



Executive
Summary 2017

Green stamped

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**van hall
larenstein**
university of applied sciences





Foreword by the Executive Board

We can rightfully characterise 2017 as a 'green stamped' year. As the first university of applied sciences to be awarded the CSR quality mark 'Toegewijd' (Committed) in 2016, we took an even greater step towards becoming the greenest university of applied sciences in 2017. Van Hall Larenstein is the only university of applied sciences in the Netherlands to have been awarded the CSR quality mark 'Erkend' (Approved). We are extremely proud of this sustainability recognition, which has been earned through the hard work, inspiration and dedication of all employees. We greatly appreciate their efforts.

The sustainability recognition shows that we are firmly on track with corporate social responsibility. It also demonstrates that we achieve results in all CSR areas (such as business processes, suppliers, employees and environmental impact). This is expressed, for example, in the new Institutional Plan 2018-2021, which contains clear objectives, a more stringent policy and greater focus on dialogue with internal and external stakeholders and on sustainable communication. We also continue to integrate sustainability in our core activities: research and education.

By signing the Charter of the United Nations in 2017, we explicitly linked our research to the 'Global Goals For Sustainable Development'. This is the United Nations' global agenda to end poverty, inequality and climate change by 2030. As a green university of applied sciences, we make an essential contribution towards these goals.

Many of our study programmes were awarded three AISHE¹ stars in 2017. Three more study programmes achieved this in January 2018. Passing one audit is already an achievement, but passing all these audits is an outstanding result. AISHE certification demonstrates that sustainability is fully integrated in our study programmes.

We enriched our range of study programmes in 2017. For example, our new full-time professional Master of *Innovative Dairy Chain Management* has started and the full-time Bachelor of Management of the Living Environment is now also offered in Velp with the major *Smart City Development*. There is also a new specialisation within the Dairy Farming associate degree: Organic Dairy Farming. The new Food Technology associate degree will also be formally launched. We submitted funding applications for two Master programmes in 2017. The application for the Master of *Innovative Dairy Chain Management* has already been approved, while the other will follow shortly. We are also preparing a new professional Master of *River Delta Development*. This will be presented in conjunction with the HZ University of Applied Sciences and Rotterdam University of Applied Sciences.

All the changes in recent years have had a major impact on the results of the National Student Survey (NSE) and our staff satisfaction survey (MTO). Although we have witnessed a slight improvement in these results, we are not yet at the level we aspire to as a university of applied sciences. We will therefore continue with additional activities to further improve the results of these measurements.

In 2017, we also took new steps in the development process towards a value-driven organisation, based on teams responsible for results and with core values integrated in the way we work. We talked to each other about our common motives and the core values. And together we determined steps to bring our university of applied sciences closer to a forward-proof position within higher education. Steps that we cannot take alone, but together with everyone who cares deeply about Van Hall Larenstein.

The Executive Board wishes to thank all employees, students and partners for their efforts and contribution. Together we will collect our next green stamps in a successful 2018!



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



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

¹ AISHE = Auditing instrument for Sustainability in Higher Education



Trackman wins Golden Globe

The Trackman project (Animal Husbandry students, Velp) received the first jury award at the annual VHL Golden Globes in 2017. Trackman is a robot that help maintain a clean and level surface for sport horses. The Food Forest and Biodiversity project (Animal Management students, Leeuwarden) received the public award. These were two of the ten nominated student projects. The competition aims to make students think about solutions for all kinds of sustainability issues. And prizes go to ideas that have a positive impact on society. The Golden Globe winners were simultaneously nominated for the LC Awards, the prestigious students awards of the Leeuwarder Courant, the oldest daily newspaper in the Netherlands.



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What will we be eating in twenty years?

What will we be eating in future? How can food supply become more sustainable? These questions were on the table at the 'Dinner of the Future', organised for the second time in 2017 at the initiative of the Dutch Cuisine cooking school (ROC Friese Poort, Sneek) and CH2018 Core Team (Leeuwarden Capital of Culture 2018, Van Hall Larenstein). Chefs, farmers, cheese makers and supermarket managers talked to lecturers, students, policy officers and professors. While the chefs served seaweed and insects, the 42 guests discussed the potential of these products. And the future of 3D food printing.



Van Hall Larenstein

The growth and development of the global population is increasing the pressure on our planet, creating a greater need for innovative and sustainable solutions. Based on our mission, we ensure the development of sustainable thinkers who will contribute in their way to resolving sustainability issues and preserving a liveable world.

Mission, vision and ambition

We train students to become ambitious and innovative professionals and aim through our applied research to contribute towards a sustainable world. Van Hall Larenstein is a green *University of Applied Sciences*. This can be recognised in our education, research and business operations. Based on a substantive profile in the areas of *Animals and Business, Delta Areas and Resources* and *Food and Dairy* (the three domains of our university of applied sciences), we make strategic choices for our education and research.

As a green university of applied sciences, we ensure high-quality education in which sustainability takes centre stage. By linking education, applied research and the professional field, research outcomes can be used in education and students are able to acquire competences that comply with the demands of the professional field. We have study programmes and research themes that are often unique in the Netherlands, have an interdisciplinary character and always cover a special field of study. All of our Bachelor degree programmes also have at least three AISHE stars.

Four core values form the basis of our identity and help us achieve our mission and vision.

1. Sustainable

Everything we do is driven by our ambition to contribute towards a sustainable society, in which the aspects *people, planet and profit* are in equilibrium;

2. Involved

We are involved with the student, each other, the organisation and our partners. Personal contact with students, colleagues and partners matters to us. By knowing and listening sincerely to each other, we can work better together. We are also closely involved in the sectors for which we provide training and conduct research;

3. Enterprising

We are innovative, follow what is happening around us, often go one step further than expected of us and make use of opportunities to achieve our goals. Through short lines of communication and personal contact, we can respond quickly to new developments;

4. Responsible

We do what we say and show what we do. We are accountable for our contribution to the results to be achieved.





“Sustainability and a great responsibility for the future of our earth are always recurring items”

Food forest in the library

A food forest in the library. This could be seen in the Rozet Cultural Centre in Arnhem during Book Week 2018 (theme: nature). A food forest combines edible trees and plants with nature and agriculture. The Rozet display showed how a forest can contribute towards a solution to the world's food problem. This was presented by the Management of Forested Landscapes professorship of Van Hall Larenstein in Velp, which conducts experiments with food forests, but Van Hall Larenstein did more during Book Week. For example, the students were in charge of 'plant for a plant': children who drew a plant were given one to take home.



Key figures

In 2017, 4,312 students, excluding Master's students, studied at Van Hall Larenstein. Enrolments in our Bachelor and associate degree programmes were 7.7% higher than in 2016. Enrolments in our Master programmes also increased compared to 2016. The number of Bachelor programme graduates was 13.7% higher than in 2016.

Students

	2015	2016	2017
Students (1 October per academic year, excluding Master's students)	4,220	4,239	4,312
Enrolments in Bachelor and associate degree programmes	1,211	1,150	1,239
Enrolments in Master programmes	59	50	62
Bachelor programme graduates ¹	532	568	646
Associate degree programme graduates	36	41	38
Master programme graduates	19	50	32 ²

1 For an academic year date 1 October.

2 Kwalificatie 2016-h2017 (Masters 1-10-2016 until 30-9-2017).

Staff

The number of FTEs compared to 2016 has remained almost constant; 37.7% of employees work on a full-time basis. The number of female employees has risen slightly compared to previous years. In 2017, 53.1% of employees were women. More than one-third (34.8%) of the workforce is 55 or older.

	2015	2016	2017
Number of employees	540	566	560
Number of FTEs	435	449	446
Support staff	37.3%	34.8%	32.7%
Teaching staff	62.7%	65.2%	67.3%

Financial

	2015	2016	2017
Total income	52,123	54,492	55,437
Total expenditure	51,919	54,233	54,838
Net result (in € thousands)	42	321	352
Solvency ratio	34.8%	31.1%	33.0%
Current ratio	0,6	0,6	0,6

"We want to encourage and challenge students to develop their talents with high-quality education".

"For us, the main quality indicator is how satisfied students and alumni are with their programme and everything related to it".

"We want to engage students even further in the design and structure of our study programmes".



Our study programmes

Van Hall Larenstein offers a broad range of study programmes in the green domain. As of 1 September 2017, Van Hall Larenstein offers fourteen Bachelor programmes, four professional Master programmes and seven associate degree programmes (see Table 2). Four of the fourteen Bachelor programmes are taught both in Leeuwarden and Velp. These are Agribusiness and Business Administration, Animal Husbandry, Management of the Living Environment and Food Technology.

Location Leeuwarden

Name	Type	ISAT
Associate degree		
Dairy farming	full-time	
Entrepreneurship	full-time	
Integral Enforcement Sustainability	part-time	80023
Law	full-time	80023
Sustainable Soil Management	part-time	80070
Sustainable Water Technology	part-time	80069
Bachelor		
Agribusiness and Business Administration	full-time	34866
Animal Husbandry	full-time	34869
Animal Management	full-time	34333
Biotechnology	full-time	34331
Coastal and Marine Management	full-time	39204
Environment	part-time	34284
	full-time	34284
Food Technology	full-time	34284
Horticulture and Arable Farming	full-time	34868
International Development Management	full-time	34203
Management of the Living Environment	full-time	34859
Post-initial Master		
Innovative Dairy Chain Management	full-time	70058

Location Velp

Name	Type	ISAT
Associate degree		
Land and Water Management	part-time	80128
	full-time	80128
Garden and Landscape	part-time	80068
	full-time	80068
Bachelor		
Agribusiness and Business Administration	full-time	34866
Animal Husbandry	full-time	34869
Food Technology	full-time	34856
Forestry and Nature Management	part-time	34221
	full-time	34221
Garden and Landscape Architecture	part-time	34220
	full-time	34220
International Development Management	full-time	34203
Land and Water Management	part-time	34226
	full-time	34226
Management of the Living Environment	full-time	34859
Post-initial Master		
Agricultural Production Chain Management	full-time	70058
Management of Development	full-time	70057
Project and Process management in the Domain of Land and Water	full-time	70056

International Business

The *International Business and Management Studies* (IBMS) programme is ending. This is due to the decision by the Netherlands Association of Universities of Applied Sciences to reduce the number of Bachelor programmes in economics and management within higher education (the 'heo' conversion). The cooperation between NHL Stenden University of Applied Sciences and Van Hall Larenstein is ending at the same time. This will be replaced on 1 September 2018 by a broader study programme in *International Business* (IB). And one year later, on 1 September 2019, Van Hall Larenstein will also offer this programme independently.



Professors on expedition

During the annual 'Lexpeditie' (professors on expedition), professors create links in their research domains. How are they working on which of the Sustainable Development Goals (seventeen UN goals aimed to end poverty, inequality and climate change) and where can they work together?

This edition of Lexpeditie began with an inspirational guided tour of Astron, the Dutch Institute for Radio Astronomy in Dwingeloo. The professors later discussed which questions from the National Science Agenda they could examine over the coming years.



Sustainability



The most sustainable University of Applied Sciences

We believe in a world in which we are constantly making sustainable choices. Climate change, the food problem, tension between nature and the living environment, land and water management. Professionals who are capable of thinking and acting sustainably are needed for all these themes. What is more: people who view sustainability as self-evident. The university of applied sciences plays a social role in this regard. By putting sustainability at the heart of our education, research and business operations, we wish to contribute together – and with all students – towards a better world for now and for future generations.

Sustainable Development Goals

We link our contribution to the big picture through the *Global Goals For Sustainable Development*. This is why we have signed the corresponding SDG Charter, by which we commit to working actively towards these *global goals*. These are seventeen goals which the United Nations set in 2016, as the successors to the millennium development goals. The SDGs aim to eradicate poverty, inequality and climate change by 2030. This cannot be achieved by governments alone. As a green university of applied sciences, we can also contribute. We feel connected to all seventeen *global goals*, but have chosen – based on our education portfolio and professorships – to focus specifically on eight of the seventeen goals.



CSR quality mark 'Erkend' (Approved)

In 2016, Van Hall Larenstein became the first university of applied sciences in the Netherlands to be awarded the CSR quality mark 'toegewijd' (committed). In 2017, we went one step further and achieved the 'erkend' (approved) level. This shows we have continued on our chosen course of corporate social responsibility and also achieved results in this regard. This can be seen, for example, in the Institutional Plan 2018-2021, with a more stringent policy and greater focus on dialogue. Naturally, we have also continued to integrate sustainability in our core activities: research and education.

AISHE quality marks

The integration of sustainability in education is based on AISHE certifications (AISHE stands for *Auditing Instrument for Sustainability in Higher Education*). An audit team from the Hobéon certification agency assess study programmes based on the extent to which sustainable development is integrated in education, research and organisation. They look, for example, at vision and policy, personnel and graduates. Many study programmes were awarded three AISHE stars in 2017. According to the auditors, this shows that sustainable development is system-oriented and included in the programme profile. This applies to:

- Environment
- Coastal and Marine Management
- Forest and Nature Management
- Management of the Living Environment
- Land and Water Management
- Animal Management
- Animal Husbandry (including Horticulture and Arable Farming)
- International Development Management
- Garden and Landscape Architecture



The three other study programmes complete the AISHE process at the start of 2018. All of our Bachelor programmes will then have three AISHE stars. This would make us the first university of applied sciences to have this level of sustainability for all its study programmes.

Silver SustainaBul

Since 2015, Van Hall Larenstein has participated in SustainaBul: the sustainability ranking of all Dutch universities. The student network organisation, Studenten voor Morgen (Students for Tomorrow) started the ranking in 2012. As in 2016, we occupy second place in the rankings for universities of applied sciences, behind Avans.

CO₂ footprint

Our ambition to be the greenest university of applied sciences extends beyond education. It also covers our business operations. This means that we set targets, as an organisation, for energy consumption, waste processing and water consumption, for example, and for the sustainable management and use of buildings. One measure of this is the CO₂ footprint. This shows how much CO₂ you emit as a

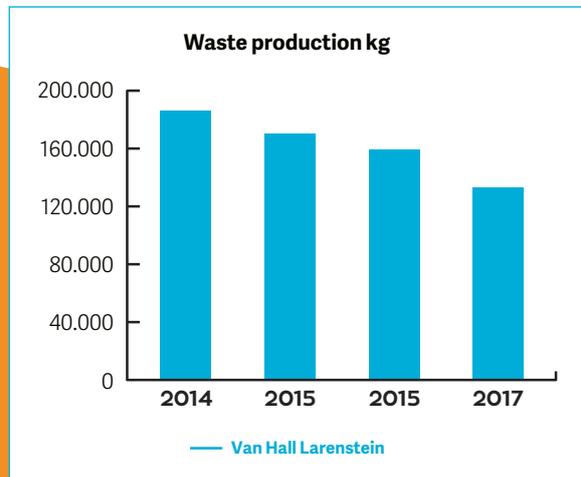
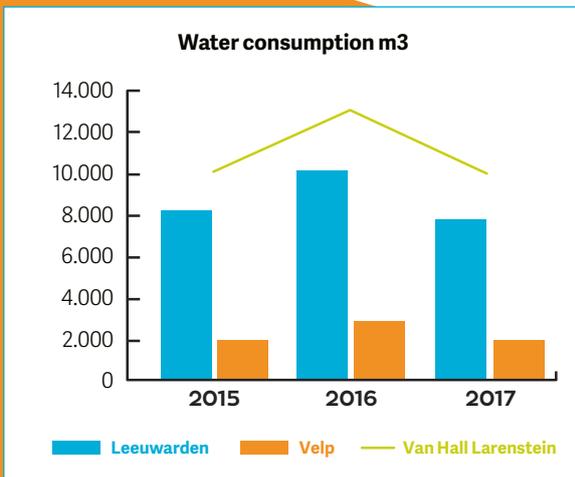
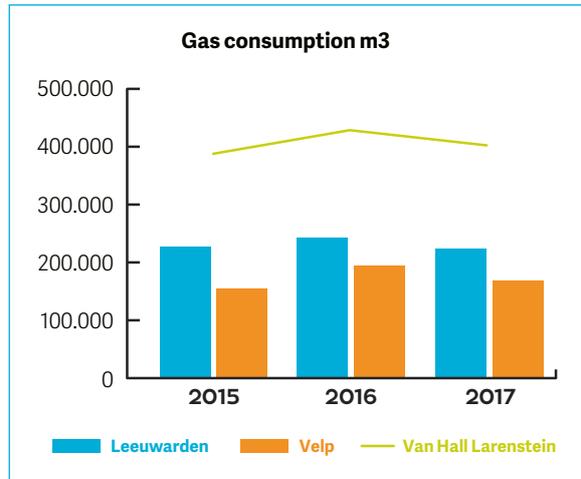
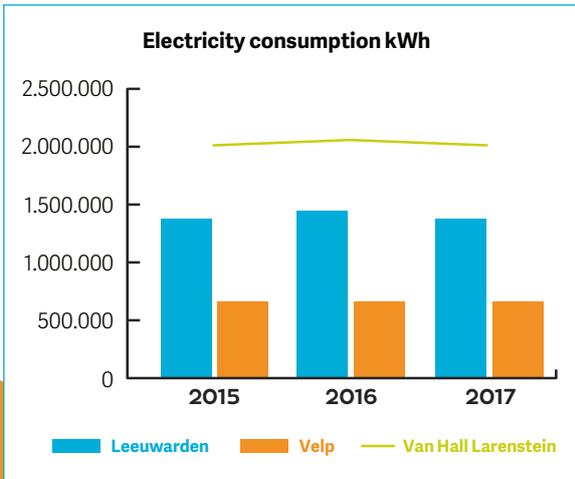
business and enables you to properly assess where emissions can be reduced. A minimal footprint is also an objective in our tenders and mobility policy.

Area development

We can contribute towards the development and dissemination of knowledge in the field of sustainable green management around both of Van Hall Larenstein’s campuses. In Leeuwarden, this is the Potmarge precinct and in Velp, the Larenstein Knowledge Estate. Our work includes bee, bird and butterfly-friendly green management and draining rainwater to the sewer system.

We do this with students and researchers, with neighbouring green schools such as Helicon in Velp and Nordwin College in Leeuwarden, with Rheden and Leeuwarden municipalities and other parties involved in the area.

For example, students and staff have contributed towards the *Waterconnecting* theme of Leeuwarden, Capital of Culture, in the form of a ‘pompeblêd’ (water lily) route along and through the Potmarge River.





**"Everything we do is driven by
our ambition to contribute towards
a sustainable society"**





Education

As a green university of applied sciences with two campus locations in the Netherlands, we contribute towards the green domain: regionally, nationally and internationally.

Van Hall Larenstein offers study programmes that enable students to tackle the complex issues of our time. They learn how they can contribute towards a sustainable world. For the reorganisation of our range of study programmes, we looked at how we could achieve this. What is the national and international demand in our domain? Van Hall Larenstein first developed a new educational concept as a framework for the study programmes. That concept is the basis for organising and implementing all education at Van Hall Larenstein. It allows the individual student to develop their talents and professional competencies in an inspiring environment.

All study programmes have five characteristics.

- centres on the real world
- freedom of choice
- diversity
- up-to-date use of digital resources
- applied research, internationalisation and sustainability in competencies

In September 2017, the 2015 student cohort entered the third year of their study programme under the new educational concept. In 2018, they will start their fourth year.

Changes to the range of study programmes on 1 September 2017

There have been major changes to the range of study programmes over the past year:

- The new full-time professional Master of *Innovative Dairy Chain Management* has started.

- The full-time Bachelor of Management of Living Environment is now offered both in Leeuwarden and Velp, with major *Smart City Development*.
- There is also a new specialisation within the Dairy Farming associate degree: Organic Dairy Farming.

Plans for new study programmes and graduation profiles

We are working on a new professional Master of *River Delta Development*. A macro-efficiency check has been requested: is this study programme adequately relevant overall and will it provide training for the expected demand for professionals? The New Programme Assessment is scheduled for spring 2018. If both assessments are positive, the new study programme will start on 1 September 2018. We will then offer this Master programme in conjunction with the HZ University of Applied Sciences and Rotterdam University of Applied Sciences.

The Accreditation Organisation of the Netherlands and Flanders (NVAO) administered the New Programme Assessment for the new Food Technology associate degree in October 2017. The assessment was positive and the study programme will formally start on 1 September 2018.

In 2017-2018, Van Hall Larenstein will continue to work on the new Animal Management associate degree in Velp.

Eight students in China

In April 2017, eight Van Hall Larenstein students worked on a project with students of the Tianmu Lake Polytechnic and Jiangsu Liyang Polytechnic in the Garden Valley resort in Liyang, China. This was the third visit by our students to Liyang. The students worked on an assignment for Mr Zhong, the owner of the leisure park. Nature, culture, design and marketing all converge in this project. Ideas such as a floating water treatment plant, a children's farm, forest fire alarm system and a romantic cottage have been proposed and discussed during the three student trips.

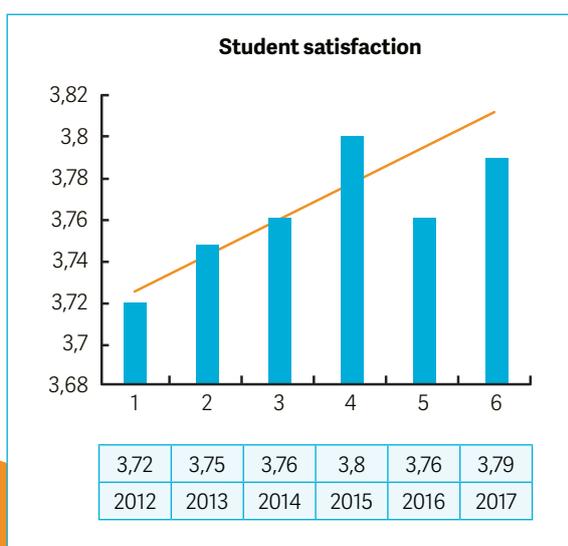


Encouraging higher professional education (HBO) Master programmes

Due to the wider funding of Master programmes and incentives from the 'Professional Masters' joint action plan of the Netherlands Association of Universities of Applied Sciences, we could work on developing higher professional development (HBO) Master programmes in 2017. Besides the existing *post-experience* Master programmes (for students who have already acquired work experience), there are also more 'internal transfer' Master programmes (from students on Bachelor programmes). These have a substantially different student population and require other teaching methods. Van Hall Larenstein submitted funding applications for two Master programmes to the Higher Education Efficiency Committee (CDHO) in 2017. The application for the Master of *Innovative Dairy Chain Management* has already been approved and, as stated above, the application for the Master of *River Delta Development* is still being processed.

Equal opportunities in education

The MBO-HBO transfer subsidy scheme (for transferring from senior secondary vocational education to higher professional education) opened in 2017. This subsidy scheme originates from the 'Actieplan Gelijke Kansen' (Equal Opportunities Action Plan) of October 2016. Van Hall Larenstein has been granted a subsidy to work with student mentors in Leeuwarden. An HBO student becomes the mentor of a MBO student who wishes to transfer onto an HBO programme. The HBO student helps the MBO student before, during and after the transition. In 2017, we also organised a two-day *Education Festival* in Velp and Leeuwarden for MBO students and lecturers and will be repeating this in 2018.



Student satisfaction

Overall satisfaction across the entire university of applied sciences has risen slightly to 3.79 (on a scale from 1-5)

At 4.18, the general atmosphere on the programmes is still higher than the national average of 4.12.

Over the past three years, we have worked on improving the prompt submission of timetables and grades. It is therefore good to note that there has already been a rise in student satisfaction regarding the provision of information on study progress. The renovations in Leeuwarden have led to increased student satisfaction with the facilities there.

Alumni satisfaction

The last annual alumni survey shows study satisfaction among alumni lies at 73%. With this outcome, our quality standard of 70% for 2017 under the Institutional Plan has been achieved.

Lecturer quality

We no longer appoint lecturers who do not hold a Master's degree. Lectures without a practical teaching record are also not given permanent appointments. The percentage of lecturers at Van Hall Larenstein with at least a Master's degree is relatively high.

The aim was to achieve a percentage of 80% in 2017. We have achieved this aim: 80% of our teaching staff have a Master's degree or PhD.

Points for attention

Customer focus and quality awareness always apply to our education. Work on this continued in 2017. The teams and management discussed measures and customised activities at length. We are pleased with the slight increase in the results of the National Student Survey (NSE) and the positive effects of the push for quality in 2017. We remain committed to bringing customer satisfaction to the level we aspire to as a university for applied sciences.



Benefit for Indian cattle farms

Family Dairy Tech, a project between Van Hall Larenstein and its Indian partner, Baramati India, has laid the foundation for joint applied research. This project has worked on a design for integrated farm management, better feed and an accounting app. for cattle improvement. It has resulted in advisory opinions both for Dutch entrepreneurs and their market position and for Indian family companies aiming to increase their profit margins. The international and interdisciplinary experience for the participating students is invaluable. A film of the project has been made for use in teaching at Van Hall Larenstein and Baramati India.



Internationalisation

Van Hall Larenstein is an international school with an international study environment. Students come from home and abroad. And all Van Hall Larenstein students are prepared for professional practice in an international context.

“We bring students from different nationalities together in international classrooms”

In 2017, our students could choose from five full-time English-language Bachelor programmes, three English-language professional Master programmes (with six variants) and five English-language short courses. The English-language Master programmes are now being converted so they can also be offered as module-based, international short courses. Last year saw the first student intake for the *Master of Innovative Dairy Chain Management* and the *Forest Chains* specialisation of the *Master of Agricultural Production Chain Management*.

Foreign students

The total foreign student intake in 2017 was 183: 122 of these students enrolled for a Bachelor programme, one for an associate degree and 60 for a Master programme. The total number of students was 468, representing an increase of 33 compared to 2016. The percentage of foreign students in the total student body in 2017 was 11%.

Framework memorandum

Objectives for the period until 2021 have been reviewed for the internationalisation framework memorandum.

An Internationalisation Steering Group has been set up within Van Hall Larenstein. And off campus, a Van Hall Larenstein employee joined the board of *Platform International Education* and the core team of *Borderless Network*.

Curriculum

In the new education concept, each study programme offers students the opportunity to obtain an international record from their third academic year. The third academic year in the new educational concept started in 2017. Several study programmes already had this option in their curriculum and students used it in these programmes.

Other forms of internationalisation in the curriculum are the compulsory international work placement, language instruction, international guest lecturers from the professional field or partner institutions, international cases or assignments (from *living labs*), virtual education with partner institutions, international literature, international excursions, participation in international conferences and an *international classroom*.

Origin	Leeuwarden	Velp	Velp	Total
	Bachelor programmes	Bachelor programmes	Master programmes	
Europe	165	134	63	299
Africa	2	4	7	69
Asia	5	83	0	95
North and South America	1	4	0	5
Oceania	0	0	0	0
Total	173	225	70	468



Research

Van Hall Larenstein is a knowledge institution where applied research takes centre stage. We conduct research to improve, develop and innovate professional practice within the three domains of 'Animals and Business', 'Delta Areas and Resources' and 'Food and Dairy'. In this way, we contribute towards the development of a sustainable society.

Applied Research Centres and professorships

Each of the three domains has an Applied Research Centre (ARC). An ARC is the umbrella structure within which several professorships work together. An ARC has the function of a knowledge centre.

The summary of ARCs shows the lines of research (professorships) and the individual professors of each ARC (December 2017).

In most projects, different professors from the three domains work together or staff and students from the different domains are involved. Projects are organised in structures such as *living labs*, in which the different parties collaborate.

Van Hall Larenstein has two honorary professors linked to the *Delta Areas and Resources* domain:
G. Baks and W. Helmer.

Centres of Expertise

In a *Centre of Expertise (CoE)*, lecturers and students work with researchers and scientists. The aim is to contribute with applied research towards innovations in the professional field and thus promote the quality of education in universities of applied sciences.

Besides the CoE Agroanimals, Van Hall Larenstein is the budget holder of the Nature and Living Environment Knowledge Centre, a similar construction. Within the green CoEs, Van Hall Larenstein participates intensively in CoE Food and modestly in CEOs Greenports and Open Cultivation. In addition to collaborating with other green universities of applied sciences in the four green CoEs, Van Hall Larenstein participates in three CoEs in the 'greyer' sector that are in line with its profile and focus areas: CoE

Biobased Economy (in which Wageningen University and Research also participates), CoE Water Technology and CoE Delta Technology.

Living Labs

Living Labs are workshops of knowledge and innovation in a real-life experimental environment, aimed at co-creation between different players. Research is conducted in these *living labs*. They exist in all of the ARC domains, both nationally and internationally.

Four living labs within the *ARC Delta Areas and Resources* have grown substantially:

- Delta East
- Noardlike Fryske Wâlden (Northern Frisian Woodlands)
- Biobased IJsselmeer
- Wadlab

Other Dutch living labs in this domain are still under construction, including the Gelderland Valley and the Citizens and Biodiversity knowledge centre in Leeuwarden.

Internationally, Van Hall Larenstein collaborates intensively in living labs working on sustainable food production.

- Baramati – Pune (India): hightech Indo-Dutch Centre of Excellence Vegetables, which will later be supplemented with a CoE Dairy and Food Processing
- Water, Health & Development Java (Indonesia)
- Food, Health & Safety in Yunnan and Sichuan (China), currently engaged in research and development of fruit and vegetable cultivation
- Romania, focusing on fruit, dairy and manure processing in north-east Romania;
- Biobased Brazil, which has been running with several partners for some time.



Animals and Business ARC

Supporting entrepreneurs, authorities and social organisations with applied research in innovations aimed at animal behaviour and welfare and at developing sustainable living environments for animals and people, translating those requirements into sustainable business models for producing adequate and safe food and other biobased products.

Professorships	Professor(s) (FTE)
Animal Welfare <i>Animal Behaviour, Animal Health and Animal Welfare</i>	H. Hopster, PhD (0.5)
Sustainable Agribusiness in Metropolitan Areas	H.P.A. Eweg, PhD (0.5) Head of Research Department
Healthy Bees	Ir. K. Steijven, PhD (0.6) Dr. A. Strijkstra, PhD (0.4) <i>Acting Professor Healthy Bees</i>
Meadow birds	A.G.E. Manhoudt, PhD (0.5)

The ARC is currently active in *living labs* in India (Baramati-Pune), N.E. Romania, Brazil (Minas Gerais), Ethiopia and Kenya and obviously in the Netherlands. Internationally, cooperation is sought with governments in the countries where the living labs are organised. Cooperation with international knowledge institutions occurs within these *living labs*.

Projects in 2017 include:

- Family Dairy Tech in conjunction with Living Lab Baranatu India
- Sustainable control of varroasis in Dutch beekeeping
- 'Sensing alarm responses of ungulate herds to prevent poaching of endangered megafauna'
- Cows and Herbs, herbaceous grassland

Delta Areas and Resources ARC

Conducting applied research, aimed at improving, developing and innovating professional practice in Delta Areas and Resources and thus contributing towards a sustainable society in a delta.

Professorships	Professor(s) (FTE)
Circular Economy and Water Resources Management	Prof. A.J.M. Smits (0.2) <i>Head of Research Department (0.4)</i>
Coastal and Marine Management	Dr. P.A. Walker, PhD (0.6)
Sustainable Landscape Management	D.J. Stobbelaar, PhD (0.6)
Sustainable Foodscapes in Urban Regions	Ir. N. Van Dooren, PhD (0.6)
Management of Forested Landscapes	Dr. E.L. Abarca, PhD (0.6)
Oil Palm and Tropical Forests	P.J. van der Meer, PhD (0.6) <i>Associate Professor</i>
Sustainable River Systems	J.S. Rijke, PhD (0.4) <i>HAN and Van Hall Larenstein</i>
Sustainable Soil Management	Dr. E.V. Elferink, PhD (0.6)

In 2017, the new Oil Palm and Tropical Forests professorship was introduced with the mission of making the production of palm oil and other tropical commodities, such as tropical wood, more sustainable.

Several projects started in 2017, including:

- Route towards a more resilient society; National Science Agenda Kickstart
- Arrosta, 'Building with Nature; coral reefs of the Caribbean-Dutch islands of St Eustatius and Saba
- Food forest as a proposition for a circular economy
- Citarum, collaboration between the partners in the Upper Citarum River Basin living lab
- KIEM logistics, smart transport, regional food, beautiful landscape



Food and Dairy ARC

Conducting applied research for the sustainable production of healthy food and dairy worldwide. This is always done with broad knowledge and use of modern technology, in a social context and consideration for the living environment. Achieving a socially adequate food supply in a safe and healthy living environment requires a circular and interdisciplinary/multidisciplinary approach with collaboration between knowledge institutions in the area of food, non-food and biobased solutions.

Professorships	Professor(s) (FTE)
Sustainable Dairy Farming	W. Voskamp-Harkema, PhD (0.4) Head of Research Department (0.4)
Herd Management and Smart Dairy Farming	C. Lokhorst, PhD (0.5)
Cost-Effective Dairy Farming	Dr. X. Chen, PhD (0.6)
Dairy Value Chains	R.M.T. Baars, PhD (0.8) <i>Associate Professor</i>
Healthy and Sustainable Food & Western Diseases	Dr. E. Nederhof, PhD (0.5)
Food Safety	A. Schaafsma, PhD (0.4)
Health and Nutrition	F. van der Leij, PhD (0.2) <i>Inholland and Van Hall Larenstein</i>
Food Physics	Dr. A.A.C.M. Oudhuis, PhD (0.25 – 0.5)
Dairy Process Technology	P. de Jong, PhD (0.6)
Safety in the Food Chain	Dr. M. Strikwold, PhD (0.6) <i>Associate Professor</i>
Sustainable Water Systems	P.M.F. van der Maas, PhD (0.5)
Biobased Proteins	Dr. E.C. de Bruin, PhD (0.6)
Water Technology	L. Agostinho, PhD <i>NHL Stenden and Van Hall Larenstein</i>
Circular Plastics	Dr. R. Folkersma, PhD Dr. J. Jager, PhD <i>NHL Stenden and Van Hall Larenstein</i>
Biomimicry	M. Gallo, PhD (0.1) <i>Aeres, Inholland and Van Hall Larenstein</i>

In 2017, existing professorships were adapted and new ones introduced. For example, *Biobased Proteins* started (as the successor to *Biobased Economy*, which ended in 2017); a new professor was appointed for *Biomimicry* with Aeres and Inholland and a new professor took over the Sustainable Water Systems professorship. A Safety in the Food Chain associate professorship also started. The *Food Application Centre for Technology* (FACT) was set up in Leeuwarden: an initiative between Van Hall Larenstein, MBO Life Science, the province of Friesland and food industry companies to support sustainable and healthy product and process innovation on a pilot scale, boost employment and train highly qualified personnel.

Several projects started in 2017, including:

- a) 'Creating A New Approach to Peatland Ecosystems'
- b) Added value of the organic farmer
- c) BioCas
- d) Personalised food for the elderly in Friesland
- e) Grass 4 Farming.



Living lab in Leeuwarden

The Potmarge is a small river that flows alongside Van Hall Larenstein in Leeuwarden. The surrounding area is a living laboratory for area development and a testing ground for food, water, health and wellbeing. Van Hall Larenstein has started the 'Duurzame gebiedsontwikkeling Potmargezone' (Sustainable area development of the Potmarge zone) project here with Nordwin College's senior secondary vocational education programme (MBO). The project partners aim to create an urban garden with testing grounds, food production and an innovative area with water and energy art. The design of the 'pompeblêd route' (referring to the leaves of the yellow water lily in Friesland's flag) contributes towards the waterconnecting theme of Leeuwarden, Capital of Culture.



Professionalisation

Van Hall Larenstein is developing into a value-driven organisation, based on teams responsible for their results and core values integrated in the way we work. By each contributing towards the objectives of the organisation, employees get the best out of themselves.

In 2017, more than ever, we have discussed the common motives and core values with all employees. This happened, for example, during sessions in which employees discussed the Institutional Plan 2018-2021. They also discussed the core values during the annual opening of the academic year, a conversation that was later continued in the organisation and in teams. Further to the Institutional Plan, a strategic HRM policy plan has also been drawn up.

Van Hall Larenstein Academy

We facilitate employee training and implementation of the professionalisation plan in the form of the Van Hall Larenstein Academy. This is to motivate employees, promote the quality of education and encourage innovation in education.

In 2017, professionalisation focused on professional training and congresses and on making teams, teaching methods, testing and examining, coaching and intervision more professional.

For example, these training sessions, courses and programmes were organised:

- Training Programme for Study Programme Committees
- Basic Qualification in Teaching Method Skills
- Teaching Methods
- Basic Assessment Qualification
- Senior Assessment Qualification
- Reflections on Study Career Guidance
- English Cambridge C1 Course
- Video Training

Sustainable Employability Scheme

As a university of applied sciences, we want our employees to remain employable in the future. Both we and the employees themselves have a responsibility in this regard. The sustainable employability of our employees has received more attention in recent years. Not only by giving employees scope and responsibility to continue developing their professionalism, but also by encouraging them to broaden their horizons. A designated scheme exists for this purpose.

During 2017, a total of 18,413 hours were allocated under this Sustainable Employability (SE) Scheme. With the accumulated and uncompleted hours of previous years, the total is 34,004 hours. These hours are used, for example, for gaining work experience outside Van Hall Larenstein, additional study leave, sabbatical leave or recovery, care obligations for a limited period, restoring the work-life balance or activities aimed at broadening employability.



Harvest dinner on Sustainability Day

Harvest had a double meaning at the harvest dinner in Velp on Sustainability Day 10-10. Apart from eating together and discussing the origin and preparation of the dishes, thirty students from the Management of the Living Environment programme made plans for the Larenstein estate's sustainable future. Part of the harvest – chestnuts, grapes, vegetables – came from the estate. The dinner guests were people involved in the estate or active in the local food scene. And plenty of ideas, such as nettle soup, were harvested during the dinner.



**van hall
larenstein**
university of applied sciences

Agora 1
Postbus 1528
8901 BV Leeuwarden
058 284 61 00

Larensteinselaan 26a
Postbus 9001
6880 GB Velp
026 369 56 95

www.hvhl.nl