



Abstract

Management Report 2016

Pushing boundaries
to prepare for what
the future holds

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**van hall
larenstein**
university of applied sciences



Foreword Executive Board

Pushing boundaries to prepare for what the future holds

In recent years, a solid foundation has been established for the future. In 2016 it was time to push our boundaries in respect of the university's important themes. We established new courses, started new research groups, developed innovative knowledge, entered into new international partnerships and developed living labs.

Steps towards becoming the largest university of applied sciences

We have taken steps towards becoming the largest university of applied sciences in the Netherlands and to this end, an important milestone was reached in 2016. Van Hall Larenstein is the first university of applied sciences in the Netherlands to have been awarded the CSR quality mark at the level 'Committed'. The building in Leeuwarden has also undergone a refurbishment, resulting in important sustainability ambitions being achieved, as was the case in Velp.

Cross-border partnerships

In terms of our partnerships, we have also quite literally pushed boundaries. In the key countries, ambitions have been laid down in respect of teaching and research in new partnership agreements with universities in China, India, Indonesia and Romania. Our expertise has allowed us to contribute to trade missions in India, Indonesia and Ethiopia.

Implementation of a new educational concept

The educational concept and other recently established policy were broadly implemented in 2016. It is anticipated that the identified improvement measures from the new educational concept and policy will pay off during the next few years, when increasing numbers of students participate in the modified programme. In 2016, students followed the first and second year of their study programmes, taught in line with the educational teaching concept.

New research groups

New research groups commenced in 2016, with contemporary themes that are appropriate to our expertise and profile. Researchers were successful in launching large projects, such as the RAAK-Publiek and H2020 projects. Through the research groups, Van Hall Larenstein contributes to developments in the Dutch National Research Agenda.

Internal organisation

2016 saw the successful creation of teams with responsibility for results and staff received further training in this. Measures were taken to tackle the workload being experienced, ensuring the teams have time to improve quality. Also discussed with staff were the direction and topics for the new Institutional Plan 2018-2021; students and external stakeholders were also involved in these discussions.

Upgrade

Students also provided us with valuable input during the annual Upgrade meetings, in which we talk about the desired improvements. The points for improvement that were identified mean that in 2017 there will be a focus on exploring in more depth the approach being taken, plus an emphasis on quality.

In 2016, Van Hall Larenstein took steps to ensure that the university of applied sciences was ready for whatever the future holds. The Executive Board would like to thank all staff, students and collaborative partners of the university of applied sciences for their commitment and contributions.



Drs. P.C.A. van Dongen
President of the Executive Board



Drs. A.C. Keizer-Mastenbroek
Member of the Executive Board



Research: the uprooted tree

Mid-July 2016 saw the start of a unique project at the square in Velp: the uprooting of a tree. On the initiative of artist Daan van Geijlswijk and lecturer Freek Rurup, a fully grown plane tree was uprooted from the ground and with its root system attached, was hung two metres above the ground in a steel construction. The tree is kept alive artificially, by spraying the roots with nutrients. This is the very first time in the world that this has happened to a tree. If the project proves successful, the technology that has been developed will enable trees to be saved in the event of, for example, construction work and from an architectural perspective, offers innovative opportunities when planting trees.



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Anne Maaïke new water ambassador of the Northern Netherlands

In 2016, Anne Maaïke van der Weide, third-year student in Coastal and Marine Management, was elected the water ambassador of the Northern Netherlands. Her innovative pitch won her this title, plus a two-year scholarship. By creating an overflow lake on one side of a dike, in the event of flooding seawater can flow through the cylinder into the overflow lake. This wave movement will operate a system which generates energy; during low tide the water can flow back, once again generating energy.

As the water ambassador, Anne Maaïke motivates students and pupils at primary schools with wide-ranging activities and enthuses them about working in the water sector.



Strategic goals

Van Hall Larenstein is a University of Applied Sciences. We educate high-quality, ambitious and innovative professionals who contribute to a sustainable world. To put this mission and our vision into action, we have formulated strategic key goals.

Van Hall Larenstein:

- wants to prove that it is the most sustainable university of applied sciences in the Netherlands, by means of investments and substantiation through certification;
- wants to be a personal university of applied sciences, where students are satisfied about their education;
- conducts practical research relevant to our education and our environment;
- is a financially sound organisation which is prepared for what the future holds.

In 2016, the Executive Board started the process of creating the new Institutional Plan 2018-2021. Discussions took place with internal and external stakeholders, to reflect on the current approach and the results, and together they considered the future. Based on these discussions, we conclude that there is support for our profile and that our key areas are recognised, both internally and externally. Our vision and mission are appropriate for the university of applied sciences. The three aforementioned fields of study with 'Applied Research Centres' give focus and weight to education and research.

Based on the environmental analysis, Van Hall Larenstein selects a profile with three interrelated key areas. These are also the three fields of study at the university of applied sciences: **Animals and Business, Delta Areas and Resources and Food and Dairy**. The key areas form the frameworks for the policy decisions, in terms of education, research and contract activities. The educational programmes and research groups form part of the fields of study.



Food Technology Students receive awards for a snack made using by-products

Top winner of the Golden Globes in 2016 was the RE snack project. Students participating in the Food Technology programme (Velp site) developed a snack partially made using by-products (residual products) from other foods. This project won them the first jury prize and the public prize. The students subsequently netted the LC Award with the RE snack (awarded by the Leeuwarder Courant newspaper) and they were nominated for the Ecotrophelia contest, where they and the other finalists presented their ideas to the Belgian royal family.



'Royal approval' for Caribbean expertise of KZM

Due to their involvement in the minor programme 'Sustainable Island Management' and the RAAK Public project AROSSTA – to improve the health of the coral reef – that was submitted, Marlous Heemstra and Alwin Hylkema were invited by the Royal Palace Foundation in Amsterdam to attend The Future of the Caribbean Coral Reefs symposium. Tjibbe Stelwagen also received an invitation, because of his role as board member of ACROPORANET. The host and hostess of the symposium were King Willem-Alexander and Queen Máxima. Princes Beatrix also took part in this symposium.

The AROSSTA project examines under which conditions artificial reefs can contribute optimally to the repair of the coral reef ecosystem at St. Eustatius and on the Saba bank in the Caribbean. These coral reefs are of significant ecological and economical importance and in recent decades, the quality of this ecosystem has deteriorated significantly. Along with various (local) nature conservation organisations, Van Hall Larenstein wants to create artificial reefs, to repair the ecosystem. Artificial reefs allow key species to recover and coral can once again establish itself.



Key data

Students

In 2016, 4,289 students studied at Van Hall Larenstein and of those, 435 students had a foreign nationality. A total of 659 students achieved their diploma. The number of students to graduate with a Bachelor's degree has risen by 6.8% in comparison to 2015. In 2016, 1,200 new students started an educational programme.

	2013	2014	2015	2016
Students (1 October indicator year)	4243	4215	4279	4289
Intake	1393	1290	1270	1200
Graduates	529	676	587	659
International students	455	377	415	435

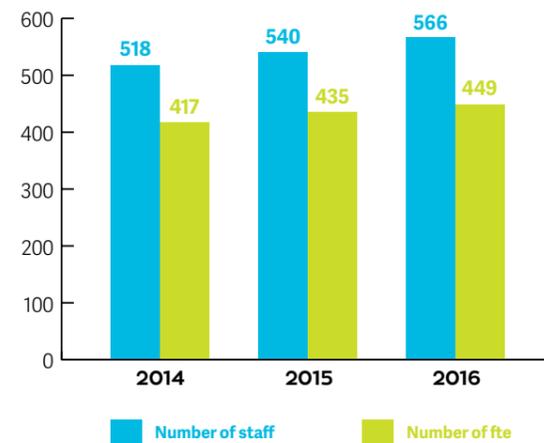
Financial

The net result and the total assets followed a positive trend in the previous four years.

	2013	2014	2015	2016
Total income	51.222	53.690	52.123	54.711
Total expenditure	48,787	49,302	51,919	54,272
Net result (€ x 1,000)	2,213	4,261	42	5,500
Solvency ratio	26.6%	35.1%	34.8%	31.2%
Liquidity	0.9	1.0	0.6	0.6
Current ratio				

Staff

Both the number of staff and the number of FTE increased in 2016; proportionally more was invested in teaching staff (65.2% in 2016). In comparison to previous years, the number of female staff has risen slightly. In 2016, 51.9% of the staff were female.



List of educational programmes

Animals and Business

Educational programme name	Type of educational programme	Site
Business Administration and Agribusiness	Bachelor's programme full-time	Leeuwarden
Business Administration and Agribusiness	Bachelor's programme full-time	Velp
Animal management	Bachelor's programme full-time	Leeuwarden
International Business and Management Studies IBMS	Bachelor's programme full-time	Leeuwarden
Master's programme - Agricultural Production Chain Management	Master's programme	Velp

Delta Areas and Resources

Educational programme name	Type of educational programme	Site
Ad Land and Water Management	Associate degree part-time	Velp
Ad Land and Water Management	Associate degree full-time	Velp
Ad Garden and Landscape Architecture	Associate degree part-time	Velp
Ad Garden and Landscape Architecture	Associate degree full-time	Velp
Forestry and Nature Management	Bachelor's programme part-time	Velp
Forestry and Nature Management	Bachelor's programme full-time	Velp
Coastal and Marine management	Bachelor's programme full-time	Leeuwarden
Land and Water management	Bachelor's programme part-time	Velp
Land and Water management	Bachelor's programme full-time	Velp
Land and Water management	FastTrack	Velp
Management of the Living Environment	Bachelor's programme full-time	Leeuwarden
Management of the Living Environment	Bachelor's programme full-time	Velp
Master's in Project and Process management in the green living environment	Master's programme	Velp
Garden and Landscape Architecture	Bachelor's programme part-time	Velp
Garden and Landscape Architecture	Bachelor's programme full-time	Velp

Food and Dairy

Educational programme name	Type of educational programme	Site
Ad Dairy farming	Associate degree part-time	Leeuwarden
Ad Dairy farming	Associate degree full-time	Velp
Ad Integrated enforcement of environmental law	Associate degree part-time	Leeuwarden
Ad Integrated enforcement of environmental law	Associate degree full-time	Leeuwarden
Ad Sustainable soil management	Associate degree part-time	Leeuwarden
Ad Sustainable water technology	Associate degree full-time	Leeuwarden
Ad Entrepreneurship	Associate degree full-time	Velp
Ad Entrepreneurship	Associate degree full-time	Leeuwarden
Biology and Medical Laboratory Research	Bachelor's programme full-time	Leeuwarden
Biotechnology	Bachelor's programme full-time	Leeuwarden
Chemistry	Bachelor's programme full-time	Leeuwarden
Chemical technology	Bachelor's programme full-time	Leeuwarden
Animal keeping and livestock farming	Bachelor's programme full-time	Leeuwarden
Animal keeping and livestock farming	Bachelor's programme full-time	Velp
International Development Management	Bachelor's programme full-time	Velp
Master's Management of Development	Master's programme	Velp
Environmental sciences	Bachelor's programme part-time	Leeuwarden
Environmental sciences	Bachelor's programme full-time	Leeuwarden
Gardening and Agriculture	Bachelor's programme full-time	Leeuwarden
Food technology	Bachelor's programme full-time	Leeuwarden
Food technology	Bachelor's programme full-time	Velp





The largest training forest in the Netherlands for tomorrow's foresters

The forests of Staatsbosbeheer, the forest management agency (95,000 hectares), offer excellent opportunities for research and education. Through a close partnership between Staatsbosbeheer, Van Hall Larenstein, Helicon and Wageningen University, the largest training forest in the Netherlands has become a reality. In February 2016, the organisations in the Speulder and Sprielder Forests in the Veluwe National Park signed a cooperation agreement; this cooperation officially signalled the start of the largest training forest in the Netherlands. In the years ahead, MBO (intermediate vocational), HBO (higher vocational) and WO (university level) students can work in the training forest to learn, practise and to perform research so that, in the future too, we are guaranteed to have forests where we can have fun and relax, where animals and plants have a home and from which we can obtain wood.



Sustainability

Sustainability is a central theme in education and research at Van Hall Larenstein and in the university's operational management. It is also a central theme in the Institutional Plan 2014-2017. Our mission and vision in respect of our social responsibility are outlined further in the policy memorandum CSR 2015-2017.

To check whether we fulfil our ambition as a green university of applied sciences, we have drawn up three critical performance indicators: a CSR quality mark for the organisation as a whole, a Sustainable Higher Education quality mark for educational programmes based on three AISHE stars and BREEAM sustainable area development. These three KPIs reinforce one another. The CSR organisation assessment focuses on the organisation as a whole, based on the management system. The BREEAM and AISHE quality marks focus on particular areas, i.e. education and the environment respectively.

CSR quality mark achieved

In 2016, Van Hall Larenstein was the first university of applied sciences in the Netherlands to achieve the CSR quality mark 'committed'; we are therefore demonstrably committed to our social responsibility in respect of sustainability. We do that by focussing our policy on demonstrable results and aligning our processes to this. This is then communicated to the very roots of our organisation.

The CSR quality mark auditors believe that, in terms of research, Van Hall Larenstein has achieved the level 'accredited'. This is the level that we wish to achieve for the entire university of applied sciences by the end of 2017. The auditors' assessment confirms that sustainability is a cornerstone in the applied research performed at the university of applied sciences.

AISHE quality marks achieved

In 2016, the programmes Coastal and Marine Management and Forestry and Nature Management achieved the three AISHE stars.

BREEAM-NL In-Use

The CSR quality mark audit panel found that the university of applied sciences has clearly identified the 'Planet' aspects of CSR and that it takes steps to develop this aspect of operational management further still. As a starting point for the sustainable management and use of buildings, the university of applied sciences in Velp and Leeuwarden performed baseline measurements using the BREEAM-NL In-Use assessment framework. The recommendations relating to the three parts of the baseline measurements: the building, the management and use were adhered to in the refurbishment of the Velp site in 2015 and Leeuwarden in 2016.



Van Hall Larenstein receives the CSR Quality Mark for Higher Education

In September 2016, Van Hall Larenstein was the first university of applied sciences in the Netherlands to achieve the CSR quality mark for Higher Education. CSR is the acronym for Corporate Social Responsibility of organisations. To achieve the CSR quality mark, in April 2016 a university of applied sciences-wide organisation assessment was performed. The CSR audit committee established that Van Hall Larenstein achieved the first level 'committed', which means that Van Hall Larenstein is demonstrably committed to bearing corporate social responsibility. We actively apply this to policy and processes and we communicate this throughout the entire organisation. Even though this quality mark has been achieved, we won't stop there. Before the 1st of January 2018, we hope to have been awarded the next level 'accredited'. Our aim is to become the greenest university of applied sciences in the Netherlands.



Education

As a green university of applied sciences at two sites in the Netherlands and with a wide range of educational programmes, we contribute significantly to the green domain regionally, nationally and internationally. In education, the implementation of the educational concept and quality were pivotal to 2016's results and developments.

Every programme has improved its profiling with the five characteristics of our updated educational concept. The educational concept gives individual students room to develop their talents and professional competencies in an inspiring environment.

The five characteristics are:

- real life centred
- freedom of choice
- diversity
- up-to-date use of digital resources
- applied research, internationalisation and sustainability in the final competencies

The new educational concept allows us to work effectively. It gives students the opportunity to follow individual learning pathways and facilitates direct contact between the student and adviser.

As at the 1st of September 2016, Van Hall Larenstein offered fourteen Bachelor's programmes, three professional Master's programmes and seven associate degrees. A major modification in terms of the programmes on offer is the new Land and Water Management programme, launched on the 1st of September 2016. In addition, in terms of the new professional Master's programme in Innovative Dairy Chain Management, the Assessment of New Educational Programmes was performed in November 2016 by the Accreditation Organisation of the Netherlands and Flanders (NVAO), with positive results. This Master's degree is structured based on the collaboration with Dairy Campus. Finally, the Dairy Farming programme will include a new specialisation, which is Organic Dairy Farming.

2016 was also marked by policy implementation. The educational concept that we developed in 2014 was broadly implemented in 2016. The monitoring and evaluation of the implemented policy were important areas for focus in 2016. A number of additional memoranda were drafted about accelerated programmes, HBO Master's degrees and minor programmes, in which the policy being pursued will be formalised.



Quality

Van Hall Larenstein offers high-quality education. The university of applied sciences uses various indicators to guarantee and improve the quality of the education. These indicators can be summarised in a number of themes: lecturer quality and quality assessment and theses, educational success, satisfied students, satisfied alumni and the professional field.

Positive assessment

An important milestone is the positive assessment of the performance agreements 2012-2015 by the Review Committee. Van Hall Larenstein achieved six of the seven compulsory performance indicators and fulfilled its ambitions in profiling and the formation of key points. Despite the unbundling from Wageningen University & Research and many quality improvements deemed necessary, Van Hall Larenstein succeeded in achieving its desired outputs.

Areas of improvement from the National Student Survey (NSE)

Over the past two years, work has taken place towards improving the timely provision of timetables and grades; we are therefore pleased to see an increase in student satisfaction from the National Student Survey in the category provision of information relating to study progress. The refurbishment in Velp resulted in an increase in satisfaction of students studying at Velp in relation to the facilities. It is anticipated that the downward trend of satisfaction with the facilities in Leeuwarden will be reversed once the refurbishment in Leeuwarden has been completed. In general, student satisfaction in the National Student Survey 2016 about programmes remains good.

In comparison to the national average, our students were especially positive about the programme content and the higher professional education scientific skills, group sizes in lectures and the ratio between small-scale and large-scale education. These are strengths at our university of applied sciences that students are consistently satisfied with. In the National Student Survey 2016, students also say that they are satisfied with what they learned during their work placement and with the availability and affordability of housing in Velp and Leeuwarden.

Our alumni are positive about international embedding, practical research, job levels suited to the educational background, type of jobs versus type of education, subject expertise of lecturers, commitment of the lecturers and good alignment between education and jobs.

In the comprehensive management report, a further explanation is given regarding the results of the aforementioned quality indicators.

Four students finalised their studies with research as part of the RAAK project at dairy plants in India

India is the largest milk producer in the world, with a production of 146 million litres every year. With a fast-growing population, this is not enough. As part of the RAAK project Family Dairy Tech, Van Hall Larenstein is involved in increasing the yield of the Indian farmers. To this end, the business model was analysed at eight Indian farming businesses and Dutch technology and knowledge will be applied and adapted to the circumstances of the Indian farmers, in order to improve the yield. In terms of this project, Van Hall Larenstein works with Saxion Universities of Applied Sciences, the Agricultural College of Agricultural Development Trust, Baramati, ten Dutch companies and eight Indian farming businesses.

In 2016, four students from Van Hall Larenstein who participated in this project, graduated in their own subjects. Darshan Latkar wrote a thesis about 'Consumer behaviour and trends'. Vishvajeet Patil researched 'The improvement in milk quality in the business'. Niranjn Joshi chose 'Improvements in milk quality through better nutrition' and Akshay Shelke researched 'Retaining milk quality throughout the chain'.



Internationalisation

Van Hall Larenstein educates national and international students. All students of Van Hall Larenstein are prepared for professional practice in a multicultural and international context.

In 2016, international students could choose from five English-language Bachelor's programmes, two English-language Professional Master's programmes (consisting of five variations) and five English-language short courses.

In 2016 intense work took place on developing new English-language programmes. For example, in 2017 students can start a 3-year English-language fast-track Land and Water Management course as part of the Master's programme in Innovative Dairy Chain Management, specialising in Forest Chains of the Master's programme Agricultural Production Chain. We also started to explore whether it is possible for parts of the Master's programme to also be offered in modules, as international short courses.

International students

There has been an intake of 197 international students. Of these 197, 147 follow a Bachelor's programme, 49 a Master's programme and 1 an associate degree. There are a total of 435 international students, representing a growth of 20 in comparison to 2015. The percentage of international students in comparison to the total number of students in 2016 is therefore 10.1%.



Intensive collaboration agreement signed between Van Hall Larenstein and China Agricultural University

In late October, an agreement was signed in Beijing by Executive Board member Diane Keizer-Mastenbroek and Vice President Gong Yuanshi from China Agricultural University (CAU), for an intensive collaboration between the knowledge institutes. The collaboration - the 'Elite Cattlemen Programme' - covers the entire education spectrum, research, student exchange and professional development of personnel.

The 'Elite Cattlemen Programme' allows students from universities of applied sciences and other universities from participating countries (China, USA, Ireland and now also from Van Hall Larenstein in the Netherlands) to participate in joint training programmes, competitions and education and research programmes.



Professional development

Van Hall Larenstein works according to the Professional Development Plan 2015-2017. The professional development plan is a translation of the institutional plan, the performance agreements and the HRM policy.

The professional development plan describes how, by educating and developing, Van Hall Larenstein will work towards the (sustainable) deployability of staff in the years ahead. The professional development plan also offers frameworks for team and development plans within which individual development agreements are compiled.

Van Hall Larenstein Academy

Van Hall Larenstein facilitates the education of staff and the interpretation of the professional development plan in the form of the Van Hall Larenstein Academy. The goal of the plan is: to motivate staff, improve the quality of the education and to encourage educational reform.

In 2016, in terms of professional development, the focus was on:

- vocational educational programmes/conferences
- professional development of teams
- teaching methods
- assessment and examination
- coaching and intervision
- Media library

Career policy

Van Hall Larenstein supports employees in their development, insofar as this meets the needs of the organisation. In this respect, the organisation clearly states what it expects from the employee, what developments affect performance and what that means for the employee's role. The employee is personally responsible for developing his/her career, but Van Hall Larenstein supports the employee. With effect from the new academic year 2016-2017, the new interview cycle 'planning, performing and evaluation' will be applied. This ties in with the teams responsible for results and is linked to the planning & control cycle. This entails an annual interview cycle, with the majority of the interviews taking place with the team responsible for results.

Lecturers achieve Basic Qualification Examiner

In 2016, a group of lecturers achieved the Basic Qualification Examiner. All lecturers who work as examiners must attain this Basic Qualification Examiner certificate, meaning they then comply with the quality standard applied by Van Hall Larenstein, in line with the policy of the Association of Universities of Applied Sciences.

The process

The Basic Qualification Examiner process requires lecturers to participate in a two-day training course and to carry out a portfolio assignment. During the final interview it is established whether the lecturers have acquired the required competencies. The programme is run by Van Hall Larenstein in collaboration with CITO (the National Institute for Educational Measurement).





Research

Van Hall Larenstein is a knowledge institute at which practical research has a prominent position. Through the link between education, applied research and the professional field, research results can be used in education and students are able to acquire competencies that meet the requirements of the professional field. We conduct research that focuses on improvement, development and innovation of professional practice within the fields of study: Animals and Business, Food and Dairy and Delta Areas and Resources, therefore contributing to the development of a sustainable society.

An Applied Research Centre (ARC) is linked to every field of study. These Applied Research Centres form an overall framework, encompassing several research groups that work in conjunction with one another. The core tasks of research groups are knowledge development, educational development, professional development of lecturers and knowledge valorisation.

ARC Animals and Business

A new research group - Grassland Birds - has been launched, in close cooperation with the government, Nordwin and Dairy Campus. The aim is to set up a knowledge centre to develop and share knowledge about biodiversity, revenue models and business models in grassland bird areas and to protect and improve the health of bees. A collaboration with Wageningen Economic Research has started, focusing on further development of the Sustainable Enterprise theme.

ARC Delta Areas and Resources

In the first half of 2016, five new research groups were set up. The Green Plus Research Group Sustainable Fishing and Aquaculture ended in June 2016 and will continue as the Coastal and Marine Management research group. In 2016, researcher dr. ir. Jeroen Rijke was appointed Sustainable River Management researcher. This research group is a joint initiative between Van Hall Larenstein and the HAN University of Applied Sciences. The two universities of applied sciences aim to intensify the cooperation in water management through this shared research group.

ARC Food & Dairy

An associate research group Dairy Value Chains has been added to the Dairy research group. This new group focuses on strengthening sustainable chains in the Netherlands, Brazil and Ethiopia. Discussions are taking place about the Biobased Economy research group with external stakeholders, about plans for continuing the research group which runs until early 2017. Discussions are taking place with the professional field about the possibility of adding an 'associate' research group in toxicology to the Food, Health and Safety research group. Since the spring of 2016, the Research and Development team, with lecturer-researchers has formed part of the ARC Food & Dairy.

Honorary researchers and associate researchers

Van Hall Larenstein has two honorary researchers, affiliated with Delta Areas and Resources field of study: ir. G. Baks and drs. W. Helmer. The university of applied sciences also offers promising lecturer-researchers or doctoral degree candidates the opportunity to develop further in research, by appointing him/her as associate researcher. The first associate researcher was appointed on the 1st of January 2016; this person will form part of the Dairy research group for a period of four years. Over the course of 2016, various initiatives were launched to appoint at least one associate researcher for every ARC.



List of research groups and researchers

ARC Animals and Business

Research groups	Researcher(s)
Animal Welfare	Dr. ing. H. (Hans) Hopster
Sustainable Agribusiness in Metropolitan Areas	Leading researcher Dr. ir. H.P.A. (Rik) Eweg
Bee Health	Ir. K. (Karin) Steijven
Grassland Birds	Dr. ir. A.G.E. (Astrid) Manhoudt

ARC Delta Areas and Resources

Research groups	Researcher(s)
Circular Economy in Water Management	Leading researcher Prof. Dr. A.J.M. (Toine) Smits
Coastal and Marine Management	Mrs dr. P.A. Walker
Sustainable Landscape Management	Dr. ir. D.J. Stobbelaar
Sustainable Foodscapes in Urban Regions	Ir. N. van Dooren
Management of Forested Landscapes	Mw. dr. E. Leyequiën Abarca
Sustainable River Management	Dr. ir. J. S. Rijke
Healthy Soils	Dr. E. V. Elferink

ARC Food and Dairy

Research groups	Researcher(s)
Food, Health and Safety	
- Health and Food	Dr. F. R. (Feike) van der Leij
- Food Safety	Dr. ing. A. (Anne) Schaafsma
Food Physics	Dr. A.A.C.M. (Lisette) Oudhuis
Dairy:	
1. Sustainable Dairy Farming	Leading researcher Dr. ir. W. (Wiepk) Voskamp-Harkema
2. Herd Management and Smart Dairy Farming	Dr. ir. C. (Kees) Lokhorst
3. Cost-effective Dairy Farming	Dr. X. (Molly) Chen
4. Dairy Value Chains	Dr. ir. R. M.T. (Robert) Baars, associate researcher
Dairy Process Technology	Dr. ir. P. (Peter) de Jong
Healthy and Sustainable Food and Western Disease	Dr. E. (Esther) Nederhof
Sustainable Water Systems	Dr. ing. P.J. (Paul) van Eijk
Biobased Economy	Dr. J.T.P. (Hans) Derksen



Dairy Valley: the Dairy Heart of the Netherlands

Dairy Valley was launched in early December 2016. Dairy Valley is a partnership between the Province of Friesland, the municipalities of Leeuwarden, Smallingerland, Heerenveen and Súdwest-Fryslân (known as the Frisian 4), Van Hall Larenstein and various businesses in the Agricultural and Dairy sector. The aim of Dairy Valley is to bring together various initiatives and parties within the Agricultural and Dairy Sector.

The parties drew up a joint action plan to turn Dairy Valley into the Dairy Heart of the Netherlands and eighty companies are now affiliated with Dairy Valley. Friesland has a strong business climate for the Agricultural and Dairy sector, for farmers and for suppliers such as factories, educational and research institutes and animal housing constructors.



Facilities

Digitalisation

In early 2016, all students and staff started the year using the new ICT infrastructure. This was the result of the actual implementation of the complex ICT transition from Wageningen University and Research to the new Van Hall Larenstein ICT infrastructure. The first and second line ICT support was set up in conjunction with OGD and other second-line support organisations. Now many of the notifications and requests reach ICT through Topdesk, which improves the efficiency and effectiveness of dealing with these. One positive outcome of the ICT unbundling is that the media libraries at the two sites now use the same information system.

There has also been a focus on expanding the digital facilities and wider functional implementation of Microsoft Office 365, such as increasing the use of Skype for Business and the use of Teamsites. A Management Information System was developed in 2016 and in early 2017 delivered the first reports about study progress, study success and intake. A programme of requirements for DLWO (digital learning and working environment) has been established, to be used as guidance for further implementation. Recording studios have been set up in both Leeuwarden and Velp, which are being actively used with increasing interest and enthusiasm by lecturers.

The data centre services supported by OGD are provided from a 'green' data centre. Additionally, when selecting and setting up new workplaces with ICT hardware, low energy consumption is used as a differentiator. During the course of 2016, technology was developed to turn work stations and screens in the university on or off remotely, to be able to save energy during the evenings and at night. We started to use this technology in early 2017.

Sustainable refurbishments

Once the refurbishment had been completed at the Velp site in 2015, the Leeuwarden site underwent a refurbishment in 2016. The refurbishment focussed on preparing Van Hall Larenstein for what the future holds in a sustainable manner. Meetings with students and employees clearly indicated everyone's needs and wishes in respect of the refurbishment. There was significant involvement of both staff and students.

The essence of the interior design was to create space and to reorganise the interior space in such a way that increased academic and social interaction could take place and students and staff were able to meet one another in a natural and informal manner. That space was created by dividing rooms more efficiently and sacrificing general spaces, such as wide corridors (approx. 2,000 m²). This resulted in 1,500 m² of additional space for social interaction, 600 m² of additional classroom space and 100 additional PC workplaces for students.

During the refurbishment, there was a significant focus on sustainability. For example, solar panels were mounted on the roof, wood was used with an FSC quality mark, 'cradle to cradle' carpet was fitted, linseed oil-based paint was used, a mechanical air ventilation system was fitted and a 'Join the Pipe' tap water point was installed in the canteen. 'Join the Pipe' promotes drinking tap water; the goal is to ensure that drinking water is distributed fairly and to combat the use of environmentally unfriendly pre-packaged spring water. Furthermore, within the school, the lights in the classrooms were replaced by LED lights in order to reduce energy costs.



Festive opening of the Leeuwarden building

Following the refurbishment of the building in Velp, in late October the refurbishment of the Leeuwarden site was completed. This was celebrated with a festive reopening. In front of a room full of students, staff, external parties and the press, astronaut André Kuipers and a lecturer and two students officially opened the building. Prior to the official opening, Mr Kuipers gave an inspiring speech about sustainability and space; two themes that were also essential during the refurbishment. The aim of the refurbishment was to create more space in which to work and study for students and to make the building more sustainable.

The additional space was mainly created by changing the layout of the building. Corridor and office space was sacrificed to enable additional classrooms and study areas to be created. The sustainable measures that were taken included installing light sensors and LED lighting and using circular materials.



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