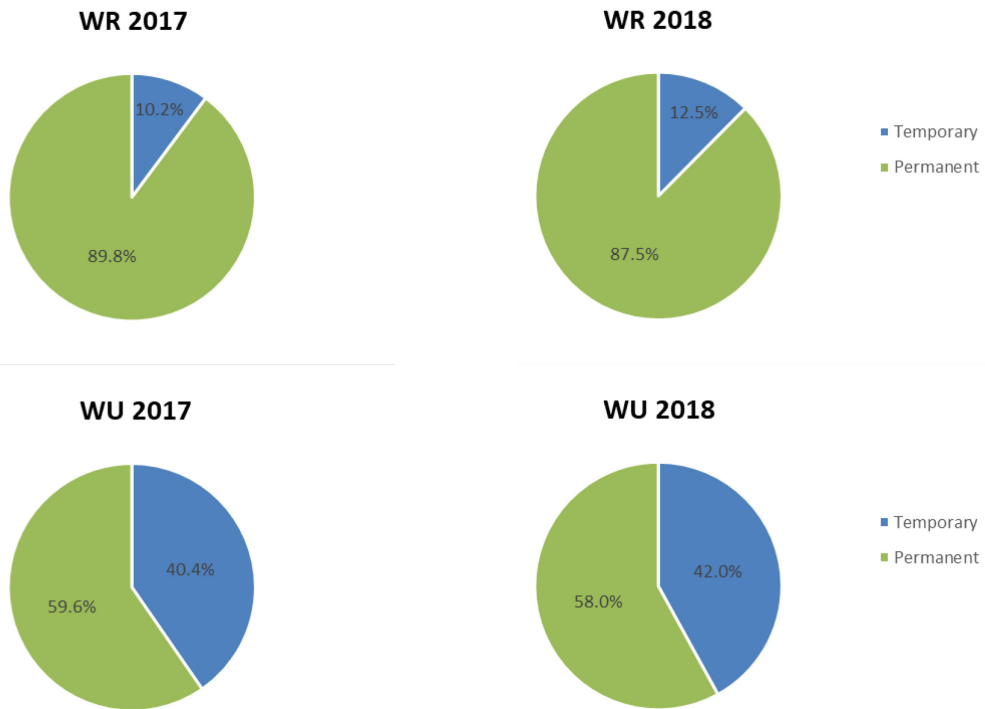


Figure B3.3 Temporary/permanent Wageningen Research Foundation and Wageningen University

The percentage of employees with a temporary employment contract at Wageningen Research Foundation has increased by 2.3% to about 12.5%. At WU, the percentage of employees with a temporary employment contract grew by nearly 1.6%, to roughly 42%. This includes the employment contracts of PhD candidates.

Age distribution

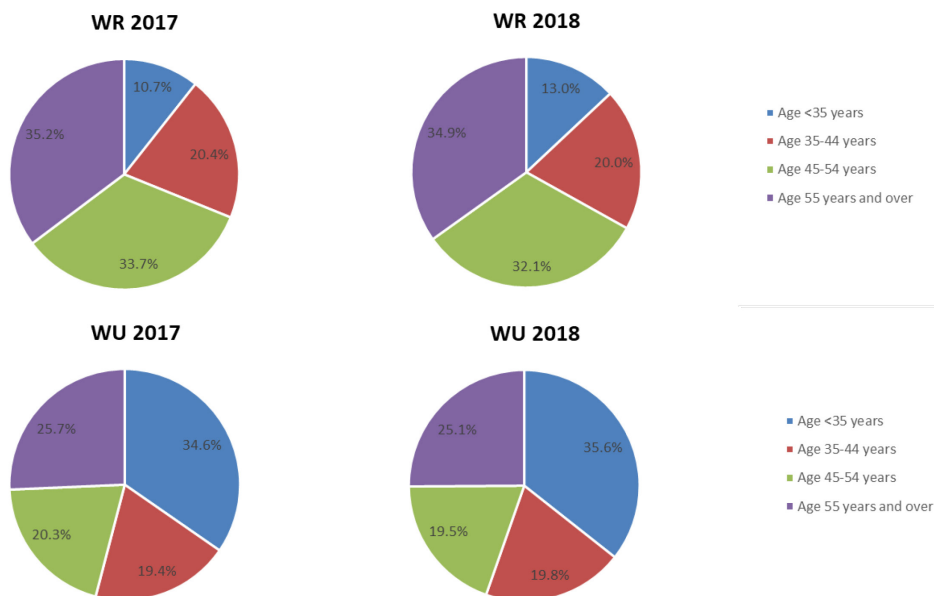


Figure B3.4 Age profile Wageningen Research Foundation and Wageningen University

The increase in the number of temporary employment contracts also has an effect on age distribution. A clear increase is visible in the age category under 35 years, for both Wageningen University as well as Wageningen Research Foundation. The figures above also show that there is a difference in the staff composition at Wageningen Research Foundation in comparison to Wageningen University. 67% of employees at Wageningen Research Foundation are 45 years or older. Half of them are 55 years or older. At WU, this ratio is entirely different. Roughly 44% of employees are 45 years or older and more than half of them are 55 years or older. The largest group of employees (35%) is under 35 years of age. This difference is primarily due to the relatively large number of (temporary) employment contracts for PhD candidates and postdoc researchers at WU.

Years of employment

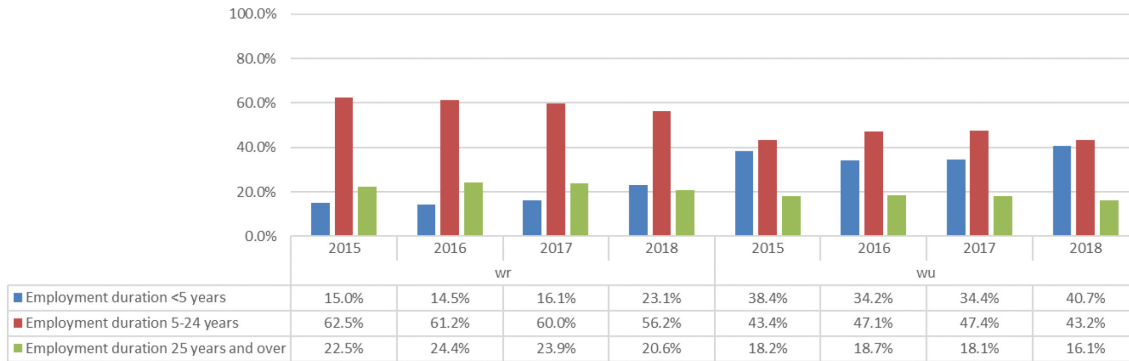


Figure B3.5 Employment duration Wageningen Research Foundation and Wageningen University

The trend outlined here also corresponds to the duration of the employment contracts. There has been an increase in staff with up to 5 years of employment at Wageningen University & Research of an average of 6.4%.

Male/Female ratio at Wageningen University & Research overall

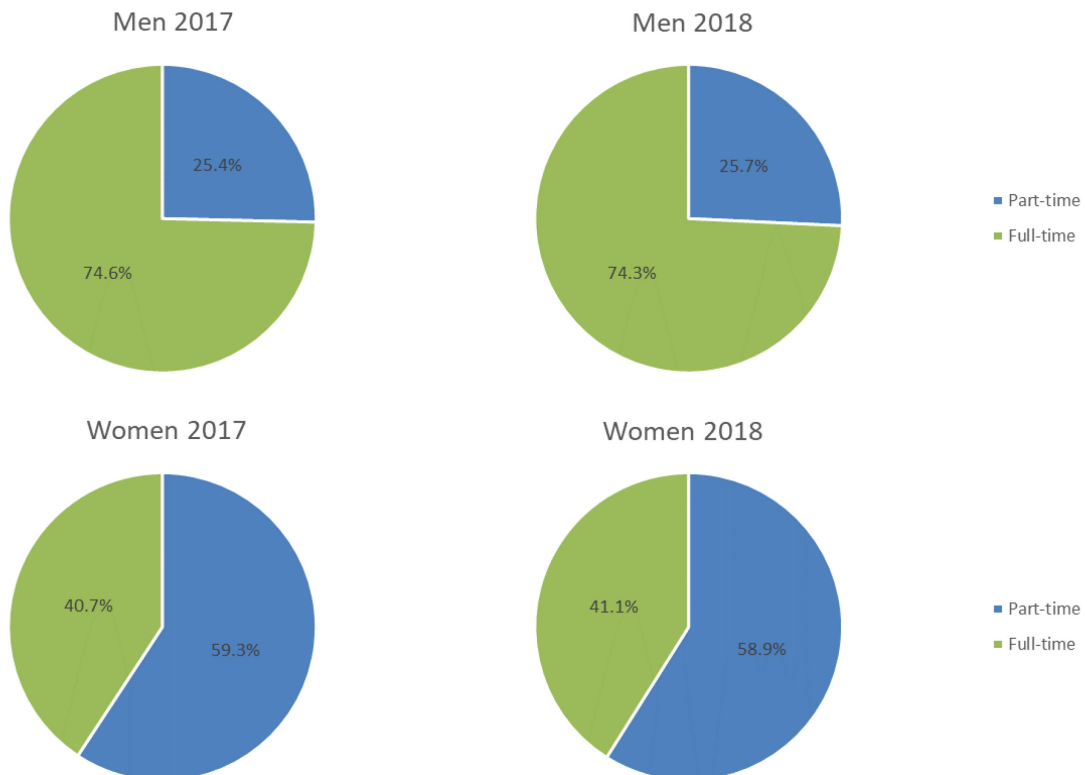


Figure B3.6 Male/Female ratio within full-time/part-time

The part-time category increased somewhat for both men and women, by 1.2% and 0.8% respectively.

Male/female ratio for temporary and permanent employment contracts at Wageningen University & Research overall

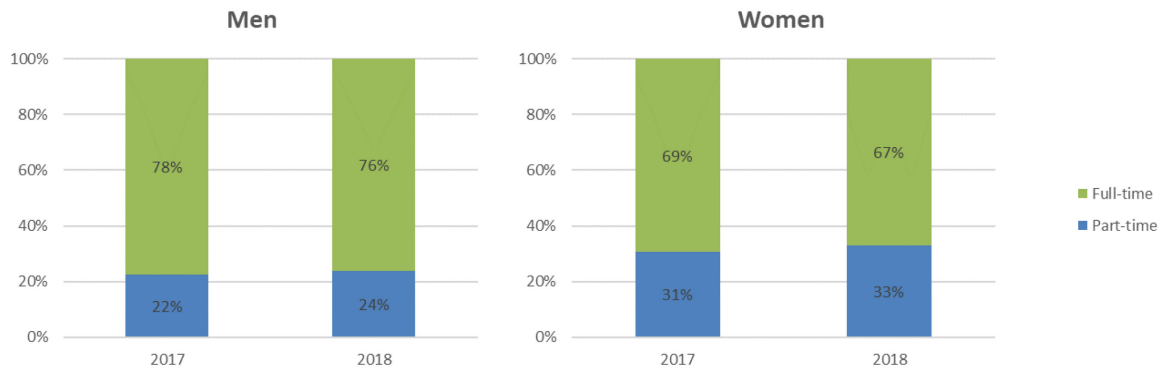


Figure B3.7 Male/Female ratio within temporary/permanent

One of the effects of this increase in the number of employment contracts is that the ratio of permanent/temporary employment contracts for men and women at Wageningen University & Research has changed somewhat. In both categories, the percentage of temporary employment contracts has increased by 2%. However, the percentage of men in permanent employment (76%) remains significantly higher than the percentage for women (67%).

Male/Female ratio per salary scale at Wageningen University & Research overall

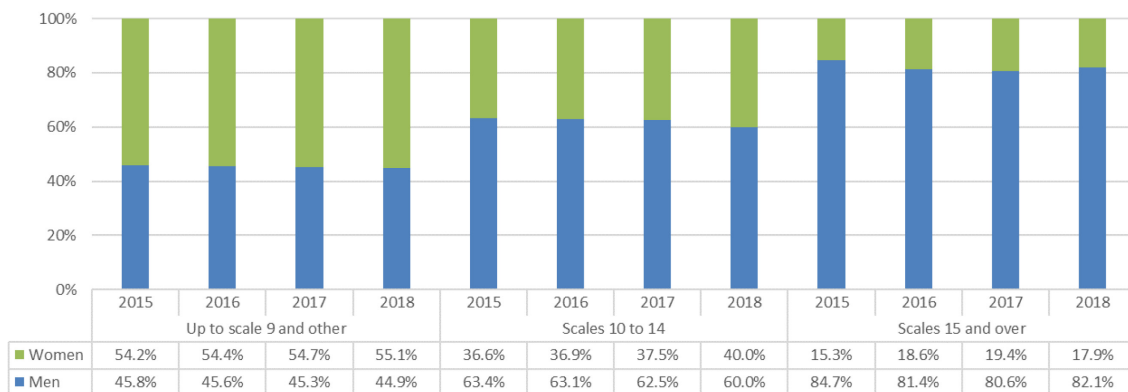


Figure B3.8 Male/Female ratio per salary scale

In recent years, there was an additional focus on gender diversity and on the advancement of women to top positions in the organisation, thereby improving the quality of Wageningen University & Research. The figure above shows the effects of these efforts on the salary scale of men and women since 2015. Notably, the percentage of women in scale 10 to 14 and higher has increased in 2018, by 2.5% to 40%.

Male/Female ratio for supervisory positions

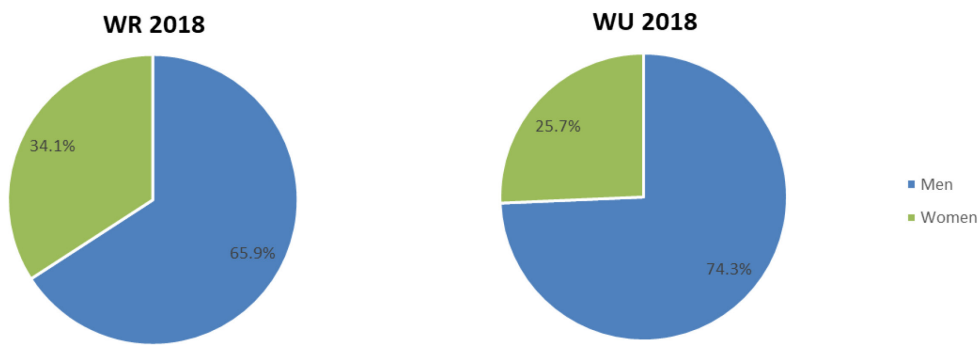


Figure B3.9 Male/Female ratio for supervisory positions at Wageningen Research Foundation and Wageningen University

The percentage of women in supervisory positions has decreased at Wageningen University by nearly 1.2%, while it has increased by 3.4% at Wageningen Research Foundation. This means that a quarter of the managers at Wageningen University are female, while women account for nearly a third of the supervisory positions at Wageningen Research Foundation.

Tenure Track - Male/Female ratio per job category (for Wageningen University)

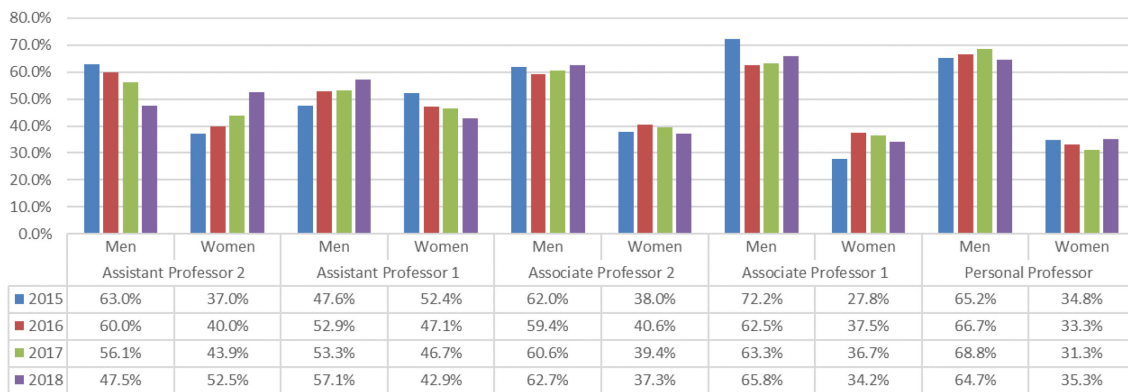


Figure B3.10 Male/Female ratio in the Tenure Track programme

The total male/female ratio in the Tenure Track programme in 2018 is about 58.6% / 41.4%. When compared to 2017, this means that the female ratio increased by 0.6%. Specifically for the Assistant Professor 2 position (incoming), there is continued growth in the number of women starting at the organisation (8.7%) compared to a slight dip in the number of men starting. This means that more women than men started the tenure track for the first time. The incoming male/female ratio is now 47.5% / 52.5%.

Internationalisation

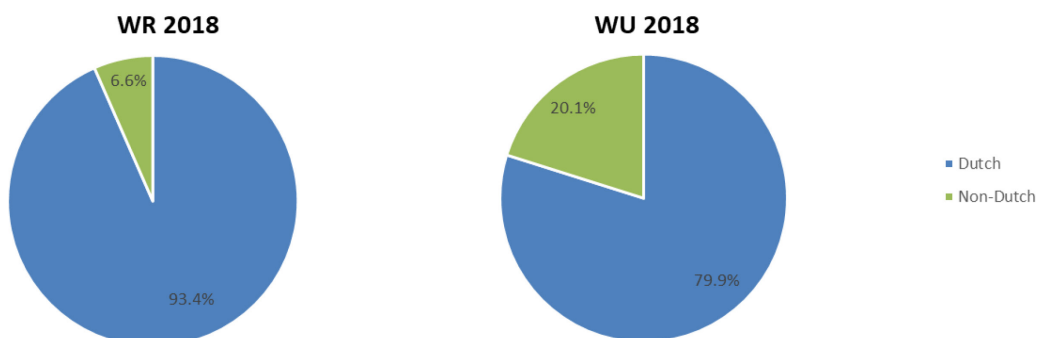


Figure B3.11 Dutch/International

In addition to the work done to improve gender diversity, efforts have also been made in the area of recruiting more international employees due to the limited international diversity in the current staff. This has not resulted in a more international staff composition. Wageningen Research Foundation in particular has a very low percentage of international employees.

Wageningen University pay scales

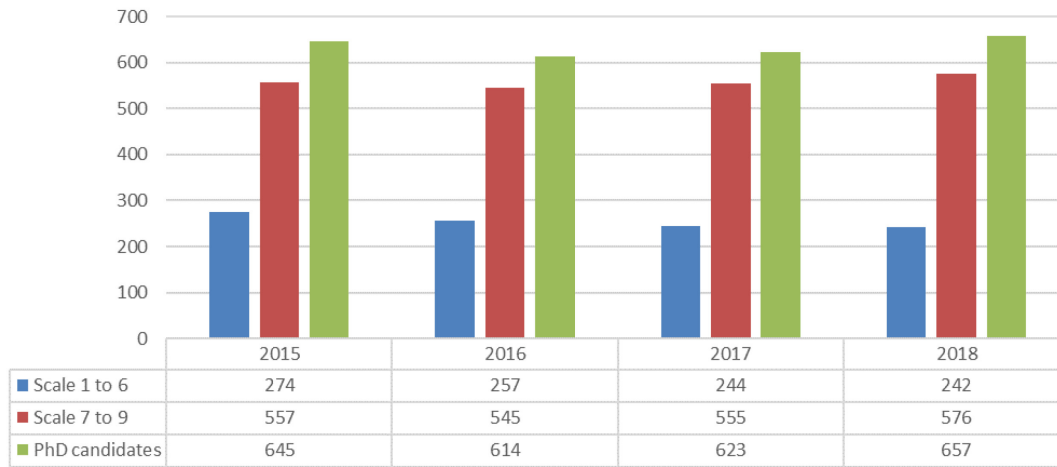


Figure B3.12 Wageningen University pay scales up to scale 9

The figures show a decrease in the lower salary categories. The growth in the 7-9 salary category as well as the PhD candidate category has continued in 2018.

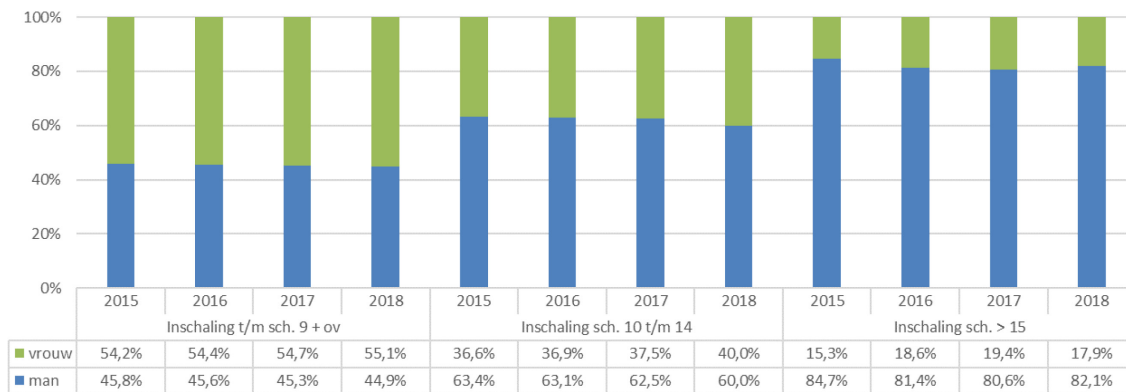


Figure B3.13 Male/female ratio in the Wageningen University & Research salary scales

Sickness absence at Wageningen University and Wageningen Research Foundation

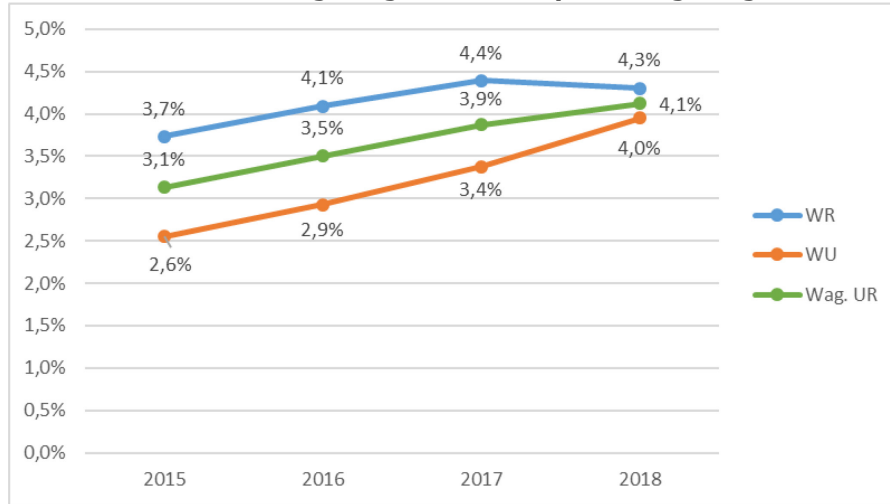


Figure B3.14 Sickness absence 2015-2018

The graph above shows that the average sickness absence at Wageningen University & Research has been increasing since 2015 and has exceeded the target threshold of 4% in 2018. The increase in 2018 is mostly from Wageningen University. The sickness absence at Wageningen Research Foundation decreased by 0.1%, but at 4.3%, it still exceeds the target threshold.

Sickness absence 2015-2018 excluding pregnancy	2015	2016	2017	2018
Sickness absence percentage incl. absences > 1 year	3.1	3.5	3.9	4.1
Sickness absence percentage excl. absences > 1 year	2.7	2.9	3.2	3.2
Average duration of absence (calendar days)	14.3	14.5	16.3	18.4
Absence frequency (%)	1	1	0.9	1.0
Staff without absenteeism due to illness (%)	50.1	48.8	52	48.8
Number of individual cases of absence through illness*	5,511	5,427	5,070	5,562
*Only those instances that began during the reporting period				
Sick leave percentage per age group	2015	2016	2017	2018
< 25 years	0.7	1	1.7	1.6
25 - 34 years	2.2	2.1	2.2	3.3
35 - 44 years	2.4	3.1	3.4	3.3
45 - 54 years	3.4	3.8	4.2	4.2
55+ years	4.2	4.6	5.2	5.3

Sickness absence excluding absence of over a year has remained the same, while the sickness absence including long-term absence has increased by 0.2% to 4.1%. It is notable that the increase of sickness absence is mainly caused by the increase of sickness absence in the 25-34 age group. In that category, there was an increase of 1.1%, from 2.2% to 3.3%. The sickness absence percentage has remained nearly the same in all other age groups.

Appendix 4

Glossary

Limitations	The scope of reporting, namely where the organisation has set the boundaries of the activities reported on. The boundary determines which information is consolidated in the report as well as what information is included regarding activities in the supply chain that could be of particular interest to users, but over which the organisation may have limited or no control.
Dialogue with stakeholders	The entirety of interactions between an organisation and its stakeholders. This is not limited to physical or virtual meetings specifically organised for that purpose.
Governance	The entirety of regulations for managing an organisation and the monitoring of their proper implementation. On the one hand, governance involves the relationships between shareholders, supervisors, management, and other stakeholders. On the other hand, governance also has an internal definition which includes management and control, internal control measures, and division of authority and responsibilities.
Social aspects of entrepreneurship	Social aspects of entrepreneurship which are identified when looking at businesses from a broader perspective than the traditional financial perspective. These include economic, environmental, and social aspects. It is used here as a synonym for Corporate Social Responsibility or sustainable business.
Societal information	All information related to the social aspects of business.
Societal results	The performance of an organisation with regard to the social aspects of business.
Societal reporting	External information on the organisation's policies and results with regard to the social aspects of business. Societal reporting is a generic term for typically non-financial information published in sustainability reports, CSR reports, or integrated in the annual report by the organisation in order to satisfy stakeholders' comprehensive information requirements.
Material topics	The topics most relevant to a specific organisation that, as such, are eligible for inclusion in societal reporting. A topic is more relevant, and therefore more material, when the organisation has a significant impact in that area. Topics that satisfy stakeholders' comprehensive information requirements and which could be decisive to stakeholders' decision making and considerations with regard to the organisation must also be considered material.
Performance indicator	A key figure used by the organisation with regard to a specific topic in order to monitor its development as well as to measure the organisation's progress and account for its results.
Scope	The range of reporting, namely the entirety of topics reported on. The scope of reporting concerns the organisation's choices regarding whether or not to report on specific topics.
Stakeholders	Internal or external individuals or parties who may reasonably expect the organisation to take their legitimate interests and expectations into account.
Value creation	An organisation's business operations require various forms of capital to or from which value can be added or detracted. An organisation creates economic, environmental, and social value for its stakeholders. Value creation refers to the process to which the organisation owes its existence.
Value chains	An organisation is active in a chain of activities leading to the production and delivery of products and/or services which are sold, used, and discarded by end users. For some organisations, activities in the value chain progress both "upstream", such as the activities of suppliers, and "downstream", such as the use of products and/or services. The hallmark of a value chain is the addition and subtraction of value at various places and moments due to the activities of the various players in the chain.

Colophon

Wageningen University & Research, June 2019
Droevendaalsesteeg 4, 6708 PB Wageningen
Postbox 9101, 6700 HB Wageningen
www.wur.eu

Contact

Simon Vink
Wageningen University & Research
T +31 (0)317 48 24 66
E simon.vink@wur.nl

Editing

Tekstcorrectie Groenewoud

Layout content

MediaCenter B.V. Rotterdam

Design & image research cover

Wageningen University & Research, Communication Services

Photography

Guy Ackermans

Printing

MediaCenter B.V. Rotterdam

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



The mission of Wageningen University & Research is "To explore the potential of nature to improve the quality of life". Under the banner Wageningen University & Research, Wageningen University and the specialised research institutes of the Wageningen Research Foundation have joined forces in contributing to finding solutions to important questions in the domain of healthy food and living environment. With its roughly 30 branches, 5,000 employees and 10,000 students, Wageningen University & Research is one of the leading organisations in its domain. The unique Wageningen approach lies in its integrated approach to issues and the collaboration between different disciplines.