university of groningen

2023

Science shop Report



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Reports and articles have been published on most of the projects discussed. These can be downloaded for free from www.rug.nl/wewi. If you are further interested in the topics discussed, please contact the relevant store.

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Merry chaos

A lot is happening at the University of Groningen when it comes to social engagement. Interesting lectures are being organized at Studium Generale, the House of Connections is opening its doors more and more often, and of course the icing on the cake: the Science Shops!

With so many activities, research projects, and events, it's easy to lose track. But the question is: is it a bad thing to sometimes lose sight of the forest for the trees? As researchers, scientists, and–first and foremost–people, we are constantly tempted to frame, identify, and, above all, try to control every single thing. However, reality often turns out to be a lot more tricky, slippery, and chaotic than our reasoning.

And that is not a bad thing, if you ask me! As Science Shopkeepers, we stand with our feet firmly planted on the ground, and I marvel every time at all the nuances that reality entails. What I see as black-and-white beforehand turns out in reality to be an ever-shifting spectrum.

To maintain some overview, we have once again put together an interesting annual review for you. You can read how the Green Office works to create more sustainable laboratories, how the Science Shop Language, Culture and Communication joined forces with Eurosonic Noorderslag for a more emancipated programme at festivals, and how the Philosophy



Knowledge Centre ensures that students set foot outside the walls of academia. And that is not all! You can also read about the farewell event for our highly valued colleague Karin Ree, who retired earlier this year, how the Science Shop Medicine and Public Health is researching plant-based diets in care homes, and how students are contributing to well-being in Vinkhuizen through the Science Shop Education.

In short, something for everyone! Enjoy the chaos.

YORICK KARSEBOOM



The science shopkeepers. Top row from left to right: Vincent Hazelhoff, Karin Ree, Aline de Boer, Marij Veldman, Mariëtte Hingstman, Niels Alberts, Henk Mulder. Lower row from left to right: Karin de Boer, Lars Jansen, Yorick Karseboom, Isey Mous. (Absent: Denise Leidelmeijer, Marc Pauly, Vera Verhage, Nils Elzinga and Lin-Si Bolk)

PROJECTS THAT GIVE YOU ENERGY

What do poverty, freezing temperatures, and teaching have in common? All three are energy issues in students' research projects at the Beta Science Shop.

By: Karin de Boer & Niels Alberts

Poverty

Energy prices are rising, leaving many people unable to pay their energy bills. This is called energy poverty, and it can affect people's health. On behalf of 'Strong from Poverty', Honours College students Matias Santacruz Vallejo and Laia Bonet Orrego investigated the health risks of energy poverty. For example, people develop lung problems due to mould in their poorly heated homes. They may also develop mental health problems. The research study found that particularly children growing up in energy poverty suffer long-term effects.

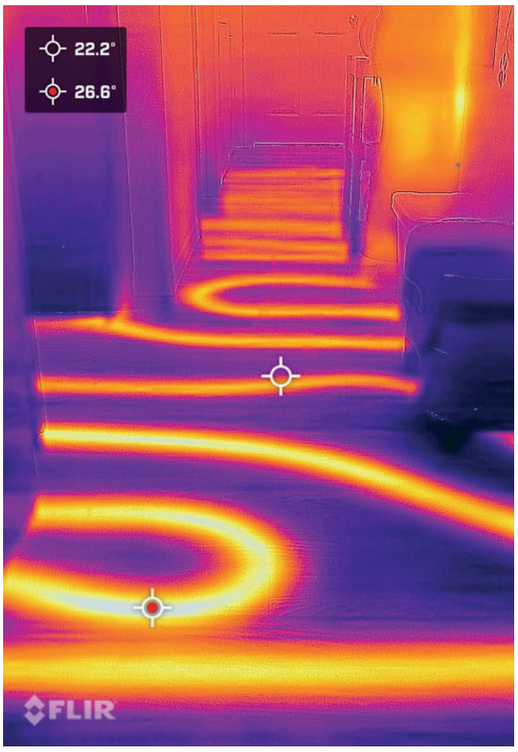
Freezing cold

The UG is also struggling with rising energy prices and is looking for measures to reduce its energy consumption. One point of attention is the use of so-called ultra-low temperature freezers, which cool down to -80°C. These appliances consume as much energy as an average Dutch household. Myriam Kammüller Pont, BSc student in Technical Business took an inventory of ULT freezers at the Faculty of Science & Engineering. The FSE has approximately 60 ULT freezers. Myriam mapped their energy consumption and use of toxic coolants. In the process, she discovered that the energy consumption of the freezers ranges from 6 kWh to 21 kWh per day. She calculated that increasing the temperature from -80°C to -70°C could reduce energy consumption by 30%. With the results of this study, the Faculty can make targeted decisions on what measures are possible to reduce the freezers' energy consumption.

> "WITH THE RESULTS OF THIS STUDY, THE FACULTY CAN MAKE TARGETED DECISIONS ON WHAT MEASURES ARE POSSIBLE TO REDUCE THE FREEZERS' ENERGY CONSUMPTION.



Students working with the heat meters from the Meet-O-Theek



Thermal image of the Academy Building by a heat meter

Energy-efficient education

How can university education be made energy-neutral? During a Hackaton at the Honours College Winter School weekend, three groups of students tackled this question.. A wide range of energy-saving possibilities emerged from the Hackathon. For example, you can make effective use of the available space by concentrating education in a few buildings and adjusting the room size to the number of students. A lot of energy is lost heating large lecture halls with low occupancy rates. The students suggested setting up a registration system for this purpose: are you planning to attend the lecture? Then sign up! The students also noted that they prefer working in smaller groups, as in this Hackathon. Another option involves insulating university buildings. The students used the heat meters of the Meet-o-Theek to take measurements in the Academy Building. From this, they garnered some useful tips for their own student houses.

Would you also like to map the energy consumption of your home? You can do so with equipment from the Meet-o-Theek. Every Thursday evening from 6 p.m. to 9 p.m. you can drop by the Smart Lab on the 6th floor of the Forum building to borrow our infrared cameras, smart plugs, and water-measuring shower heads. Interested in what else you can borrow? Then have a look at the Forum Groningen website!

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> **FOR EXAMPLE, YOU CAN MAKE EFFECTIVE USE OF THE AVAILABLE SPACE BY CONCENTRATING EDUCATION IN A FEW BUILDINGS AND ADJUSTING THE ROOM SIZE TO THE NUMBER OF STUDENTS.**



INTRODUCING: ÍSEY MOUS

Hi! My name is Ísey Mous, and this year I started working as a student assistant at the Science Shop Language, Culture and Communication. In addition to my position as a student assistant, I am currently enrolled in a Research Master’s programme in Philosophy, where I focus on questions related to the philosophy of science. What I really enjoy about my work at the Science Shop is the fact that it allows me to approach this interest from a very practical perspective.

What I find particularly interesting about the research of the Science Shops is the way in which many different parties can work together to solve an issue. Plus, it is also fun to see how the collaboration from different perspectives ensures that the issue can be understood better. As a student assistant, I am mainly responsible for assisting with the projects we carry out at the Science Shop Language, Culture and Communication.

In my spare time, I enjoy attending concerts and trying out new sports at the ACLO. Next to that I enjoy hiking through the Icelandic mountain landscapes, when I visit my family there.



(WO)MEN AT WORK

Equal opportunities in the live music industry

By: Vincent Hazelhoff

Whether it be jazz, rock, or dance, women are in the minority in nearly all music genres. Not just on stage, but also in the industry around it: from producers to managers, from stage builders to technical experts, music is a man's world. Partially thanks to the #MeToo debate, inequality in the arts and culture has come under close scrutiny. The Groningen showcase festival Eurosonic Noorderslag (ESNS) wants to tackle this inequality and asked the Science Shop Language, Culture and Communication to help.

'Pretty clever for a girl'

Anyone can make music, and yet we see fewer female musicians on stage. Why? It's hard to put a finger on why that is. A report by Buma/Stemra reveals that female artists from the Netherlands earn structurally and significantly less than their male colleagues, while girls play an instrument more often than boys, and women of all ages tend to have a higher level of musical education than men. So things go wrong somewhere along the line. This has to do with the lack of role models and female colleagues to emulate. Without strong role models, it is harder for women to imagine a career in music.

This has to change, the Eurosonic Noorderslag team thought. Showcase festivals can play a decisive role in creating a more level playing field, according to ESNS, by putting together a more 'inclusive' programme. This means that in addition to quality and diversity in genres, festivals should consciously opt for a 50/50 male-female ratio in their line-ups. In order to find out how effective ESNS's programming policy is, they need to first look at how well it worked for them. So ESNS contacted the Science Shop Language, Culture and Communication, which brought them into contact with students from the Master's degree programme Arts, Culture and Media.



"Ão at ESNS" Bron: Siese Veenstra, ESNS. 2024.

> **WITHOUT STRONG ROLE MODELS, IT IS HARDER FOR WOMEN TO IMAGINE A CAREER IN MUSIC.**

Groningen and Europe: is there a difference?
Under the guidance of lecturer Dr Chris Tonnelli, students Dan and Juan Carlos analysed the male-female ratio at Eurosonic by closely examining their line-ups between 2016 and 2022. Dan and Juan Carlos looked at all the band members of all bands and what gender they identified with it. They then categorized these data. One of their conclusions: the number of acts with at least one woman was only 36% in 2017; by 2022, it had increased to 57%, which seems to indicate that there is now more balance. At first glance, this is a positive development, but if you look at absolute numbers, the majority of artists at ESNS are still male.

Next, students Eryn, Terezie, Aina, Lea, and Ricardo looked at the line-ups of seven other European festivals, such as Linecheck in Italy, Focus in Wales, and Sofia Live Fest in Bulgaria. They discovered that showcase festivals have a more balanced line-up than commercial festivals like Sziget (71% male). The students also noticed a big difference between festivals in Western Europe and in former Eastern Bloc countries (see Figure 2).

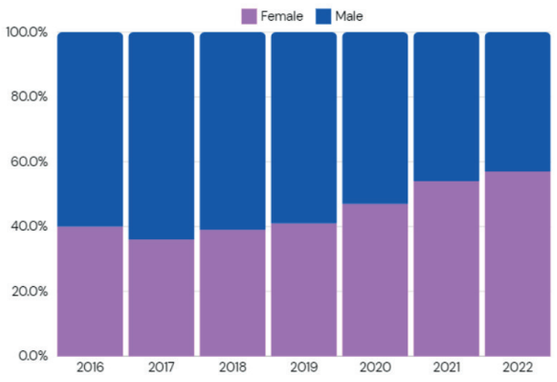

Figure 1: Gender distribution of ESNS lineups over the years

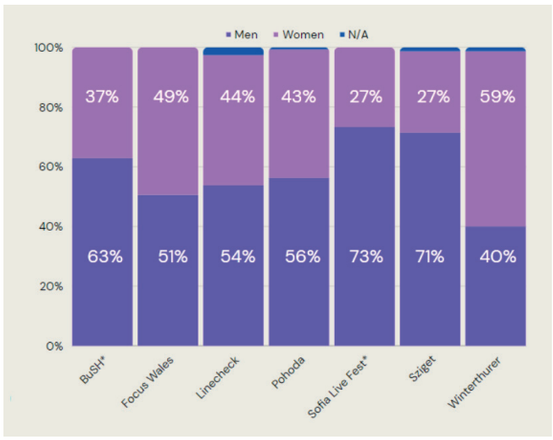

Figure 2: Gender distribution in the line-ups of various showcase festivals

> **HOWEVER, WHEN FINANCIAL INCENTIVES ARE INVOLVED, PROGRAMMERS STILL OFTEN OPT FOR THE SAFE OPTION: A BIG, OFTEN MALE ACT.**

Festival programmers: Male bands are more profitable?!

How can there be such a big difference in line-ups between showcase festivals and commercial festivals like Sziget? The students spoke to four (male!) festival programmers about equal opportunities in the booking industry and the underlying motivation of programmers. These candid conversations revealed that programmers primarily look at professionalism and the quality of the acts, how popular an act is (e.g. on social media), and whether the act suits the festival. At the same time, there are also formal and informal networks that influence the booking process, which are based on friendships and relationships between programmers and artists or their managers.

Although all interviewees reported having a female booker on their team, none of the organizations had a woman in an executive role. Only one festival employed a diversity officer. All the programmers did indicate that they found talking about diversity in the workplace very important. However, when financial incentives are involved, programmers still often opt for the safe option: a big, often male act.

Clashing European values

Back to the difference between the West and former Eastern Bloc countries. The students found a significant difference in the male-female ratio in the analysed line-ups of showcase festivals BuSH in Hungary and Sofia Live Fest in Bulgaria. What explains this difference? Fellow programmers from Eastern Europe notice that they have fewer opportunities to engage in inclusive programming. That is because in Eastern Europe, the audience is less diverse than in the West. In addition, some countries have a conservative government that actively interferes with culture, for example by not granting subsidies to 'woke' festivals.

At the same time, people are becoming aware that a more diverse line-up can also lead to a different, new audience. This applies not only to more women at festivals, but also to the representation of marginalized groups, such as people of colour. One of the recommendations of the UG students to ESNS and its network is to raise awareness among programmers about inequality in line-ups. Programmers always make bookings in a certain way, without thinking about it, while they might be willing and even eager to change. Moreover, for smaller festivals, which often face higher financial risks, there are opportunities in the form of European grants for promoting equal opportunities.

Awareness of inequality goes beyond line-ups. There should also be more room for women in the composition of the organization around festivals, the students believe. It is striking that in the course of their research, the students only spoke to male programmers, and that none of these largely progressive festivals had a female team leader. The students advised ESNS to speak to more programmers about this topic to gain a more complete overview of team composition and the motivations of programmers. Another challenge for further research is to explore the extent to which a more diverse line-up contributes to a more diverse audience.

Closer contact between the professional field and education

The collaboration between Eurosonic Noorderslag and the Science Shop Language, Culture, and Communication is about to enter its third year. Thanks to this collaboration, lecturers and the Science Shop have joined forces to create a new course unit: Music careers, industries and lives, a course unit in which collaboration with external clients plays a central role. In this course unit, students not only learn to look at music from inside their safe academic bubble, but also to experience the nuances and complexities of themes with people from the field. This helps the students grow into valuable researchers for the future.

What's next? Discussions around equal opportunities are often polarized. That is a shame, because potential solutions for more equal opportunities are lost in fact-less clamour. Equal opportunities start with creating awareness about this topic. And awareness requires facts, and therefore research. So let's get to work!



"Pommelien Thijs at ESNS" Bron: Stef van Oosterhout, ESNS. 2024.

EQUAL OPPORTUNITIES START WITH CREATING AWARENESS ABOUT THIS TOPIC. AND AWARENESS REQUIRES FACTS, AND THEREFORE RESEARCH.

A PLANT-BASED MENU IN THE NURSING HOME

By: Vera Verhage

A growing number of people are becoming aware of the fact that a plant-based diet is not only good for our health, but also for the planet. Several scientific studies have also shown the benefits of a plant-based menu for human and planetary health (see 1-8). Public hospitals in New York City have switched to mainly plant-based menus. The Dutch physician Mitchell Evertsen was inspired by this and launched a pilot project in a nursing home in Eelde. How can we provide scientific evidence to justify a shift to a more plant-based menu? How high are the emissions from the current menu? Do residents actually want to eat plant-based food? These were the questions explored by the Science Shop for Medicine and Public Health and the Beta Science Shop.

Plant-based diet

A plant-based diet consists of fewer or no animal products and more healthy plant-based products, such as grains, beans, nuts, vegetables, and fruit. Put simply, a fully plant-based menu means refraining from eating meat and fish, but also dairy products, eggs, and cheese. That is not the same as a vegan diet. Vegans refrain from using any animal products, so not only food (from meat to honey), but also, for example, shoes made of leather.

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> **WE CAN CONCLUDE THAT SWITCHING TO A VEGETARIAN MENU WILL REDUCE EMISSIONS BY ABOUT 37% COMPARED TO THE CURRENT MENU. A FULLY PLANT-BASED MENU COULD EVEN REDUCE EMISSIONS BY 70%.**

Baseline measurement

To map the emissions of the current nursing home menu, Industrial Engineering student Wietze Hoogeveen carried out a baseline measurement. He developed a model calculating the nitrogen, methane, and carbon dioxide emissions of the current menu. To do so, he put all the foods that are currently purchased into the model. It was then estimated how high the emissions were for each of these products. As expected, most emissions came from animal products. Based on Wietze's model, we can conclude that switching to a vegetarian menu will reduce emissions by about 37% compared to the current menu. A fully plant-based menu could even reduce emissions by 70%. The biggest gains come from reducing consumption of beef (24%), dairy (18.5%), and pork (10.4%).

Involving residents, relatives, and staff

Thanks to the baseline measurement, we know that there are gains to be achieved in terms of emissions by making the menu more vegetarian and/or plant-based. However, it is important to know how residents, relatives, and the staff would feel about such a change. What do they think is important? How do they feel about switching to a more plant-based menu? Do they see obstacles or opportunities? To find out, we formulated the following research question: What are the perceptions and preferences of residents, relatives, and staff members in a nursing home concerning the transition to a more plant-based menu, and how do these perceptions influence their support for or resistance to this change? To map this, we conducted several interviews in the spring of 2024.



Follow-up steps

The Science Shops always try to set up projects such as this one broadly, so that other organizations can investigate the transition to plant-based menus in a similar way. The baseline measurement can for instance also be carried out at other locations. Finally, follow-up research can focus on the impact of this kind of change. Have attitudes and satisfaction levels among residents, relatives, and staff members changed? And did the introduction of a plant-based menu affect the wider community, for example, by raising awareness or inspiring other organizations?

As coordinator of the Science Shop for Medicine and Public Health, I embrace initiatives from the field, such as this project, and I enthusiastically support them. With a solid foundation in scientific research, and active participation from all stakeholders, we look forward to the future of this initiative with full confidence. Together, let us strive for a world where choosing a plant-based menu is not only an individual choice for one's health, but also an act of caring for our planet and future generations!



INTRODUCING: ALINE DE BOER

Until September, Lin-Si and I will be working as student assistants, focusing on communication for the science shops. My main focus will be on anything text related. Additionally, I'll be involved as an editor of the annual report. Currently, I'm in the final phase of my studies in Applied Social Psychology. I really enjoy being creative; my hobbies include painting and theater. Moreover, I have a wide range of interests and I like learning new things. So, working at the science shops is perfect for me! I was drawn to working at the science shops because I wanted to broaden my perspective. I also hope to learn more about how science and practice intersect and what I want to do in the future. I'm curious to see what the coming months will bring!

ON BEING WELCOME AND WELL-BEING

When students themselves come up with ideas to narrow the gap between the university and society, this should be cherished and encouraged. The student association STUFF from the Faculty of Philosophy contacted the Science Shop Education with this very goal in mind, because they wanted to organize events with and in society. We thought it was a great idea! But how do you turn an idea into a successful activity? And how do you make sure the students themselves learn something in the process? Together with STUFF, we looked for the best way to help students with this question in an educational manner. This led us to the neighbourhood initiative Samen Sterk Vinkhuizen (Strong and United Vinkhuizen), and its midweek activity 'Je mag er Wel-Zijn' (a wordplay in Dutch on being welcome and well-being).

By: Denise Leidelmeijer & Lars Jansen



Wijkbewoner Joop in gesprek met de studenten

> **"WHEN STUDENTS THEMSELVES COME UP WITH IDEAS TO NARROW THE GAP BETWEEN THE UNIVERSITY AND SOCIETY, THIS SHOULD BE CHERISHED AND ENCOURAGED.**

The midweek programme was packed with a variety of activities, ranging from a resilience training to a beauty evening and a 'violin and piano taster'. In short, something for everyone. But one block in the programme was still open: the Wednesday afternoon. WIJS Groningen, the local network organization whose mission is to connect students and other Groningen residents, is also part of Samen Sterk Vinkhuizen. WIJS wanted to involve students in the midweek programme. In an exploratory conversation between STUFF and WIJS/Science Shop Education, we soon ended up talking about the Wednesday afternoon in question. The framework provided by the client, Samen Sterk Vinkhuizen, for the programme was clear: something to do with 'being welcome and well-being' and 'capitalizing on one's talents'. The STUFF board knew enough and developed a workshop accordingly.

'We organized a philosophical workshop for the residents of the Vinkhuizen neighbourhood,' explains Jasmijn Bergsma, chair of the STUFF board. 'That way, the residents could be introduced to philosophy, and the students got to know the residents and their ideas and experiences. By philosophising about socially relevant topics, many interesting topics emerged for both parties.' The STUFF board wants to help its members step outside their student world. The board has noticed that students live very much inside their own bubble and know too little of what goes on in the world outside the university. In order to get out of this bubble, you need to meet new people and find out more about their lives and ideas. Jasmijn: 'We would also like to show that anyone can engage in philosophy and that it is relevant in many ways. Working with WIJS gave our students the opportunity to meet new people and step out of their bubble.' The workshop was clearly structured around the themes of well-being and capitalizing on one's talents. It began with an introduction by a philosophy student from the Master's programme in Education, who briefly talked about some philosophical perspectives on well-being and happiness. Using three theories, participants were invited to find answers to questions such as: 'What is well-being?' and 'How do you achieve well-being?' Next, small groups of residents and students discussed a number of propositions related to the topic of well-being.

'We wanted to create an informal convivial atmosphere, where students and the residents of Vinkhuizen could have interesting conversations over coffee, tea, and nice food,' says Jasmijn Bergsma. The residents were positively surprised by the workshop of the philosophy students. In the words of local resident Joop Steenhuis: 'I saw the announcement of the 'Je mag er Wel-Zijn' midweek programme in the WhatsApp group of Samen Sterk Vinkhuizen. The philosophy workshop was a real hit. I felt heard, and that's very important to me. That wasn't the case that when I was growing up. My father used to say: "What do you know about it?!" Offering my own input: I really enjoyed that so much! Kierkegaard speaks so beautifully about well-being. He says, for example: "Life is lived forwards and understood backwards." The fact that I can actually quote a philosopher feels amazing.' At the risk of repeating ourselves: when students themselves come up with ideas to narrow the gap between the university and society, that is something to cherish and encourage. How do you do that? Well, like this!

INTRODUCING: MARIËTTE & MARIJ

Hi! We are Mariëtte Hingstman and Marij Veldman, the two new coordinators of the Science Shop Education. We both work as assistant professors at GION (Groningen Institute for Educational Research), which is part of the Faculty of Behavioural and Social Sciences. As lecturers, we are involved in various course units and guide and supervise students from the Bachelor's programme in Pedagogical Sciences, the Academic Training for Primary Education Teachers, and the Master's programme in Pedagogical Sciences in writing their thesis. We also conduct our own research, and we like to focus on the question of how we can make teaching better and more effective. We find it important to be close to educational practice, for example by thinking together about interesting research questions and by making knowledge from research accessible to a wider audience. It will therefore come as no surprise that we very much look forward to working for the Science Shop Education!



Mariëtte Hingstman



Marij Veldman

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DIVERSITY IN THE MUSIC INDUSTRY: A HACKATHON AT VERA

By: Yorick Karseboom & Marc Pauly



Compared to other Science Shops, we at the Knowledge Centre Philosophy are facing a big problem: people often don't know that they have a philosophical problem or question. Because the thing is: What actually is a philosophical question? Well, this question, for example! More generally, philosophical questions are often big 'What is...?' questions, such as 'What is beauty?' or 'What is justice?' As a Science Shop, we have the advantage that we do not have to answer these questions in an abstract and general way. Instead, we can consider concrete situations in which such questions arise. That is, if people know that they have a philosophical question and are willing to engage with us about it.

Diversity and inclusion are themes that are relevant in many different areas in our society. They are also themes that we can ask philosophical questions about: What is diversity, actually? What is inclusion, or what should it be? These questions are usually formulated according to certain categories that are perceived as important: gender, age, ethnicity, sexual orientation, physical or mental disabilities, etc. The Groningen pop music venue Vera sent us a question about what diversity and inclusion should mean for Vera.

> **"PRECISELY BECAUSE WE AS PHILOSOPHERS OFTEN DEAL WITH RATHER GENERAL AND ABSTRACT QUESTIONS, IT IS FUN TO EXPLORE THESE QUESTIONS IN A CONCRETE SOCIAL SITUATION.**

Club for the International Pop Underground

Vera was founded in 1899, making it one of the oldest pop venues in the Netherlands, and it promotes itself as a 'club for the international pop underground'. An interesting label, since 'pop' generally refers to popular music, while 'underground' represents music that is not considered to be mainstream. In practice, this expresses itself with bookings of bands such as Nirvana, Pearl Jam, and The White Stripes.

Recently, there has been a push from the Dutch government for more diversity and inclusion at music venues. But what do these concepts actually mean in the context of Vera? Should Vera feature other music? Focus more on other genres, such as techno or classical? Or should Vera actively try to attract new audiences? And to what extent are the bands you book and the audience you attract connected to each other? In short, there are enough questions to investigate from a philosophical perspective.



Students working in the kemenade of Vera

Philosophy in practice

When it comes to questions from society, we at the Knowledge Centre Philosophy begin by figuring out a suitable form for the process of addressing this question. On the one hand, at the Faculty of Philosophy, we have a number of lectures in which we can ask students to work on societal questions. On the other hand, we also offer placements in which students can work more intensively on a specific issue for a longer period of time. But for the question posed by Vera, we wanted to try out a new form that we had no experience with yet: the Hackathon.

A Hackaton is a method originating from the computer world (a combination of 'hacking' and 'marathon'), in which a group of people work on a particular problem for a short period of time. Originally, it was intended to create or improve software, but the method gradually evolved and started being used to solve all kinds of different problems. A characteristic of this method is that participants work intensively on a particular problem for a short period of time. It is a kind of intellectual pressure cooker.

For Vera's Hackathon, we invited several students from the Bachelor's and Master's degree programme in Philosophy to Vera's premises. The goal: to provide a perspective on the question of what the concepts of inclusion and diversity mean in the context of Vera in the space of one afternoon. The day began with a tour of the premises and a detailed explanation of Vera's history by programmer Peter Dijkstra. Then, over lunch, the students were given a flash lecture on inclusion and diversity from the perspective of academic philosophy. This lecture was given by PhD student Ervin Kondakciu. After lunch, it was the students' turn to apply philosophical theory to Vera's societal question. Students were allowed to explore Vera's premises, and they had a number of conversations with staff members. The input from these conversations was then linked to philosophical theory, and, by the end of the day, the students were able to present Vera with concrete advice for making Vera more inclusive and diverse. In addition, both programmer Peter Dijkstra and director Olaf Veenstra indicated that the students' presence and the conversations they sparked among the staff were a boon in themselves.

Precisely because we as philosophers often deal with rather general and abstract questions, it is fun to explore these questions in a concrete social situation. This has added value both for philosophers and for society.

‘DE UITDRAGERIJ’

After more than 40 years as a Science Shopkeeper, Karin Ree retired on 23 November 2023. To mark this occasion, the science shops joined forces to celebrate Karin’s retirement, which resulted in ‘De Uitdragerij’. An afternoon that centred on connecting the present and the past: old science shop projects, new science shop projects, old staff members, young staff members, former students, and students who will soon be working on science shops projects in the future. During the afternoon, there was an interactive market where people could look at projects, but they could also make their own contributions, for example, by doing experiments. Since the connection between art and science is something that has always fascinated Karin, the day was documented through poetry. You can find the poems here.



Boterkoek manifest

Wij zijn hier samengekomen
om te protesteren
tegen complotten
tegen geheime wereldleiders die zich niet in een kamer verzamelen, maar afspreken via Zoom
tegen industrieën die niet bestaan en
tegen die er al zijn.

De 8050 Emergency Line trilt rood
tijdens het protest bieden wij koffie, boterkoek en fietslessen aan
met infrarood bevestigen wij dat de koffie nog warm is
de kinderen staan al 130 decibel te schreeuwen
Voor wetenschap wordt bloed gegoten
het bloed zakt naar de bodem
onze bodem.

Wij protesteren voor bruggen op deze bodem
bruggen naar olie bevlekte geschiedenis
bruggen naar de complotten om ze te verwelkomen
transparante bruggen van hout zodat iedereen kan zien wat wij te bieden hebben
en letterlijke bruggen om *smooth* overheen te fietsen.

Onze vrienden van weleer hebben elkaar weer gevonden
zelfs na afscheid staat de oude garde nog vooraan
dankzij hen is het een perpetuum mobilé protest
voor wetenschap wordt bloed gegoten
het bloed zakt naar de bodem
onze bodem.

Written for Karin Ree by Marius I. de Vries

ik lees iets over transparant hout en
vraag me af of we bomen doorzichtig
kunnen maken zodat ik het bos
nooit meer uit het oog verlies

ik voel me een kopje bloed in
een bad met water ik dij uit
tussen deze kraampjes ik fiets
overal tussen door en langs totdat
ik een smoothie ben ik kijk

door een infraroodcamera en zie
dat hier de warmte bestaat tussen
dit alles waar wetenschap met de voeten
in de klei staat ik duik een

kraampje in en word een experiment ik
duik een kraampje in en ik ben een onderzoek
ik duik een kraampje in en word een
toetsvraag ik duik een kraampje in en
vind mezelf jaren later terug in een
bronvermeling ergens wegge-
moffeld in een et al.

ik ben een wetenschapsburger
ik ben een wetenschapsburger met extra kaas
ik ben een wetenschapsburger met extra kaas die afval
scheidt vanaf een afstand

het is hier eigenlijk een snoepwinkel met
betanoga talenknabbeltjes energieneutrale
dropveters die ons van fossiele brandstoffen afhalen en
er is boterkoek en muffins en pepernoten die een
goed uitgedachte historische context bij zich
dragen en er is een pretzel die in zo'n vorm
gevouwen is dat filosofen er gedegen vragen
over kunnen stellen

(de pretzel is misschien een complottheorie
van de GMO-FBI daarover kan geen twijfel bestaan)

ik rust uit bij een
verhalenboom die me
vertelt over zeewier
de atmosfeer golfenergie
elastische rubberproducten de
kracht van de buurt plastic
zonnecellen die me vertelt over
stompzinnig vertragingsbeleid

ik denk aan iemand die deze
winkel opent de toonbank
afstoft de etalage inricht met
wetenschap in potjes en kruikjes en
potjes en kannetjes aan iemand

die dit aan de wereld laat zien die
de vloer vrijhoudt van ongestelde vragen
ik zie oneindige schappen voor me
oneinige kraampjes ook met luifeltjes
waaronder je antwoorden krijgt of mag
twijfelen over eigenlijk alles

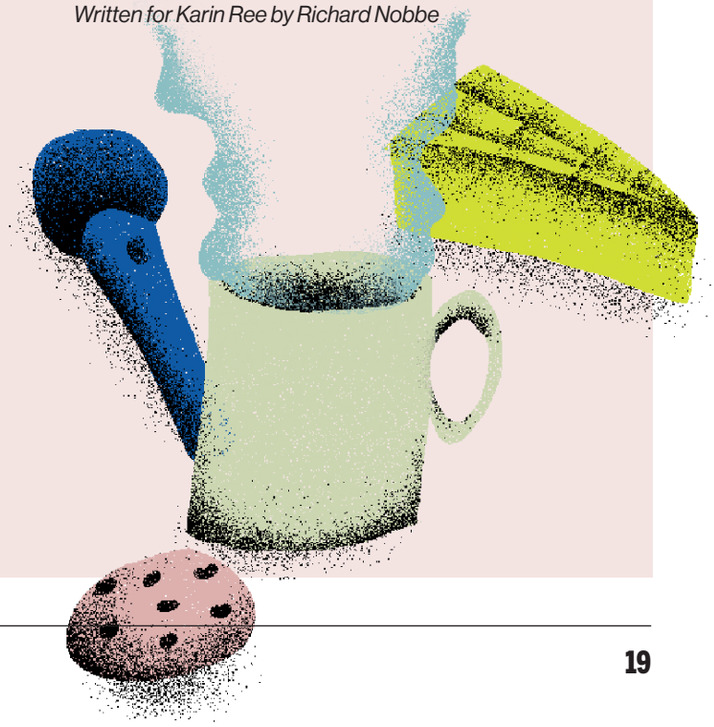
naar zo iemand moet je een plein
vernoemen of een straat of
een parkje waar iemand een eurekamoment
heeft of een brug misschien ik

geloof niet meer in ivoren torens kom
tot het besef dat wat er niet is gebeurd
net zo belangrijk kan zijn als wat er
wel is gebeurd dat kunst en wetenschap
iets fundamenteels gemeen hebben:
dat het ons altijd nieuwe dingen probeert
te vertellen

ik schrijf dit op terwijl een man-
vrouwmachine op de achtergrond ratelt
en voel dat in deze oneindige optocht
van kraampjes en snoepjes er nog maar
een vraag geen antwoord heeft:

wanneer komt die brug terug?

Written for Karin Ree by Richard Nobbe





By: Nils Elzinga en Francine Nijp

SUSTAINABILITY OF LABORATORIES GAINING MOMENTUM

Scientists play a crucial role in society and contribute to solutions to the climate crisis. Although scientific research can lead to major breakthroughs and insights, laboratory research often has unintended negative consequences for the environment, such as excessive energy consumption, the production of (hazardous) waste, and the depletion of natural resources. In 2021, the Green Labs project was launched in collaboration with the Green Office as a small initiative to make a number of biology labs more sustainable. In addition, in 2022, a working group was initiated through the 'FSE is Going Green' programme, which now includes a number of labs from eight different institutes of the Faculty of Science and Engineering (FSE). What makes this project so successful? A dedicated group with many enthusiastic and intrinsically motivated people.



LEAF

To fully engage the UG labs in sustainability, FSE has joined the Laboratory Efficiency Accreditation Framework (LEAF). LEAF is an online software platform where labs run through a checklist of criteria and can fill in what concrete actions they will take. One example involves putting up stickers to indicate whether a device should be switched off after use. In the next step, someone from the Green Labs group stops by to check whether the actions have actually been carried out. This way, participating labs can get a bronze, silver, or gold certificate. A total of 46 labs have been accredited so far, 17 with LEAF silver, and 29 with LEAF bronze. The software tool also calculates savings, both financial and in terms of CO2 equivalent. For example, in 2023, €398,763 and 477.1 tons of CO2 equivalent were saved thanks to the efforts of the UG Green Labs (see Figure 1).

Green Labs Working Group

The UG Green Labs working group has made considerable progress in 2023. Following the initial efforts to make a number of labs more sustainable, the working group was redesigned. The working group has grown considerably and now includes a chair, a secretary, and a communications team. All members are volunteers who are there on their own initiative. Students, PhD students, lab technicians, support staff, and anyone who feels that things should and could be done differently. This is not a group that engages in endless meetings, but first and foremost a group that takes action.

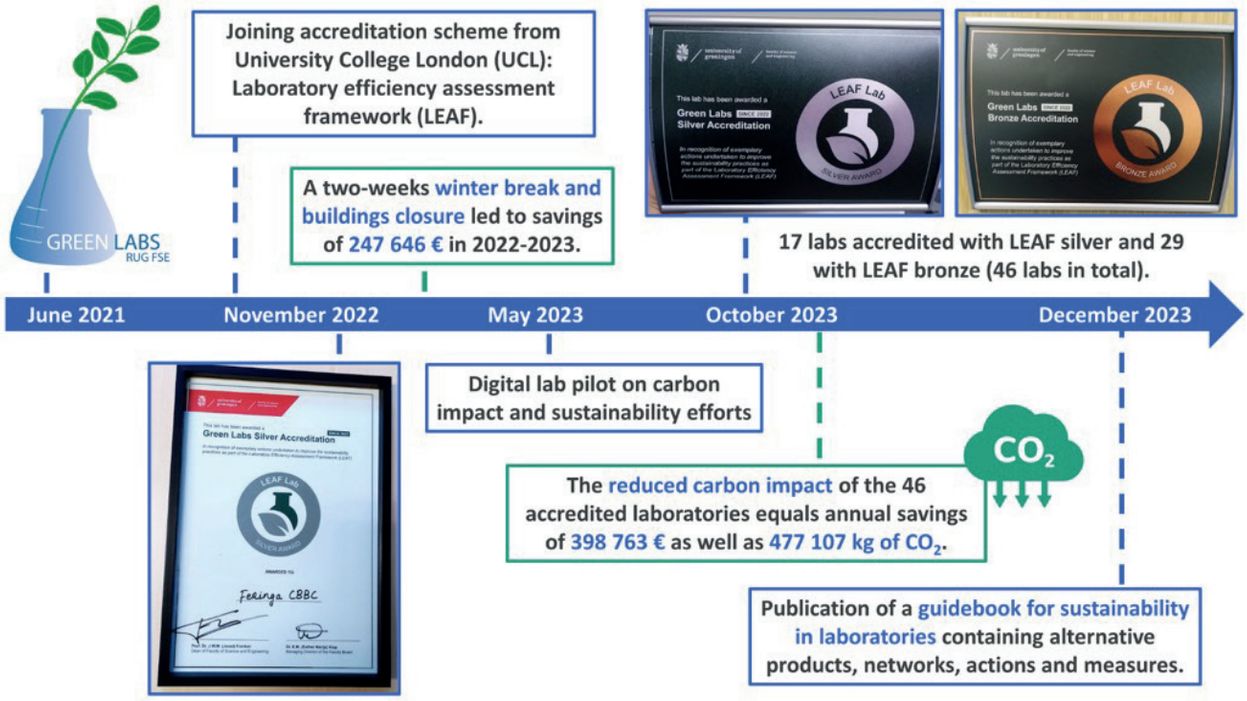
Sustainable Laboratory Manual

In 2023, a comprehensive manual was published with practical suggestions for lab users and lab managers. This manual includes, for example, what type of sustainable chemicals you can use, whether it is better to replace plastic with glass, what to do with old or damaged lab equipment, and what to do with old lab coats. Since early 2024, the manual can also be found online, and it is already extensively used by UMCG, Utrecht University, Wageningen University, the University of Amsterdam, and Washington State University to make their labs more sustainable.

INTRODUCING: LIN-SI BOLK

Until September, Aline and I will be working as the communications department of the Science Shops. My task will mainly involve designing the website, LinkedIn, and the annual report. I'll also be involved with the videos that the science shops produce. Right now, I'm in my final year of studying Law. Besides my studies, I have a big passion for photography and I also really enjoy sports. Additionally, I'm always very interested in social issues and research. So, the science shops will be a great place for me to further explore those interests. I think it would be really cool if I could portray the research being done well and thereby get the recognition it deserves. I'm really looking forward to the upcoming six months and expect to learn a lot.





Figuur 1: Timeline Green Labs RUG

Hidden Waste of Research (Sustainability Week 2023)

Every October, the Green Office organizes the Sustainability Week. The week consists of a stimulating programme based on current themes, including lectures, walks, exhibitions, a film night, a pub quiz, and an excursion. Last year was our most successful edition with more than 750 participants. One of the activities was the Hidden Waste of Research event, with several short lectures on 'hidden' waste in labs and the travel behaviour of researchers. There was also an award ceremony honouring labs that received a LEAF accreditation last year. All this in the midst of art installations made from waste from a chemistry lab (see Figures 2, 3, and 4). The goal of this event was to gain a better understanding of our waste and share ideas and best practices on how we can reduce, reuse, and recycle waste.

Living Lab Project

Every year, the Green Office joins forces with students from various faculties to investigate how the University can become even more sustainable. Students can work on a real project in an instructive and interesting setting and the Green Office receives interesting science-based advice in exchange. One recurring partnership is with the Beta Science Shop. Last year, student Myriam Kammüller Pont conducted research on Ultra Low Temperature (ULT) freezers. These are freezers that are normally set at -80 ˚C and consume as much energy as an average household. Myriam took an inventory of the freezers, conducted a literature review on freezer types, and ran a survey among lab technicians. Her research revealed that most samples can be stored between -60 ˚C and -63 ˚C, which is the next freezing point after 0 ˚C. One exception are samples containing Ribonucleic acid (RNA). Because the temperature can sometimes fluctuate, a safe temperature for this acid would be -70 ˚C, which would make it possible to save at least 30% on energy consumption. In addition, she investigated whether freezers need replacement or maintenance. Based on Myriam's recommendation, eight ULT freezers will be replaced.



Image 2: Swan and other glass sculpture made from broken glassware.
Credits: M. C. A. Stuart, University of Groningen.

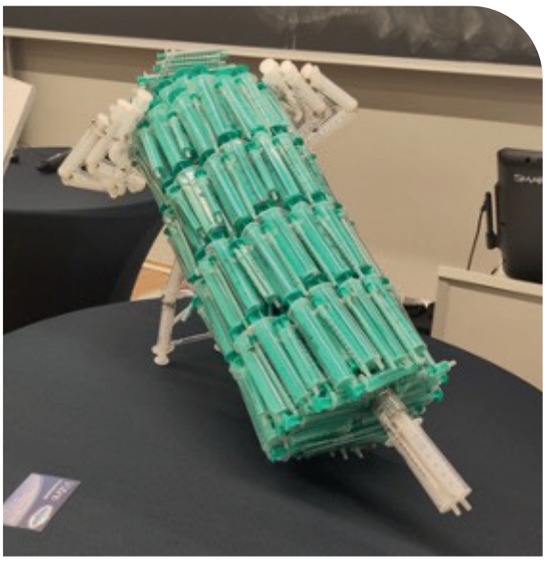


Image 3: Syringe made from plastic waste from syringes collected in the pilot laboratory.
Credits: M. Heinhuis, University of Groningen.

Image 4. Old and forgotten lab coats pile up.
Credits: T. Freese & P. Nauw, University of Groningen



Outreach and the future

FSE produced a short video on sustainable laboratories, in which Nobel Prize winner Ben Feringa promotes Green Labs. We are also currently working on an extensive article for the Royal Chemistry Society, with the UG as a case study. This article, together with the existing manual, can be used by various future Green Lab movements. In 2024, we will continue to work on improving and recycling plastic supplies in laboratories and setting up a recycling facility for solvents. In short, the University is making its laboratories more sustainable, but there is also still plenty of work to do!

RECIPROCAL LEARNING IN COMMUNITY CENTRES

Vocational education (MBO), university of applied science (HBO), and university students work together on neighbourhood issues

By: Vincent Hazelhoff



The students in conversation with the Residents' Association and the municipal area manager about their contribution to the neighbourhood plan.

> **"STUDENTS LEARNING FROM RESIDENTS, AND VICE VERSA, IS ONE OF THE CORE VALUES OF BOTH WIJS AND THE WIJS ATELIERS.**

A vocational education, university of applied science, and university student walk into a classroom... This is not the first line of a bad joke, but the reality in three Groningen community centres. In what is known as Ateliers, students from all Groningen knowledge institutions work together with residents and professionals on an issue affecting the neighbourhood. How exactly does an Atelier work? And what is its added value?

From ladder to fan

The Dutch educational system is too strongly vertically organized, according to the government. Current views on higher and primary education create patterns of thinking in which the aim is always to get as high as possible. This results in a system in which a vocational education programme is seen as less valuable, when in fact, we are facing a structural shortage of practically trained people such as nurses and IT professionals. Also, striving for 'more and higher' leads to a lot of stress among students. Outgoing Minister Dijkgraaf therefore suggests viewing the education system more as a fan, in which a switch from a university to a university of applied sciences is not seen as a step down, but a step sideways.

In network organization WIJS (Wijkinzet Jongeren en Studenten), students work together in community centres on issues affecting the neighbourhood. These can be small-scale issues, such as help with a tax return or writing an objection, or larger research questions which the students can use for their thesis. This happens in collaboration with residents and in the neighbourhood, based on the idea that students gain practical work experience, and residents get help in an accessible way. WIJS has by now expanded to seven locations and is helping approximately 2000 Groningen residents per year.

Do we speak each other's language?

Students learning from residents, and vice versa, is one of the core values of both WIJS and the WIJS Ateliers. In these teaching programmes, students work on issues from the neighbourhood. For example, in De Wijert students are working on an exercise route for the elderly, at the Selwerd community centre students are working on loneliness among young people, and at Hoogezandse Spoorstraat-Kieldiep participants are supporting the Residents' Association in developing a new plan for the neighbourhood.

How does this work? In the first four weeks, the students attend several workshops, in which they learn more about product-oriented thinking (design thinking) and get to know each other's expertise and boundaries (boundary crossing). They also come into contact with the client. During the first four weeks, the lecturers involved are responsible for the content, but the relationship between lecturer and student changes after week 4. The students form project groups, and the lecturer assumes the role of coach, help desk, and walking Rolodex. 'The importance of freedom of choice, autonomy, being allowed to make mistakes, and getting to know each other's perspectives has proved to be of great value,' says UG student Tabatha Ros, who is researching this innovative form of education. 'That is why the manual of the WIJS Ateliers course unit focuses on gradually transferring ownership.'

Reciprocity

Throughout the full six months, the Atelier acts as a testing ground for students to learn more about the neighbourhood and its issues. The programme includes a wide range of experts and experts by experience: from community workers to area managers, from child-parent coaches to aldermen, and from GPs to imams. Each guest brings his own perspective on the neighbourhood. A GP has a completely different take on loneliness than a municipal policy officer, for example.

> **"IN THE 'ATELIER' I EXPERIENCE A VALUABLE ENVIRONMENT, WHERE DIVERSITY PLAYS A KEY ROLE. HERE WE SHARE EXPERIENCES AND LEARN FROM EACH OTHER. AS A STUDENT, THIS PLACE OFFERS ME A WEALTH OF OPPORTUNITIES TO GROW AND GAIN PRACTICAL SKILLS.**
>
> - Büsra Türkmen, student Management in Healthcare, Hanze

By becoming aware of the different dynamics and perspectives in a neighbourhood, the students learn to discover their own role as future professionals. For vocational education students, for example, it can have added value to learn more about policy, while university students benefit from seeing the practical results of specific academic concepts. In this way, they reinforce one another with their expertise and shortcomings.



Het resultaat van de grensverkenning

Giving back to the neighbourhood

At the end of the semester, the students deliver a product for the neighbourhood. This can be anything: an activity for young people, an advice for the municipality, a model for a playground, or a workshop for healthcare professionals. The students deliver customized work that is tailored to the residents and professionals in the neighbourhood. One of the criteria for the final product is that it should provide tools for the neighbourhood to proceed independently. The product therefore becomes not only something of the students, but also something of the neighbourhood.

The students not only give something back, they also pass something on to the new cohort of students. This means that the new group does not start with a clean slate, but they build on the work of their predecessors. This creates continuity and ensures impact in the neighbourhood. It also reduces the risk of repetition and research fatigue in the neighbourhood, because the new group of students often approaches the issue from a different angle.

No egg of Columbus

The WIJS Ateliers are not the egg of Columbus when it comes to the reappraisal of higher education. There are also clear obstacles. For instance, recruitment for the Ateliers takes a lot of time, because the educational systems are not aligned with each other. It also takes a lot of time to learn to speak each other's language before you can take the plunge together, and supervision by the lecturers is intensive.

> **"IT IS EXTREMELY VALUABLE TO WORK WITH STUDENTS FROM DIFFERENT COURSES, BECAUSE EVERYONE BRINGS THEIR OWN UNIQUE PERSPECTIVE, KNOWLEDGE AND SKILLS. THIS WAY YOU ARRIVE AT NEW INSIGHTS AND IDEAS TOGETHER.**
>
> - Yara Peper, student of educational sciences, RUG



Photo by: Tomáš Madeja, Comenius University Bratislava.

SCIENCE SHOPS AND ENLIGHT

Since 2020, the UG has joined nine other European universities in the ENLIGHT European University Alliance. One of the core concepts of this alliance is 'impact', meaning working on the important societal challenges of our times. That is what ENLIGHT wants to do in explicit collaboration with and for society, whereby students can learn through teaching that is based on these challenges.

By: Henk Mulder

You could almost say that ENLIGHT is a new take on the Science Shop concept. It is therefore no surprise that Groningen's experience with Science Shops, and public engagement in a broader sense, is eagerly shared in this network. Henk Mulder of the Beta Science Shop is one of the facilitators of ENLIGHT. He is the leader of the ´public engagement´ part of the ENLIGHT-RISE project.

In 2023, he organized a number of webinars to facilitate experience exchange, and he explained how the Groningen Science Shops work in his first webinar. Under the guidance of a Leiden colleague, we then focused on how to measure the impact of science communication. Niels Alberts from the Beta Science Shop and Dr Mohammad Gharesifard also offered a webinar on how to build Citizen Science networks within a university.
From our partners in Bilbao, we learned more about integrating impact in research, and our colleagues in Galway shared how they have integrated Service Learning into their teaching. The latter strongly resembles the Science Shops, with the difference that the 'service' in question does not exclusively consists of research. You could also consider it a social training.

Because online activities have their limitations, we also organized a number of 'real' workshops, for which Henk visited partner universities in Bilbao, Bratislava and Bordeaux. He also gave a presentation in Groningen for a delegation of administrators from Bratislava. A workshop in Tartu is still being planned. These workshops, intended for support staff and academic staff, contributed to the formation of local networks for public engagement and were inspiring thanks to the exchange of ideas — and the discussion on how to translate them to the local context. The latter in particular was and remains incredibly fun!

How do you bridge a gap?

BY: KARIN REE

Students keep you on your toes. They pull you out of your routine with their open-minded questions. Take our brand-new student assistant Aline: '*The annual reviews of the science shops are full of results of projects, but how do these projects actually come about?*' Aline wants a peek into the kitchen. Unfortunately, there is no recipe: every question is unique, and each shop has its own cooking habits and specialities. As far as I'm concerned, after a long career at the Science Shop Beta, I've come to the conclusion that it might just be a matter of messing around. But I don't want to fob Aline off with such an answer. So to honour her question, let me share the genesis of one question that is close to my heart: the Paddepoelster Bridge.

The bridge over the Van Starkenborghkanaal used to connect the north-west side of Groningen, near the Zernike Campus, with the Ommeland area. I say 'used to connect' because, in September 2018, the bridge was damaged by a passing boat, and since then the locals have been embroiled in an impressive game of tug-of-war with authorities over the future of the connection.

How does a group of local residents come to contact the science shops? In general: we are quite well known; it sometimes amazes me how people manage to find us through surfing the internet and referrals. That said, we need to devote a lot more attention to our visibility and accessibility for potential clients who may be further removed from the university. This can be done through general PR, such as the Annual Review, but also by initiating contact with organizations ourselves. In the case of the Paddepoelster Bridge, there was also some self-interest at play on the part of the UG: the bicycle connection between the Zernike Campus and the region is sorely missed. We have a shared interest with the *R'turn Our Bridge* organization, so contact was quickly established.

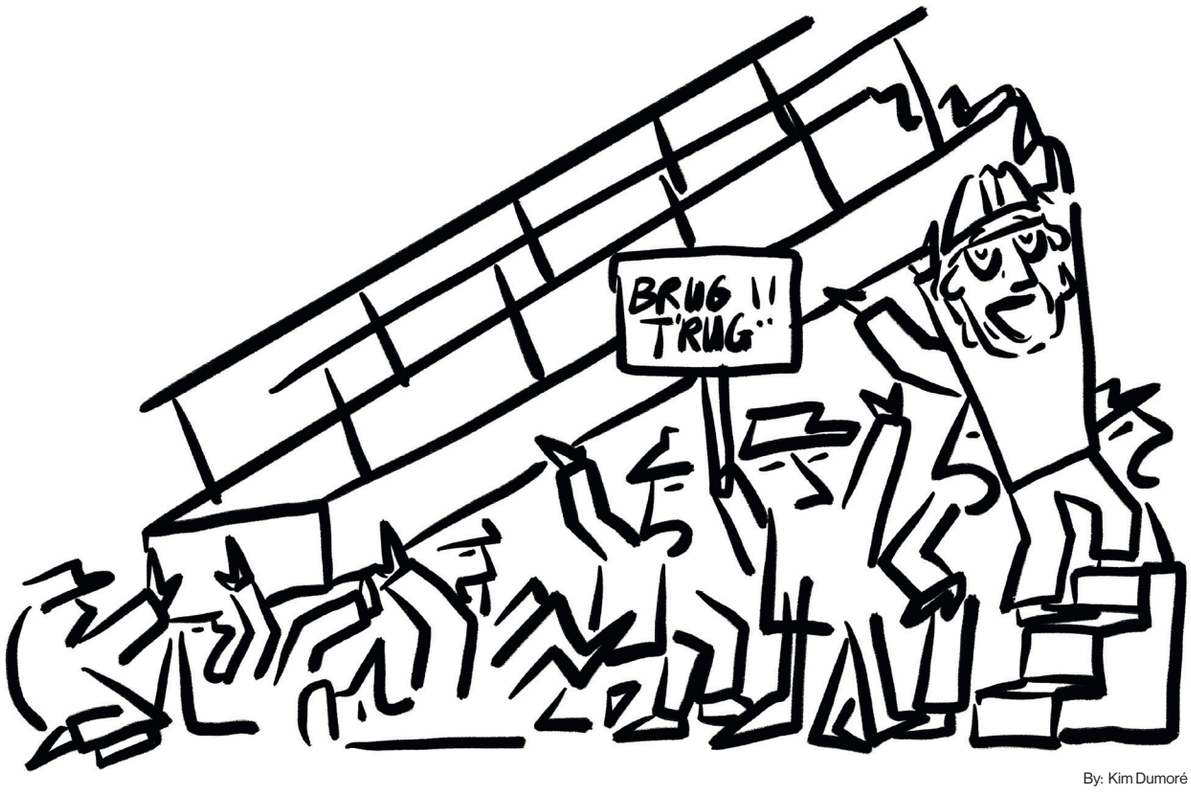
How do you then arrive at a research question? That is a matter of consultation about supply and demand, which is where you run into the following phenomenon: 'Society has problems, the university has faculties (or disciplines)'. Problems are always surprisingly complex, even a seemingly simple bridge repair. Such consultations are one of the most enervating aspects of the Science Shop work. Trust me, you don't want to hear all the issues Brug t'rug was running into. Questions were flying in all directions. We started out by simply mapping the usefulness and need for the bridge: how many people use it, by what means of transport, from where to where, and what are the consequences of them having to take an alternative route? It was tailor-made for for a student with expertise in logistics.

Next step: how do you find such a student? The first obstacle: find a lecturer or research group that believes this question fits within their discipline. This is the next challenge in the brokerage role of the Science Shop. Our Faculty (Science and Engineering) is large, everyone is extremely busy, there is a lot of turnover and many non-Dutch speakers, and then there is you with your local bridge... So make sure people know you. Don't be afraid of being the girl with the weird questions, because weird questions always make for great stories. Fortunately, we have a number of free spaces in education, where questions for project assignments are welcomed, but we should be careful to not limit ourselves to these.

> **"SO MAKE SURE PEOPLE KNOW YOU. DON'T BE AFRAID OF BEING THE GIRL WITH THE WEIRD QUESTIONS, BECAUSE WEIRD QUESTIONS ALWAYS MAKE FOR GREAT STORIES.**

This particular question found a place in the Bachelor's programme in Industrial Engineering and Management. Finding a student there is never difficult, as they are eager to take on real-life problems. Ruben Kuik got to tackle this one (2019).

So is the Science Shop's job over at that point? On the contrary, coaching the societal aspects of projects is part of our job as lecturers. So Ruben and I jointly attended the meetings of *R'turn Our Bridge* and experienced first-hand how their network was expanding with all kinds of organizations for nature preservation, tourism (the Pieterpad runs over the bridge), and municipalities. The administrative complexity (concerning who is responsible for the bridge, who is responsible for the water, who is responsible for the road, and how do they interact) was a big eye-opener. If a student working on this kind of project thinks they are going to solve the problem: humility about what science can do is one of the most beautiful learning moments. You can, however, make yourself useful, learn a lot in practice, and score eternal gratitude. The bridge is still not there, but Brug t'rug is not to be broken, and its importance transcends the bridge itself. So Aline: give it a try!



By: Kim Dumoré

A warm gesture for Ukraine

By: Karin Ree

Winter 2022-2023. The energy bill of the university is skyhigh, so the thermostat is set to low. To soften the inconvenience, the Executive board of the university has gifted all the staff members a UG-red fleece blanket for christmas. The coffeetable of the Energy & Environmental Sciences department is used to thick sweaters: “Ukraine. There, the people are really cold. Let’s send our blankets to Ukraine.” Leo Dvortsin, my neighboring colleague, is of Ukrainian-Russian descent and knows the roads there. The Ukrainian civil society organization Zgraya (which means “wolfpack”) took up the distribution. The department of Energy & Environmental sciences is not that big: a box of blankets would fit in the back of a car. At least, that was the plan before the Ukrant got wind of it.

A small news article with just my name and contact details, created a storm of emails coming from all corners of the university. “Can we join in? I will collect blankets at my department/ my faculty/ we still have a few boxes of blankets that haven’t been collected...” It was heartwarming! Every day, people came by with a few blankets, and even with whole bundles of blankets. This is where the decentralized nature Science Shops can really shine! Every Science Shop became an active collection point for their respective faculty.

However, the total stock of blankets quickly exceeded the back of our car. The Executive board, who fully supported the campaign, offered to help in the search for suitable transport to Ukraine. Again, the informal route proved the best: the dutch civil society organization Hope4Ukraine came by with a truck and brought around 850 blankets (circa 45 boxes) to Zgraya in Kyiv. in the following weeks, Leo regularly received emails with pictures of our blankets in ukraine: “This pallet is going to Bachmoet, this one is going to the frontline!” It brought the war closer, but it also showed the resilience of the ukrainian people! I’m forever grateful for every UG-donor who, with their blankets (how futile they might seem), contributed!



Dozen met dekentjes onderweg naar Oekraïne.

2023 PUBLICATIONS AND PRESENTATIONS

Science Shop Language, Culture & Communication

Publications:

- *Marrit Claus*. **Maar thans heb ik met heel mijn hart Toewan Jezus lief" Een onderzoek naar het zendingsbeeld in protestantse jeugdzendingspublicaties over Indonesië (1900-1980)** Masterscriptie. Maart 2023.
- *Bela Geick, Matthew Squire en Jorik Mossel.* **Internal Communication Affects External Communication: A research report reviewing the internal communication methods within Stadsbeheer regarding the pilot of the "Maai-Mei-Niet" for the Municipality of Groningen.** Onderzoeksrapport. Februari 2023.
- *Dan Padure en Juan-Carlos Méndez Álvarez*. **Eurosonic Noorderslag: Diversity & Inclusion.** Onderzoeksrapport. Maart 2023.
- *Eva Postema, Floor Bijker, Laura van der Laan, Luna van Dijk, Marieke Voogt en Sabijn Janssen.* **Marketing plan Mooie Dingen Makers.** Marketing Plan. April 2023.
- *Sillé, M., Bruin, C., Tomanov D., Omileke J., en Verver, K.* **Final Advisory Report: Social Lab**. Juni 2023.
- *Daphne Janssen.* **Rapport Kunstinventarisatie.** Kunstinventarisatie gemeente Coevorden. September 2023.
- Jaimie Wijmenga, Annemar Renzema, Inge Spoelstra, Paulien Steen en Ilse Engels, **Ruraal Erfgoed in Fryslân**. Onderzoeksrapport. Januari 2023.

Presentations:

- *Vincent Hazelhoff*, **Visualising power structures**, Career minor. December 2023.
- *Vincent Hazelhoff*, **Introducing the Science Shop**, Music Careers, Industries and Lives. November 2023.
- *Vincent Hazelhoff*, **About the Science Shop Language, Culture and Communication**, presentatie ENLIGHT, mei 2023.
- *Vincent Hazelhoff en Yorick Karseboom*, **Over de Wetenschapswinkels**, presentatie Talent Web Groningen, mei 2023.
- *Eva Postema, Floor Bijker, Laura van der Laan, Luna van Dijk, Marieke Voogt en Sabijn Janssen.* **Presentatie Mooie Dingen Makers.** Mei 2023.
- *Vincent Hazelhoff*, **Presentatie Wetenschapswinkels**. Public Engagement Meeting. Maart 2023.
- *Bela Geick, Matthew Squire en Jorik Mossel.* **Internal Communication Affects External Communication,** presentatie wethouder Miriam Wijnia, februari 2023
- *Bela Geick, Matthew Squire en Jorik Mossel.* **Internal Communication Affects External Communication,** presentatie gemeente Groningen, januari 2023
- *Vincent Hazelhoff*, **About the Science Shop Language, Culture and Communication**, presentatie college vertaalwetenschap, januari 2023.
- *Jaimie Wijmenga, Annemar Renzema, Inge Spoelstra, Paulien Steen en Ilse Engels*, **Presentatie rapport Ruraal Erfgoed**, februrari 2023.
- *Daphne Janssen*, **Presentatie kunstinventarisatie Coevorden**, presentatie ambtenaren. September 2023.
- *Daphne Janssen*, **Presentatie kunstinventarisatie Coevorden**, presentatie wethouder. September 2023.
- *Sakshi Rao.* **Leeswijzer: Where the Crawdads Sing, Delia Owens**. Senia. April 2023
- *Asha van Wee & Szymon Branka.* **Leeswijzer: The Watchmaker of Filigree Street, Natasha Pulley.** Senia. Maart 2023.
- *Maartje Bergers*. **Leeswijzer: April in Spain, John Banville.** Senia. Maart 2023.
- *Kato Kuijpers*. **Leeswijzer: Lessons, Ian McEwan.** Senia. Maart 2023.
- *Iris Tamara Schnabel & Martijn W. Siebring.* **Leeswijzer: Sea of Tranquility, Emily St. John Mandel.** Senia. Maart 2023.
- *Amelie Hock*. **Leeswijzer: Americanah, Chimamanda Ngozi Adichie.** Senia. Maart 2023.
- *Fyona Geleynse*. **Leeswijzer: Tussentijds, Peter Zantingh**. Senia. April 2024.
- *Jet Sterkman.* **Leeswijzer: Sloop, Anna Enquist.** Senia. April 2023.
- *Yvonne van Kollenburg*. **Leeswijzer: Nieuweling, Marion Bruinberg.** Senia. Mei 2023.
- *Kyra Grievink*. **Leeswijzer: Buitenleven, Nina Polak.** Senia. Mei 2023.
- *Patricia Francekova*. **Leeswijzer: Allein, Daniel Schreiber**. Senia. April 2023.

Collaborative Events:

- **Wetenschapsbraderie: 'De Uitdragerij'.** 20 oktober 2023.

Science Shop Bèta

Presentations:

- *Henk Mulder*, **Science Shops**. Enlight-Public Engagement Webinar #1, 22-Jun-2023
- *Henk Mulder*, **Public Engagement in ENLIGHT: Opportunities to Create Benefits for Research, Teaching and Society**. University of Bordeaux, 10-Oct-2023
- *Henk Mulder*, **Public Engagement at Universities: Opportunities to Create Benefits for Research, Teaching and Society**. Comenius University Bratislava, 20-Sept-2023
- *Henk Mulder*, **Public Engagement at Universities: European Experiences to Create Benefits for Research, Teaching and Society**. University of the Basque Country, Bilbao, 29-Mar-2023

Events:

- *Henk Mulder & Maaike Muller*, **UG/UMCG Public Engagement Network Event**. Groningen, 5-Jul-2023.

Collaborative Events:

- **Wetenschapsbraderie: 'De Uitdragerij'**. 20 oktober 2023.

Science Shop Medicine & Public Health

Publications:

- *Jansen, A. & Verhage, V.* **Korte literatuurverkenning naar de uitkomsten van verschillende coronamaatregelen tijdens de coronapandemie.** Februari 2023.
- *Ritsema, E., Verhage, V. & Boonstra, M.* **De weg naar een zelfredzame patiënt: Een kwantitatieve studie naar de ervaren steun en kwaliteit van zorgverleners bij nierpatiënten met lage gezondheidsvaardigheden**. Masterscriptie. April 2023.
- *Hoen, L., de Boer, K. & Verhage, V.* **Shedding a light on working night shifts in menopausal hospital workers: How scheduling freedom can support a healthy workforce**. Posterpresentatie. Juni 2023.
- *Van der Vegt, L., Huyghen, A-M., Heijs, N., Verhage, V. & Visscher, L.* **Op weg naar duurzame overbodigheid van professionals door het bevorderen van samenredzaamheid: Onderzoek naar de ervaringen van jeugdigen, ouders/verzorgers en personen uit het sociale netwerk met het betrekken van het sociale netwerk en de bijdrage aan netwerkversterking binnen de interventie Community Support**. Masterscriptie. Juni 2023.
- *Pit, I. H., Huyghen, A-M., Visscher, L., Witte-van der Laan, N. & Verhage, V.* **Meer dan Vaardigheden: Het Belang van Competenties voor Begeleiders: Bij volwassenen met een verstandelijke beperking en complexe problematiek**. Masterscriptie. Juni 2023.
- *Van der Graaf, B. N. J., Sanders, J. B., Oldenburger, D. C. V., Gijzenberg, N. L. & Verhage, V.* **Inschatten van Bloedverlies tijdens Badbevallingen in de Praktijk**. Bachelorscriptie. Juni 2023.
- *Verhage, V., Pieterse, A.C. en Dumore, K.* **Open Dag UMCG: Wat doet de Wetenschapswinkel?** Juni 2023.
- *Verhage, V., Alberts, N., en De Boer, M.K.* **Open Dag House of Connections.** Juni 2023.
- *Hoen, L., de Boer, K. & Verhage, V.* **Should night shifts be discouraged in (post)menopausal female hospital workers?** Honours College onderzoeksproject. Juli 2023.
- *Murach, E., Haan, M., Steverink, N. & Verhage, V.* **Sociale steun in de**

psychiatrie: Kwalitatief onderzoek naar de rol van sociale steun in het welbevinden van bezoekers van Stichting (On)Gestoord. Masterscriptie. Oktober 2023.

Knowledge Centre Philosophy

Publications:

- *Yorick Karseboom.* **Jouw huis of het mijne.** Platform Gras. 28 juni 2023.
- *W. van der Laan.* **Leeswijzer: Basisboek Oosterse Filosofie, Michel Dijkstra.** Senia. Mei 2023.
- *J. de Vries.* **Leeswijzer: Het Vuur van de Vrijheid, Wolfram Eilenberger.** Senia. Mei 2023.
- *J. Huberts.* **Leeswijzer: Wat is Ruimte Waard, Marjolein van Heemstra.** Senia. Mei 2023.
- *A. Korver.* **Leeswijzer: Heidegger, Dirk de Schutter.** Senia. Mei 2023.
- *I. Jugo.* **Leeswijzer: De Essentie van Kant, Jabik Veenbaas.** Senia. Mei 2023.

Presentations:

- *T. Liefting, M. Pauly, B. Budak & A. van der Star*. **Zinvol leven.** SKLO lezing. 18 oktober 2023
- *Marc Pauly*. **Complottheorieën - een filosofisch perspectief.** Buurtcultuurfestival Korrewegwijk. 4 november 2023.
- *Yorick Karseboom.* **Keynote Speech Open Research Awards: Making Connections.** Open Research Awards RUG. 23 november 2023.
- *Yorick. Karseboom.* **Debat Workshop**. Deelnemers MindWise debat, Studium Generale. 8 mei 2023.

Collaborative Events:

- **Wetenschapsbraderie: 'De Uitdragerij'**. 20 oktober 2023.

Bèta

Publications:

- *Obbe Barth.* **Energy Performance at the Energy Academy.** Bachelor report Industrial Engineering and Management. Januari 2023.
- *Ruben Kaman.* **Analyses of sludge and sludge ash as partial replacement of Portland cement in concrete.** Bachelor report Industrial Engineering and Management. Januari 2023.
- *Sake Salverda.* **Analysis of decentralised air humidification systems for the UMCG.** Bachelor report Industrial Engineering and Management. Januari 2023.
- *A.R. Jen Hong Li.* **Energy transition at "De Vijftig Bunder".** Bachelor report Industrial Engineering and Management. Maart 2023.
- *Dide C¸ etinayak.* **Organic solvent recovery from chemical lab waste for minimal environmental impact.** Bachelor report Industrial Engineering and Management. Juni 2023.
- *Jannat Kashkay.* **Pathway to a circular Future. Bachelor report Industrial Engineering and Management.** Juni 2023.
- *Quinten Nauta.* **Rheology of Sugar Glaze.** Bachelor report Industrial Engineering and Management. Juni 2023.
- *Myriam Kammüller Pont.* **FSE Green Labs - ULT Freezers.** Bachelor report Industrial Engineering and Management. Juni 2023.
- *Allegra Melli.* **Introducing integrated green practices for solid laboratory waste management at the University of Groningen.** Bachelor Honours College FSE. Juni 2023.
- *Senyo Kwami.* **Ecological Services for Offshore Wind Development.** Master advice report Science Business & Policy. Juni 2023.
- *Marjolein Paardekooper.* **Ammunition in the Dutch North Sea: An overview of the effects of leaking dumpsites and munition-clearing explosions.** Master advice report Science Business & Policy. Juni 2023.
- *Lysanne Hoen.* **Should night shifts be discouraged in (post) menopausal female hospital workers?** Bachelor Honours College FSE. Juli 2023.
- *Igor bij de Vaate.* **Carying capacity Cas Abou beach.** Master advice report Science Business & Policy. Augustus 2023.
- *Jelmer van der Wees.* **Production of large scale seaweed cultivation in Dutch Coastal Waters: a simple model.** Master report Energy and Environmental Studies. September 2023.
- *Ruben van Luijk.* **Life-cycle greenhouse gas emissions and reduction strategies for movable steel structures: a case study of Solidd Steel Structures.** Master report Energy and Environmental Studies. Oktober 2023
- *Esmee Duursma, Naomi Hoogerhuis, Sidra Jendo, Bibi Nijland, Sjoerd Prins, Troy Schoenmaker, Min Su Suh, Bin Qiong Wang.* **Prepared for PureIMS.** Master advice report Science & Business. Oktober 2023.
- *Konstantina Bairaktari, Natasa Bellou, Leticia de Bonilla, Inga Breuer, Maren Oosterlaan, Clara Taetz, and P.F. Pols.* **Shoreline synergy: navigating coastal development and coral protection in Curaçao. An investigation into legislation surrounding the SPAW protocol.** Master advice report Science & Policy. November 2023.
- *Vincent de Boer, Anniek Bonestroo, Milou Venema, ClàudiaSerra Monraba, Maria Kyratzi, Jorge Peralba Pena, Daniel Deep Sing & Judith Bentvelzen.* **Policy implication of including additional values in the Dutch reimbursment system.** Master advice report Science & Policy. November 2023.

Presentations:

- *Amy Dotinga, Bas Rijpkema, Mark Scholten, Jeroen Smit.* **The dark side of the light.** First Year Symposium Biology/Life Sciences and Technology. 3 februari 2023.
- *Cécile Guignes, Twan Langedijk, Anna Schreinemakers, Stijn van Valkenburg.* **Wild water invasions: pennywort.** First Year Symposium Biology/Life Sciences and Technology. 3 februari 2023.
- *Annemieke Borsch, Rudmer Bouius, Kaj Mulder, Mara Oltean.* **'Engulfing' the city.** First Year Symposium Biology/Life Sciences and Technology. 3 februari 2023.
- *Karin de Boer, Than Mai, Han van der Strate, Rick Stratingh, Han van der Strate.* **Hackathon Energy Neutral UG Education of the Future** (link: https://www.youtube.com/watch?v=COwtYFItq4Q). Science LinX, Honours College (Erasmus+ Virtual Hackathon). 10,11,12 maart 2023.
- *Xander Bernard, Tyralee Thiessen, Preslav Tanchev, Matej Kucera, Twan Kemkers, J.Q. Chen, Paulina Rogg, Max Schaetzel, Ilse Drenth, Abhishek Kumar, Lizaveta Yurkianets.* **Winterschool interactive presentation Energy crisis: RUG.** Evenement Honours College Festival. 28 juni 2023.
- *Karin de Boer.* **Impact of (micro)plastics on the marine environment.** Presentatie interdisciplinary summerschool on microplastics. 11 juli 2023.
- *Niels Alberts.* "Paneldiscussie op evenement 'Celebrating Openness' van het Open Science Groningen Netwerk, over **"the internalization of public engagement: challenges, hurdles and opportunities"**. 23 november 2023.
- *Karin de Boer.* **Fate of (micro)plastics on the marine environment.** Presentatie GLV Idun. 12 december 2023.
- *Aude Lambot, Ivar Kuper, Clara Mountstephens-Fietz, Carl Schmidt Edler von Wolkahof*. **Polysterene in food packaging.** Film: Honours College broadening module Garbage Patchwork. 19 december 2023.
- *Lukás Chronc, Tjaša Drobnič, Yusei Nozaki, Anne Most, Noah Schoen.* **HDPE bags.** Podcast: Honours College broadening module Garbage Patchwork. 19 december 2023.
- *Muhammad Abyan Aushaf, Victor Groß, Martha Guran, Teodora Neaga.* **Polypropylene and the recycled flower cup.** Film: Honours College broadening module Garbage Patchwork. 19 december 2023.
- *Aaron Holzapfel, Gabor Kalla, Nicole Puchel, Csenge Szőke.* **LDPE; stick it together for the future of recycling.** Podcast: Honours College broadening module Garbage Patchwork. 19 december 2023.
- *Matei Benescu, Nina Cielica, Eva van der Zee.* **Green threads: redefining the fabric of fashion.** Film: Honours College broadening module Garbage Patchwork. 19 december 2023.

Collaborative Events:

- **Wetenschapsbraderie: 'De Uitdragerij'**. 20 oktober 2023.

Education

Presentations:

- *Katya Byelova & Denise Leidelmeijer*, **presentatie 'From Learning Communities To Living Labs?'**, Education Festival RUG, 28-03-2023.
- *Denise Leidelmeijer, Barbara Bijlstra, Naomi den Besten, Claudia de Joode, Mieke Ruiter,* **workshop Stadslabs**, Landelijke City Deal Kennis Maken dag, 02-06-2023.
- *Denise Leidelmeijer & Mette Bekius,* **posterpresentatie Samen leren bij Atelier Selwerd: handvatten voor effectieve samenwerking en begeleiding van multilevel en multidisciplinaire onderwijsprogramma's**, Comenius Festival, 29-06-2023.
- *Denise Leidelmeijer en Vincent Hazelhoff*, **deelnemer brainstormsessie House of Connections**, RUG, 10-07-2023.
- *Denise Leidelmeijer, Vincent Hazelhoff, Yorick Karseboom*, **deelnemer Landelijke Kennisdelingsdag City Deal Kennis Maken**, 13-11-2023.

