



AERES
UNIVERSITY OF
APPLIED SCIENCES

RESEARCH MAGAZINE 2022

Healthy living in the green city!

From city to ecosystem

Inclusive food strategy

Playing sports in public spaces



Scan voor het magazine
in het Nederlands

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Editor: MagSite

Editor in chief: Kees de Rijk

Design: Josta Bischoff Tulleken

Concept & realisation: MagSite, Wormer

Photography: Kees Bennema
Peter Hermeling (Bluemonque) en Tamara Hoornweg

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Preface

Green transition

The Floriade got off to a colourful start, and in the following six months, the theme of Growing Green Cities will be revealed to two million visitors. This will demonstrate how innovations such as drones, robots, vertical farming and sensors influence the growing of crops. In addition, much attention will be given to the connection between horticulture and sustainable, healthy cities. The Dutch Innovation pavilion, built with one hundred bio-based materials, will picture the future of home construction based on sustainability and the circular economy.

With our beautiful new building in the Floriade park, we have materialized our wish to lead the way in the green transition and its challenges. We want to be green changemakers and have the ambition to take on the challenges that we are faced with in agriculture, food and healthy living environments. We bring this about with our study programmes and increasingly with our Practice-Based Research Team. In 10 years' time, this team has grown from our first professorship into a mature team of 20 people, of whom 7 are research professors. They actively seek to collaborate with our other faculties in Dronten and Wageningen on our projects and on theirs.

The Floriade will provide a melting pot of new ideas that give meaning to the theme of Growing Green Cities. We provide online platforms, such as the educational programme for young people and the Nectar Exchange, where knowledge is collected and exchanged. In addition, we participate in other Floriade activities, in order to demonstrate and share our experience and expertise. By doing so, we express our wish to be connected with the outside world, and support innovations that are necessary to create a green, healthy and sustainable future.

In this edition, three of our new professors will be introduced to you. I hope you thoroughly enjoy reading this edition of our magazine.

Director of Aeres University of Applied Sciences, Almere



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provide a melting pot
of new ideas"*

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The stage is ours



They were both present when Aeres University of Applied Sciences acquired Floriade in 2012. Dinand Ekkel has been the professor of 'Groene & Vitale Stad' at Aeres University of Applied Sciences in Almere since 2011 and leads the 'Team Praktijkgericht Onderzoek' (translation: Practice Oriented Research Team). He even worked on the proposal. Linda Nol started working as the 'Teamleider Toegepaste Biologie' (translation: Applied Biology Team Leader) in 2012.

"We came from the dull inner city to the Aeres University of Applied Sciences building in Almere that is literally blooming"

Dinand Ekkel



"In the Team Praktijkgericht Onderzoek (TPO) we have a programme calendar," Ekkel says, "on which is noted what we can expect in the next six months during Floriade. Projects have been planned and there will be three inaugurals in the summer or autumn. Let us use the stage provided to us by Floriade, to highlight our fine activities. In turn, Floriade has asked us to make a programme for one of the Floriade Dialogues. We have been given a stage to debate with various international guests on the subject of Urban Health & Green.

Unforeseen

We take weekly note of the programme calendar and anticipate being surprised by things that we could not have foreseen. For example, we might be informed about a delegation from Australia that will arrive next week and

wants to find out what we do at this school. Or about a project development agency from Eindhoven that wants to come and take a look at our new school. We will receive a large number of requests like these.

Combine programmes

Together with Floriade and Flevo Campus, we will be organizing a 'Voedselweek' (translation: Food Week) in the third week of June. The initiative for this was the fact that one of my colleagues graduated on the subject of Feeding the City. At the time, I said: graduating is fine, but do something in return for the city. Another colleague was assigned to the Almere City Council to lead the Milan Urban Food Policy Pact. They have an annual conference of one week that is on the Floriade programme. We will combine all of these programmes to create a Feeding the City week." »

Authentic real-life situations

“I too can remember the ‘Bidbook’ that we used to acquire Floriade with, and that we began giving the courses in two small shipping containers,” Linda Nol says. “Looking at the fantastic school buildings where we are now, it is clear that a lot has happened in more than ten years’ time. Many students are involved in various Floriade projects. I am head of Praktijkleren (translation: Practical Learning) and it is my task to bring vocational education students into contact with authentic real-life situations as much as possible. That means that at least 75% of their assignments are not just for school but for external clients as well.

Does not end up In a desk drawer

We have many contacts at Weerwoud on Utopia Island. This is a combined urban agriculture and social project, where students do internships on plant, growing and soil issues. The external clients also receive a copy of the assignment report, so this does not end up in some teacher’s desk drawer. Another project is a large scientific research project for which we need some of Floriade’s greenhouses. Together with my colleagues, I am finding out how we will arrange this in six months’ time. I do many things and that is why I take great pleasure in working here.

Go the extra mile

Students easily find jobs, because they already have many contacts in their fields of practice. Sometimes, we go the extra mile in our study programme. In one of the modules, we take a look at the fine projects offered by our external clients, and if necessary, we take that extra step when part of the project is not included in the curriculum, in order to support our students. We provide them with money to fund advice from outside experts on subjects that they know nothing about. The assignment results can be applied straight away by the clients. This improves our students’ job suitability.

Bees come inside

Floriade’s influence is clearly visible. We came from the dull inner city to the Aeres University of Applied Sciences building in Almere that is literally blooming. When you open a window, the bees come inside. It is absolutely fantastic. There are so many opportunities that enable us to create six-month internships. All of the students have participated in challenges presented by Floriade, there are summer schools and winter schools, and there is a birdsong recognition course in Weerwoud. There will be a floating food Island on the Weerwater

“Students easily find jobs, because they already have many contacts in their fields of practice”

Linda Nol



lake and plenty of attention for Oosterwold, which is the largest urban agricultural project in the world. Visitors to Floriade will be informed by students at stands.

Relative problem

Floriade has just begun and it is already clear that we will receive many requests for collaboration. We have to choose wisely, because we cannot follow up on every request, even though we would like to. It is a relative problem that arises now that the school is blooming.” «



Interested?
If you would like to know more about this project, please contact
Linda Nol l.nol@aeres.nl

Not replacing, but complementing

To measure is to know. This, in a nutshell, summarizes the professorship that Miguel Dionisio Pires has been endowed with for two days a week. He aims to obtain healthy surface waters with innovations in monitoring, modelling and measures. To this end, he uses, among other things, remote sensing and the AlgaeRadar.

Innovations in monitoring give more insights into how water ecosystems work

Dionisio Pires gained his knowledge on innovations in water research at Deltares. The collaboration between Deltares and Aeres will ensure that aquatic ecology and biodiversity are investigated, water quality models are validated, and measures are improved and made more efficient. This centres around biodiversity. By implementing innovations in monitoring, insights will be gained into how water ecosystems work.

Poorer water quality

"In the past, the water quality was very poor, due to nutrient run-off from agriculture and industry. Fortunately, a new kind of fertilizer policy focused on the reduction of nitrogen and phosphorus, and improved purification. Huge investments have been made to effectuate this type of policy since the eighties. We keep a close eye on the influx of nutrients into our surface water. We also try to increase the diversity in the water, by stimulating the growth of aquatic plants, which in turn, attract other life forms. New challenges keep presenting themselves, for example, new substances such as PFAS,

"Often, they only briefly try a new methodology, after which it is eventually forgotten about"

Miguel Dionisio Pires



pharmaceutical residues and of course plastics, that present a demonstrable danger.

Traditional methods

Laboratories and water boards already use a wide range of methods to keep an eye on water quality and aquatic biodiversity. For instance, traditional methods such as microscopy and nets for scooping up organisms with, that can then be counted. "We want to create space for innovations and prove that these are of great value in addition to what is already being used. Take note that we do not intend to replace the current methods, but want to complement them instead, in order to provide a comprehensive overview of what is needed to optimize water quality."

Eventually forgotten about

"Water managers should be willing to persevere. Often, they only briefly try a new methodology, after which it is eventually forgotten about. In the world of water management, many people are hesitant and reserved, and often expect others to further implement innovations." Dionisio Pires does not dismiss the old techniques. His doctoral advisor (prof dr Ellen van Donk) always said: "It is fine to measure everything, as long as you know what you are measuring and what you are looking at. You must take samples and for that you need a microscope."





“Healthy surface waters with innovations in monitoring, modelling and measures”

Miguel Dionisio Pires

Cohesive whole

“I try to connect different techniques. For example, you can link satellite data to population participation data or model data. This helps you to anticipate the effects of major interventions on the water quality and on biodiversity in general. In this way, you can manage and control the water quality within smaller margins.”

Front runners and laggards

The Netherlands leads the way in knowledge on water quality and in what has been invented to control quality. At the same time, you can see that we are unable to achieve the high level of water quality that other countries have. This is due to the fact that our country is situated at the mouth of a number of large rivers that transport many undesirable pollutants. In addition, our country is a delta that is prone to a high level of salinity influx and this interaction influences the chemical composition of the soil, among other things. All things considered, it is actually an achievement that we are not lagging behind in this field.

Enhancement

Three days a week, I also work in the field of water quality and ecology for Deltares. I predict the quality of water used for swimming, I research the influence of the energy transition on the quality of aquatic ecosystems, such as research on the influence of floating solar farms on the water quality and on biodiversity. I am also closely involved in the development of the Markermeer lake, and using satellite data, I assess whether the development of the Marker Wadden have a positive effect on the water quality – meaning clear water – of the Markermeer. So, my jobs complement each other.

AlgaeRadar

This is how the AlgaeRadar came about; a fairly simple statistic model in which the presence of algae can be predicted by calculating atmospheric temperature, wind speed and solar irradiance. This is much quicker and cheaper than a 3D model and is easy to use, even by the general public. The water boards provided data and at Deltares we developed the model. I want to apply it to the Weerwater lake. We are carrying out a project with the KNMI (translation: Royal Netherlands Meteorological Institute) and the NIOO (translation: Netherlands Ecology Institute), called ‘Veilig Zwemwater’ (translation: water that is safe to swim in), in which we will try to make short-term predictions of the quality of water used for swimming.

Collaboration

A collaborative partnership of ours, Water Insight, developed a hyperspectral camera that can instantly interpret the colour of water as values that indicate whether or not the water is polluted. It is an ideal addition to satellite data that provide an overall picture of the water quality in a specific area. Once these two are functioning well together, we will have a convincing case to present to decision makers. Subsequently, people must be prepared to educate their colleagues.

Proof

I will be satisfied as soon as one of our techniques has been widely accepted in just three years’ time. By carrying out research and testing new techniques, we will be able to implement innovations step by step in organizations such as Rijkswaterstaat (translation: Directorate-General for Public Works and Water Management) and the water boards. This takes time, but if we are able to provide convincing proof, this will happen by itself.

Making the most of the opportunity

Four years may seem like a long time, but in this past year, I have met everyone and everything, shaped my professorship, and connected students and projects. In the next few years, we must make the most of the opportunity of carrying out research and testing new techniques. I am confident that we will succeed.” «

Interested?

Are you interested in surface water research through innovation and monitoring?

Contact Miguel Dionisio Pires m.dionisio@aeres.nl

Nature inclusive residents more important in management of green living environments

Promising tools

Residents are becoming more important in the management of green living environments. However, residents experience many barriers in the shape of unclear policies, residents who do not want to cooperate, etc. This project researches how residents can become more involved in Nature, in order to generate more public support for nature conservation.

"What is a Nature inclusive resident? In research that was carried out by Radboud University on green volunteers, the distinction was made between counters, restorers and storytellers. The first group consists of people who help to conduct bird counts. This week, I heard that there are even worm counts now. So, this branch is growing. The second group is active in Nature, for example, in the pollarding of willows. The third group studies these subjects and tells people about it.

From counters to recounters

There are bound to be other ways of organizing this project," Dinand Ekkel, who is responsible for this project at Aeres University of Applied Sciences, says, "but I find this way very graphic. We are studying how the roles that people assume relate to the support for Nature conservation and if counters can be turned into recounters. At present, bird counts are limited to counting and reporting. The results are only presented in the greater whole. When people do report results themselves and are informed of their neighbours' counts and about last year's counts, more people will become involved and there will be a higher chance of them also wanting to participate in, for instance, a butterfly count.

Shift

We have ten cases of varying involvement in Nature. We are going to explore these cases, by asking people questions such as: What exactly do you do? What is your relationship with Nature? Would you like to become more involved? The cases are about those people who are already Nature inclusive, but we also hope to bring into view those residents who are not yet Nature inclusive, for they will be the counters of the future. So, a shift in involvement is taking place.

Steam and boiling water

In the steam and boiling water process of writing such a proposal, we learned about the 'Educatiebos' (translation: 'Educational Forest'). We have just started and the first thing I am going to do, is question the people who developed this forest. It was recently reopened and further developed, and I want to find out about their goal, their target group, what they want to achieve, and so on. I am going to take the same route that they have created, and the information that I collect, together with the information from the other cases, will provide the input for the whole project. We are going to exchange and send information on our activities to the organization. Subsequently, in the second year, we will be able to see if the changes have had any effect.

Promising tools

With this two-year project, we want to contribute to the development of promising tools for active residents, in order to achieve biodiversity objectives and to enable local government and active residents to make contact with residents who are not Nature inclusive or residents who are limited in their inclusiveness, and thereby make a larger part of the population Nature inclusive. The first year focuses on collecting information and learning from each other. In the second year, we will monitor what we have learned and establish what actually works.

"When people do report results themselves, there will be a higher chance of them also wanting to participate in, for instance, a butterfly count"

Dinand Ekkel

Relative problem

I have been working for Aeres University of Applied Sciences Almere for more than ten years now, and during this time, I have built a huge network. At every stage of the writing and implementation process, I try to involve people from this network, as this increases the knowledge and support for the project. This is effective and yet, we are faced with the relative problem of having more work than manpower. I was thinking of assigning this project to a colleague, but in reality, it appears that I will have to work on it myself." «

Interested?

If you are interested in the research or if you have other questions about this project, please contact Dinand Ekkel d.ekkel@aeres.nl





Esther Veen studied 'International Development Studies' in Wageningen and obtained her PhD on the subject of 'Community gardens, social cohesion and alternative food networks'. She became an assistant professor at the Rural Sociology Group but after working and studying at Wageningen University and Research (WUR) for 20 years, she asked herself: "What's next?" Then the new professorship Urban Food Issues was established and she turned out to be the person they were looking for.

From chaos comes order

Professor of Urban Food Issues wants to create a healthier and more sustainable food environment

She had already worked on a project at Aeres before and knew many of the people there. However, it was very different from what she was used to: "It is not just a matter of doing what you are used to, but that is exactly what I had bargained for, because I am not someone who likes doing the same thing all the time. When I did my doctorate research, I had no idea how to go about it and when I finished, I had to develop the curriculum for a subject that I had to lecture on three months later. I love getting my teeth into something without knowing what the outcome will be. I now find myself in the same situation."

Welcome

"This is a very different environment from WUR, and this is noticeable in everything. It is smaller and that has its advantages, and communication here is more direct. In the beginning, I was looking for what I was familiar with: How do things work here and where do I find students? It is a matter of interpersonal relationships. This stage is now behind me and I can enjoy the smaller scale and the interpersonal relationships with colleagues and students. I felt very welcome here."

Focus

More than six months later, she is still busy shaping her professorship. She works with many people from Flevo Campus and has found out that she has much knowledge on the research subject. She is involved in many matters, she writes blogs and gives advice on projects, and she is also coaching two PhD students from Wageningen. Veen regards this as a good way to move the research forward and to meet people. She occupies herself with a variety of tasks, but focuses on food routines in shopping, cooking and eating.

Upscaling

Veen now needs to start upscaling to larger projects, to collect data on a larger scale and to combine smaller projects to form larger ones. The fact that everyone was working from home and that she had no sparring partner made it difficult to make this shift. That is why she feels fortunate to have found someone to support her for three days a week. This PhD student is someone who Veen can spar with and who can carry out research projects for her. »



"Convenience is the most determining factor when it comes to doing the shopping"

Esther Veen



"Many products in supermarkets have externalities that consumers are not paying the costs for"

Esther Veen

Usual suspects

She is going to find out how Community Food initiatives, which are now mainly visited by the usual suspects – highly educated white women – can be made to appeal to the food routines of the average person. "From other research, we know that convenience is the most determining factor when it comes to doing the shopping. Many people who work five days a week, have no time or energy to go to a farmers' market on the outskirts of the city. So, the market has to come to them.

Short Food Supply Chain

At present, we are researching a number of Short Food Supply Chain initiatives in Almere. None of these are very successful, which is a reason for concern. 'Support your Local Businesses' was the motto during the coronavirus pandemic. Now that less attention is being paid to this, these initiatives are not doing very well. They simply cannot compete with well-run supermarkets that charge lower prices. Many products in supermarkets have externalities that consumers are not paying the costs for. We see projects like ours elsewhere that are successful, and we could make an overview of the differences and similarities between these projects.

Stir things up

What my client, Flevo Campus, wants is for me to stir things up a bit. Research is not the only thing I do and I am not just doing it for the benefit of science. Almere must benefit from my professorship as well. Flevo Campus is renting a building in the centre of Almere where all kinds of activities are being carried out, such as data collection and informing about results. It is my job to see to it that this is done in a scientifically responsible manner and to share this with the scientific community.

Enrichment

It is very interesting to know what different generations of migrants have contributed to the enrichment of the food cultures of the people of Almere. Almere is a melting pot, which makes this a relevant research question.

Plant-based

Another matter is that there seems to be a consensus that we should eat more plant-based and vegetarian food. Much has been said and written about this, but has this been normalized in Almere? Is this reflected in how people think and talk about plant-based diets? I believe how people feel about plant-based food is definitely changing, and gradually this will influence the consumption of meat. An upward spiral of developments that will not only make vegetarianism more accessible, but will make it become more socially acceptable as well.



«

»

Interested?

Are you interested in urban food issues or questions about the professorship? Please contact Esther Veen e.veen@aares.nl



Resilient Plants professorship
wants sustainably grown crops

*"There are still very few alternatives to pesticides
that actually work on a large scale"*

Mirka Macel

Natural plant defence

There is nothing new about looking at crop protection from a biological point of view, but Mirka Macel is researching a promising alternative for pesticides that will make plants become resilient. "In our project, we try to enhance the chemical and mechanical defences of plants."

Mirka Macel's path to Almere went via Leiden University, where she helped to write a proposal for the Nationale Wetenschapsagenda (translation: National Science Agenda), that is linked to the Resilient Plants professorship. She became a professor on the 1st of April, 2021, and is researching the possibility of improving the defences of plants, by increasing plants' natural chemical defences and optimizing their mechanical defences by mimicking, as best as possible, the sticky trichomes that protect them from harmful little creatures.

Harmful

The transition to sustainable agriculture and horticulture demands that pesticides are used less and less. It is a particularly complex problem, as the scale of agriculture and the necessary quantity of agricultural produce make the extensive use of these substances as harmful

as they are vital. That is why Macel's Resilient Plants professorship is looking for alternatives.

Transition

"In any case, it will be necessary to transition to sustainable production. Therefore, it is very important to find out if there are natural alternatives for synthetic pesticides. The research project is in the form of a collaboration with the universities of Groningen and Wageningen, that have chemistry and material experts who are attempting to simulate the natural stickiness of trichomes. In Leiden and Almere, there are biologists who have to assess whether the artificial sticky trichomes have an effect on the insects that they are supposed to repel. What we also want to determine, is whether it only works on specific insects, because other insects, for example bees, must not be hindered. »



"So, besides cultivating seedlings or using leaves in a petri dish, we can conduct larger experiments in a more realistic grower's setting"

Mirka Macel



Few alternatives

Plant resilience is made up of, among other things, biological control, in which natural enemies of the pests are deployed. It is possible to introduce microbes to the soil, causing the plants to be triggered to develop defences and thereby become more resistant. There are still very few alternatives to pesticides that actually work on a large scale. Some pesticides have already been banned and more will follow. The production of alternatives has serious consequences. We are not the only ones working on this.

Research group

I graduated on the subject of diversity in plant defence systems. My research question was whether all of the different particles that are present in plants also have a specific effect on insects. This was clearly the case, which is why I would like to research this further. After my graduation, I did research work abroad, in Switzerland, the US and Germany. However, blood is thicker than water. I missed the looseness that we have in the Netherlands and now hope to build up this professorship here. With this professorship, I hope to contribute to a more sustainable way of growing crops.

A good start

Teachers from Aeres University of Applied Sciences are also involved in the research project. It is a consortium with representatives from Leiden, Groningen, Wageningen, Aeres University of Applied Sciences and various companies. For example, the meetings were organized by Linda Nol who is the Aarde en Klimaat (Earth and Climate) team leader. Bram Knecht, a teacher from the Plant study programme, is more actively involved with the research project and the students involved. So, I got off to a good start, and the project was already well underway before I arrived. The research role of universities of applied sciences (UASs) is that of putting theory into practice. A UAS like Aeres has a fine part to play.

Experiments

The role of practice-oriented research is upscaling that what is thought up in laboratories. We are going to make a start, and after the Floriade, we will have a greenhouse that will provide us with more space to conduct experiments in. So, besides cultivating seedlings or using leaves in a petri dish, we can conduct larger experiments in a more realistic grower's setting. This will make clear whether the trichome mimics work and how long they remain on the plants.



Bottleneck

We would be very glad to receive a prototype from Groningen or Wageningen this year that will enable us to try out things on a larger scale. This is the bottleneck. They started earlier than we did, but have to provide their findings on time, in order to keep things moving. They are both on schedule, so I am confident that we will be able to test both types." «

Interested?

Would you like to know more about abrasive fields, please contact Mirka Macel m.macel@aeres.nl

Searching for local gems in the field of human health and living environments

Playing sports in public spaces

Just by looking at his track record, you can clearly see that Sander Blikendaal is a true-blue sports fan. He studied at the 'Academie voor Lichamelijke Opvoeding' (translation: Physical Education Teacher Course), went on to study Human Movement Sciences from an academic interest, to eventually graduate for his PhD on the subject of the cause and prevention of sports injuries.

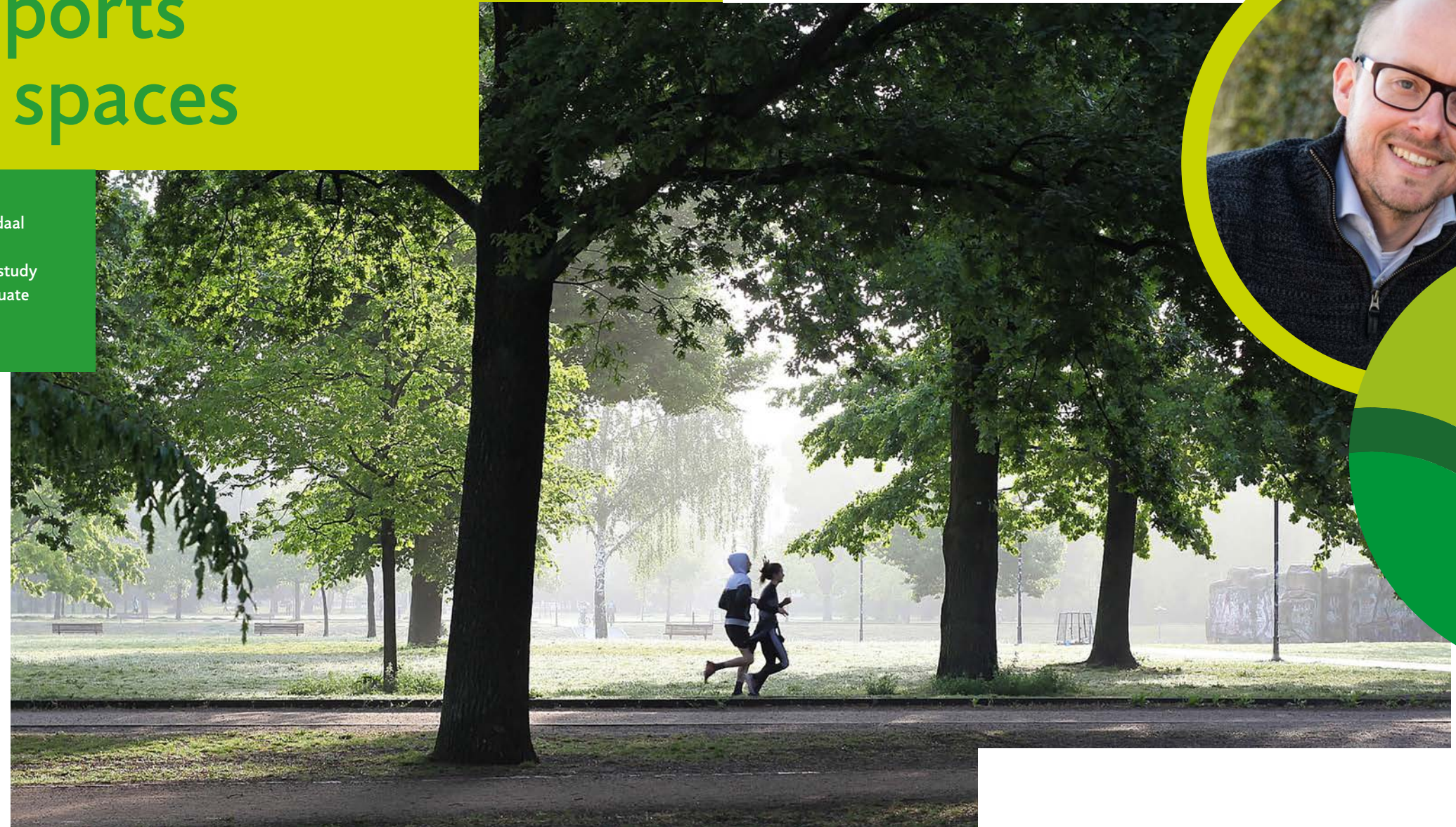
At present, he is researching health and safety in sports and exercise. Exercise is an important part of the 'Voeding & Gezond Leven' programme (translation: Nutrition & Healthy Living) at Aeres University of Applied Sciences in Almere. "At Aeres I had the opportunity of studying the link between exercise behaviour and the living environment, with the knowledge that the relationship between these two aspects is under pressure. Because this subject was not being researched at Aeres, I saw ample opportunity to give shape to this.

Good start

A short while ago, Almere launched its vision on sports, in which the theme of 'exercising in public spaces' is prominent. For some time now, we have had the intention at Aeres of researching this subject and of generating its relevance in practice. I now have a research scholarship that will enable me to make a good start. »

"I am exploring the relationship between the characteristics of environments and people's exercise behaviour"

Sander Blikendaal





Present research

In my line of research with the working title 'Bewegen en leefomgeving' (translation: Exercise and living environments), I am exploring the relationship between the characteristics of environments and people's exercise behaviour. In the long run, I want to work towards a line of research for this theme with several interconnecting research projects. My present research focuses on the characteristics and the use of various playgrounds.

Concrete advice

Two students from the Voeding & Gezond Leven programme are researching this and will make an overview of all of the different aspects of the playgrounds. They are monitoring how many people frequent the playgrounds and what kind of activities they pursue. The amazing thing about it is that aspects like these are seldom evaluated. With our research, we aim to formulate concrete advice on the design and improvement of playgrounds.

For the first time

We expect to find that playgrounds with varied designs and programs will be used more often and more actively, especially by boys and less by girls, adults and senior citizens. This is what we often see in practice, but this type

of research is not carried out much in the Netherlands and therefore, we have very little hard data. In the Netherlands, there are many fine public sports and exercise facilities, but very little attention is paid to how these are used and how we can ensure that they are used more often.

Prevention

We have more plans. These playgrounds are often meeting spots for all sorts of sports clubs. Many sports activities take place in public spaces and have some sort of program. So, what effect does this have? How safe are these playgrounds? Exercise and safety is one of my focus areas. Many sports injuries are caused by playing sports and exercising in public spaces, for example running, mountain biking and playing outside. How can we prevent such injuries?

Local gems

At Aeres Almere, we have a very exercise friendly environment. There is a running trail around the Weerwater lake, a forest, a water ski course and several playgrounds at the Floriade Park. With students, we hope to work towards great projects in our region, such as exercise programs, the development of tools and methods, innovative sports locations and making schoolyards greener. I call these the local gems.

Springboard

I have many ideas for future research. Almere is a unique city for shaping this kind of research in, and I see my present project as a springboard to following projects that centre around healthy lifestyles with exercise and healthy food in healthy living environments. We must grow towards this. I am thrilled about working on this.” «

Interested?

Are you interested in the research on the prevention of sport injuries? Please contact Sander Blikendaal s.blikendaal@ares.nl



“How can we prevent injuries, caused by playing sports and exercising in public spaces?”

Sander Blikendaal

The realization of a food strategy
at Almere is just the start

Inclusive food strategy



*"How can access to
sustainable and healthy food
be made more inclusive?"*

Anke Brons



Anke Brons has worked on several research projects of Aeres University of Applied Sciences in Almere in the past few years. However, most of her time was spent on her doctorate research project on the concept of inclusiveness. Or, in other words, how can access to sustainable and healthy food be made more inclusive?

The doctorate committee is now examining her thesis that she hopes to defend on the 17th of June in Wageningen. She is very pleased to have completed it, because due to the coronavirus pandemic, instead of being in Almere among the people that she researched, she spent two years at her desk in Utrecht. "It was difficult to stay motivated and it was such a pity not having any appointments anymore."

Green elite

She researched ways of involving a larger portion of the population in eating sustainably and healthily. In earlier research it was apparent that sustainable and healthy eating is a habit of what is called the 'green elite': highly educated white people with high incomes. What can be done to involve more ethnic groups and to lessen social

inequality? How can access to sustainable and healthy food be made more inclusive?

Eating habits

Brons applied participative methods, where people themselves research their own consumption behaviour, in order to gain a better understanding of what inclusiveness and access mean, and to take the population on a transition to more sustainable and healthier eating patterns. And to arrive at the question of what prevents and what encourages a sustainable diet in their daily lives. "I researched what the consumption habits are of different ethnic groups in the city of Almere and also what it means to stimulate people to choose healthy and sustainable food more often."

»

*“Almere City Council
attaches importance to healthy
options for everyone”*

Anke Brons



Consumption habits

“The research focused on two groups. The first was a group of Syrians who I went shopping for groceries with with and with who I was present while they did their cooking. The second group was made up of patients with type 2 diabetes. In both groups, I looked at their consumption habits, and whether a change had taken place after migration or diagnosis. A substantial change in eating habits was visible in both groups, and both groups’ relative unawareness of the concept of sustainability was remarkable.”

Implicit sustainability

There appeared to be a difference between what people mean by sustainability and how they apply sustainability in their lives. Diabetes patients were certainly prepared to change their diet by adopting a flexitarian diet after being diagnosed with this condition. Syrians were noted to have a natural tendency for eating seasonal vegetables and preferably also organically grown. They purchase these at markets. Here, sustainability is more of an implicit concept.

Food strategy

In 2021, the first urban food strategy was devised, thereby taking the first step towards a food policy at city council level. Several councils have food strategies. There is

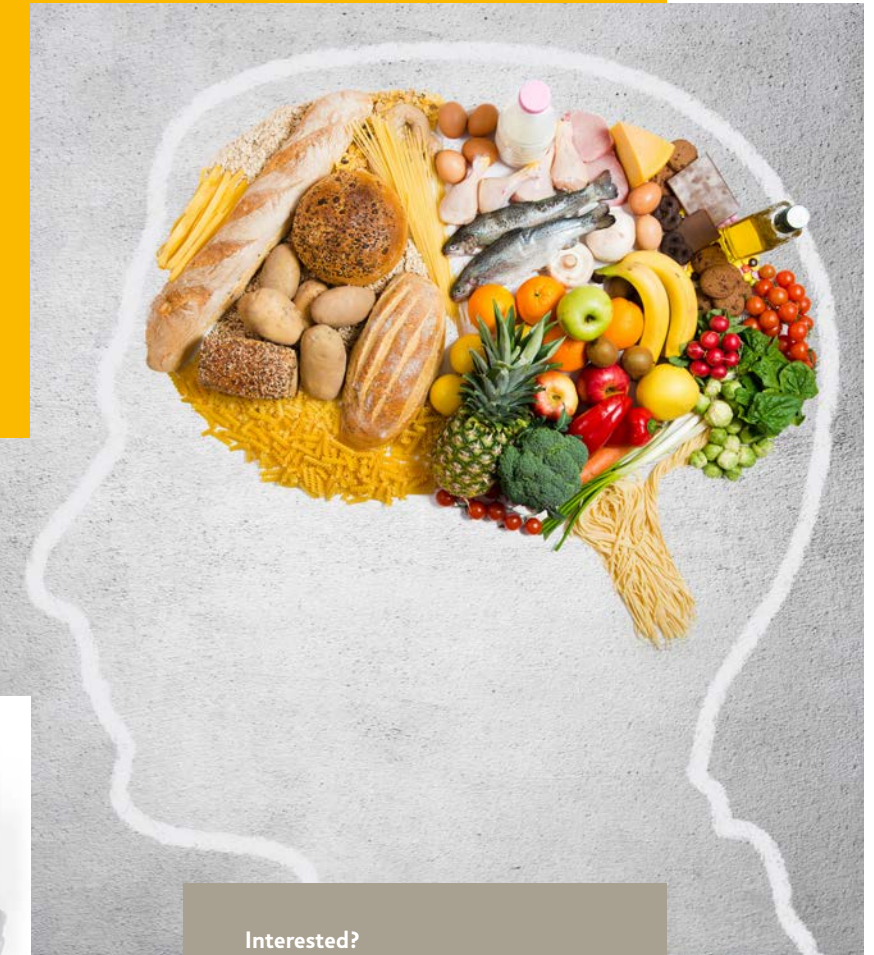
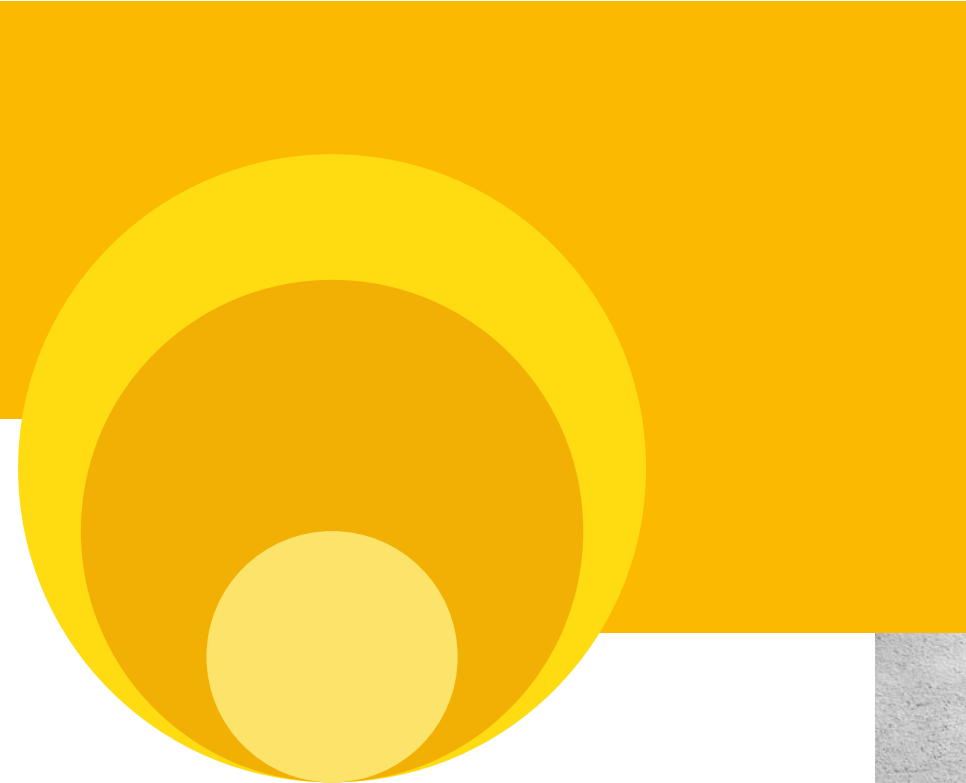
no blueprint for these, but the objective is that more societal actors work together on forming these. Almere City Council attaches importance to healthy options for everyone and a sustainable food economy in which everyone benefits, and they are proud of their local and regional food products and initiatives.

Food debate

Much has happened in four years’ time. When I started my research, we organized the first big food debate with Flevo Campus. Participants from the first Flevo Campus Think Tank formulated seven points on what is important in urban food matters. This took place during the council elections, and a number of councillors and members of political parties were present. It was evident that they did not know exactly how to deal with this urban food agenda. Looking at where we are now, exactly one election later, you can definitely see a huge difference.

Political action

What we have done at Aeres has certainly contributed to this. The food strategy is a start, and now the institutional embedding has to become tangible in the form of political action. This should happen in the next four years, and it will be exciting to see whether these good intentions will be transformed into action. I would like to continue committing myself to bringing this about.



Interested?

Would you like to know more about research into inclusiveness in the food transition?

Contact Anke Brons a.brons@aeres.nl

Innovation & Urban Green Space professorship demonstrates what is possible in Nature inclusive area development

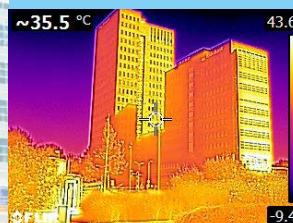
In order to research how the transition to Nature inclusive area development can be accelerated, the Aeres Innovation & Urban Green Space professorship is working on the realization of cities that are more Nature inclusive.



From city to ecosystem

"Native plants attract a large variety of insects such as bees, bumblebees and butterflies"

Gideon Spanjar



According to Professor Gideon Spanjar, there is a great need for increasing momentum. "In the coming years, at least 100,000 new homes will be built in the Netherlands every year, and by 2030, the total number of new homes will be one million. If we wish to build in a greener and more climate resilient way in the inner cities, we will be able to colour the so-called 'red areas' green. This challenges us to incorporate the right green adjustments, based on place, use and the benefits we desire.

Stepping Stones

For example, by developing stepping stones for the development of Nature. In our Nationale Wetenschapsagenda (translation: National Science Agenda) project 'Rewilding Stepping Stones', we, among other things, developed a temporary basin construction in the centre of Almere, from freshly chopped poplar wood from the neighbouring Lumièrepark, and planted it with native plants. The goal of this experiment was to research how bio-based materials can be combined with greenery when designing public spaces.

Biodiversity

The results show what stony inner cities can look like with the development of Nature, and thereby create support for large scale greening plans in urban areas. The use of plants, such as hazels, willows and red champions attract a large variety of insects such as bees, bumblebees and butterflies, and therefore, stimulate the biodiversity in city centres.

City dwellers' needs

Like many cities, the centre of Almere has a stony environment where implementing Nature is very difficult and very costly. So, we must be certain that what we do, will work well. That is why we asked the general public, on the basis of the stepping stones that we developed, what type of green they would support. In interviews with 50 visitors to the centre of Almere, it became apparent that the majority needs more green in the city centre.

Native plants

80% prefers the use of native plants to exotic plants, on condition that native vegetation is well-maintained (60%) instead of letting these grow unchecked (40%). Spanjar is happy with the results and expects that the number of people who find unchecked green to be acceptable will only increase in the coming years, once people realize the value that comes with this.

Counter urban heat island effect

Almere has a unique starting position as a 'New Town' with a green and blue framework in which the residential centres are surrounded by greenery. Because of this, Almere can take big steps towards the transition to a Nature inclusive and climate resilient city, thereby setting an example for other cities. That what is now green, could be made more biodiverse, and what is now stone, could be replaced with bio-based materials that are less likely to heat up, or they could be covered in greenery, for example with the use of greenery on building frontages. In this way, we can counter the urban heat island effect of the city. We will measure the effects of spatial characteristics, such as frontage materials, paving types and greenery in outdoor public spaces, on the apparent temperature with mobile weather stations in the research project of Urban Micro-Climates with the Almere City Council. »



Maintain liveability

The core question is how we can maintain accessibility and liveability in those areas in the city that we go to on a daily basis, despite an increase in weather extremes. That is why, in the five-year Excellente Groene en Gezonde Leefomgeving project (translation: Excellent Green and Healthy Living Environment project), together with the Almere City Council and GGD Flevoland (translation: Public Health Service Flevoland), we are researching how two green corridors between suburbs, the city centre and large green parks can be realized. In two other suburbs, we are looking into ways of protecting people who are most vulnerable to the heat, such as the aged and children, and how to invite them to go outside, with tactical use of greenery to help them to keep cool.

Encourage support

With Rewilding Stepping Stones, we can experiment with what works and what does not. In Urban Micro-Climates, it is becoming apparent what the level of thermal comfort is in various outdoor spaces, so that we can learn how to design new residential streets. In Excellente Groene Gezonde Leefomgeving, we are working on the enhancement of the green network and through this of residents' health as well. And the new 'Natuurinclusieve gebiedsontwikkeling project' (translation: Nature inclusive area development project) is about connecting the development of Nature at different levels to provide greater natural value. I believe that the recognition of such value will encourage public support.

Nature inclusive operationalization

In this new project, Aeres University of Applied Sciences, as lead partner, collaborates with the University of Applied Sciences Van Hall Larenstein, University of Applied Sciences van Amsterdam and University of Applied Sciences Avans with the Centre of Expertise Groen (translation: the Centre for Green Expertise), in order to accelerate the transition to Nature inclusive cities, using knowledge developed on bio-based materials and ecological greening. The results

"Simply greening everything is not the solution, as social and cultural value will then be lost"

Gideon Spanjar



of this research will enable us to develop the bases for Nature inclusive area development and its conversion into a programme of requirements, that is linked to a practical points system for invitations to tender."

Three levels

Spanjar has the ultimate accountability for the project and describes the research as follows: "Research is carried out at three levels: building level, street level and area level. We will link this to three different cases, including Almere city centre and Almere Pampus. Together with a broad representation of the field of practice, such as local and regional government, design agencies, knowledge institutes, housing associations and developers, we will determine the critical risk and success factors and provide tools with which the transition can be accelerated.

Urban ecosystem

The slogan 'Almere wants to become the greenest city' is merely a view on what is right. According to research carried out by Natuur & Milieu (translation: Nature & Environment), we are now in second place, so we can

state that we have achieved our goal. Simply greening everything is not the solution, as social and cultural value will then be lost. 'Almere wants to make optimal use of the urban ecosystem' might be a better slogan. We need to find a new balance between that which is of (historical) cultural value in the present city and what we need now and in the future in a changing climate. What happened during the coronavirus pandemic lockdowns, was that when people were asked not to go into the Staatsbosbeheer (translation: National Forestry Commission) forests, our city parks became overcrowded with people who went there instead. We have become aware of the fact that there is something wrong with our cities, and we must reinvent them to strengthen our well-being.

Empowerment

'Green' and 'grey' oriented universities of applied sciences empower each other. This is what we have found out in new projects, such as Nature Inclusive Area Development. It is all very well for us at Aeres to wish for greening, but we have to show consideration for multiple spatial claims to other urgent issues, such as home construction and the mobility transition. It is our ambition to bring parties with divergent interests together, in order to provide a strong position for Nature inclusiveness when making plans, and we are not the only ones. The future lies in young people's hands. Seeing the effort put in by our enthusiastic students and what is put into practice, I am confident that we will come up with innovative ideas for the realization of green and appealing cities in a changing climate."



Interested?

If you would like to know more about nature-inclusive area development or if you have other questions about this professorship, please contact Gideon Spanjar g.spanjar@aeres.nl

*"Do you have any ideas
in the field of food, greening and making the
urban environment more sustainable?"*

Let us know! Mail to d.ekkel@aeres.nl



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Arboretum West 98 | 1325 WB Almere
088 020 6300 | www.aeresuas.com/almere



Watch the film (5 min):
'Healthy living in the green city!'

