

THE DAILY FUTURE



GRONINGEN DIGITISATION IN ACTION

Groningen is the beating heart of the future. The Daily Future keeps you up-to-date with all developments in the city and province. For a smarter, greener and future-proof world, Groningen is the place to be. But who are the pioneers making this possible, what are their ground-breaking results and which organisations can benefit?

The world is about to change and Groningen is leading the way. You can see this all around you. In Groningen, conversations and curiosity form the roadmap. As Groningers, we are always focused on quality and sustainability. In fact, we are practical instigator and have launched many pioneering initiatives in social and green

innovations. The future? It has long since begun in Groningen. We are committed to growing and transforming every day. By combining our special strengths, we are making this the ideal testing ground for the challenges of the 21st century. Together, we are working for a better life and a better world.



THE FUTURE OF AI: A PERSONAL ASSISTANT FOR EVERYONE

BY MARK VLETER

Since the end of 2022, artificial intelligence (AI) has been on the rise. And when something like this hits the news, it creates hype. But is AI just hype? Or will it become part of our reality? To answer that, I have investigated what AI will bring us in the near future.

Current AI technology is based on prediction models. These models have analysed huge data sets to make predictions based on them. But prediction is not enough. As users provide feedback on the output of the systems, they become increasingly accurate. The possibilities offered by AI are impressive, but it is important to know this: AI does not understand what it is doing. As a result, it generates pictures where people have seven fingers on one hand, for example, or it may generate information that is incorrect. It is quite difficult to explain to the systems what is wrong; after all, this is not how the basic technology works. For a long time, therefore,

it seemed that the operation of AI tools would remain limited. Right now, you can see an emergence of specific AI tools that help you with specific tasks like creating a video, summarising a document or translating a text. All of these are useful and efficient tools that will boost the productivity of knowledge workers. But it could not be more than a boost - until it turned out that the tools can also write computer code. To understand its power, it is worth looking at the AI tool AutoGPT. AutoGPT uses AI to write code, using user feedback to fine-tune and improve output. In doing so, it automates every step that you would normally perform manually yourself, by writing small computer programs for it. As a result, the tool does that work better, faster and automatically.

This means that AutoGPT is not merely one tool that optimises one task. When an AI starts writing computer code, you have one tool that can do every administrative task

for you: this is a game changer. It is important to recognise the current limitations of tools like AutoGPT. For instance, it needs a considerable amount of computing power, which makes it expensive to run the tool. Moreover, you need considerable technical knowledge to use the tool effectively. However, these limitations are going to disappear in the future. And with that, AI is set to provide a significant productivity boost for anyone working with a computer.

Is AI going to replace humans? No. For 75 to 80 per cent of employed people, work has a significant physical component. Consider nurses, carpenters, taxi drivers and cashiers. The remaining 20 to 25 per cent can work many times more productively and efficiently, if they embrace technology. At the same time, our inability to change our behaviour, experiment and fail gets in the way. And I fear an artificial intelligence is going to do little to change that.

THREE GRONINGEN COMPANIES IN AI

In Groningen, we are working hard to create the world of tomorrow. The city has a strong focus on sustainability, healthcare and innovation, and it is buzzing with energy. Not surprisingly, many innovative companies are based here. In Groningen, the future has already begun.

KLIPPA

Klippa, the specialist in smart document processing, takes document automation to the next level. In a world where sustainability, cost reduction and error reduction are the talk of the day, Klippa shines thanks to artificial intelligence (AI) and machine learning (ML). With these technologies, they have streamlined countless processes and are achieving global successes. For instance, Klippa's AI software can process receipts and expense claims quickly and without errors, for example. That means less human effort, huge savings in time and materials, and fewer errors. And all this is achieved with Groningen's characteristic

down-to-earth attitude. So it's not without reason that renowned companies from home and abroad, such as Van Moof and Nivea, praise Klippa's services. A frequently asked question Klippa gets is: why Groningen? "We are really a company in the new economy. There are many young, innovative companies in the city. This is because of the good economy and the university that attracts young, highly educated workers," says Yeelen Knegtering, CEO and co-founder of Klippa. According to him, a company like Klippa is the perfect fit for Groningen.



ANCORA HEALTH

A digital therapeutic platform, where innovation and health go hand in hand, this is Ancora Health. With an integrated approach that combines lifestyle coaching and behavioural science with advanced technologies such as artificial intelligence (AI) and machine learning (ML), Ancora guides people step-by-step on their health journey. Through validated algorithms, AI determines where the risk for which disease lies, enabling faster focus on the most important issue and timely response to disease risks. Ancora is proud to be seen

as something of a spin-off from the University Medical Centre Groningen (UMCG), as two of its founders are medical graduates from the University of Groningen. "We have strong ties with local academic institutions like Lifelines, the University of Groningen and Hanze University of Applied Sciences Groningen, which is due to the presence of a huge amount of young talent and great potential in Groningen," says Castela Forte, founder of Ancora Health and head of health science.



NEOLIFES

NeolifeS is a perfect example of the combination of power between top institutes and knowledge institutions. The project, led by the University Medical Centre Groningen (UMCG) and other academic medical centres, investigates the long-term effects of preterm birth in babies to minimise consequences later in life. Due to the increased risk of various problems related to growth, movement and development, preterm babies require special care. Using artificial intelligence (AI), certain movement patterns of preterm

babies can be detected automatically, improving the assessment process, saving time and increasing efficacy. Arie Bos, neonatologist and professor of paediatrics at the UMCG, notes that Groningen is making considerable strides in this area. "There is considerable knowledge of AI at the University of Groningen and new technologies are deployed during internships. Groningen is particularly good at collaborating, using various expertises to complement each other, rather than being limited to individual platforms."





TOMORROW'S WORLD STARTS TODAY, IN GRONINGEN

We Groningers love space. In the literal sense: vast landscapes, untouched salt marshes, the vast mud flats, the far horizon. But also in the figurative sense: the space to develop and grow. You get that space here. Plenty of it.

Energy, health, food and digitalisation: these are the themes with which Groningen is working on the world of tomorrow. These pillars work independently, but are also inextricably

linked. Take for example the company Enatom, which combines health and digitalisation. They have developed an app that allows anatomical specimens to be viewed in detail. This allows users to realistically study the anatomy of a human being digitally. Or consider Avebe, who combine food and sustainability with their breeding company. They have developed new and more sustainable potato varieties that are more resistant to diseases. These are examples of how transition

themes are connected in the Groningen ecosystem. In this ecosystem, talent, entrepreneurs, partners and investors work together. All with that typical down-to-earth Groningen mentality.



How do Groningers see the future? **Scan the code** and read the stories.

SPACE TO DEVELOP

Groningen never stops thinking about the issues of the future. We are leading the way in the development of renewable energy, experiments with sustainable food systems and also have a super dynamic start-up scene in the digital sector. This is a city with plenty of career opportunities for your talents. Whether you are a scientist, student or young professional, in Groningen you can predict the future by shaping it yourself.



Scan the code and read how we are shaping Groningen.



HEALTHIEST CITY IN THE NETHERLANDS

Around the distinctive spire of the Martini Tower lies an old city with a young heart, a city of students and city-dwellers. Groningen is also the healthiest and youngest city in the Netherlands. It is good to be here: from the busy city centre that never sleeps to the peaceful green area around the corner. In this city, there is always someplace green close by, but you can also easily take beautiful walks in the woods just beyond the suburbs. Groningen is also great for culture lovers. You can visit interesting museums, get to know new music at various venues and festivals or enjoy the extensive theatre performances. Fancy something tasty? Then drop by one of the many friendly cafés, cosy lunch spots and restaurants with the most delicious meals. And if you're not done yet, there is always the extensive nightlife, with no closing time.



Scan the code and read how we are making Groningen the healthiest city in the Netherlands.



URBAN NEIGHBOURHOODS AND FRIENDLY VILLAGES

Whether you like to live in the bustling city centre or prefer the peace and quiet: Groningen is a great place to live. Because it is a compact city, you can do everything by bike. The city has many different faces. Each neighbourhood has its own identity. There are pre-war town houses, but also modern new buildings.



Scan the code and read why Groningen is the place to live.

Just outside the city are friendly villages, where there's plenty of peace and quiet among the trees or by the water. And an added bonus: prices are not sky-high in Groningen. In general, homes here are quite affordable.

GRONINGEN



THEY WENT BEFORE YOU



TJARDA POLDERMAN

She grew up in both the west and the east of the country, but found her home in Groningen. Via a tweet, Tjarda Polderman (30), project manager and freelance marketer in the digital sector, ended up in Groningen. This was the eternal student city that people leave when they graduate, she thought. But for Tjarda, it was nothing like this. "My view changed completely. This is just the place to make a career. Here you can start, but also grow and stick around," she says enthusiastically. "If you have an idea here, you can go to many people. People think more in terms of possibilities than obstacles." She experienced this when she got involved in the world of start-ups. At Founded in Groningen, she discovered her niche. This is an organisation dedicated to start-ups, from idea to realisation, with multiple success stories. "From that connection I get so much support. We are literally building the future of tomorrow together. This is possible in Groningen."

"This is just the place to make a career. Here you can start, but also grow and stick around."



Scan the code for the full story by Tjarda Polderman.



JEROEN OOSTERVELD

After wandering all over the Netherlands, Jeroen Oosterveld (29) found his place in the North. In Groningen, he found the challenge he was looking for. As a data scientist at Voys, he is busy solving complex issues on a daily basis. "I need a strong challenge," he says. He finds that in the digital sector. For him, it all has to make sense. "Data does not lie, it is rational and objective. At the same time, I can back up certain ideas and feelings with figures." The Groningen mentality appeals to Jeroen: more collective, less individual. This is what working and living in Groningen is all about. Jeroen endorses that. "Here we are not so much competitors of each other, we have the same goal in mind." To achieve that goal, more talent is needed. Groningen offers the space for that. "The realisation has to come that the Randstad is not the only place to make a career in the Netherlands. If we do it together, we can build the future of Groningen."

"Here we are not so much competitors to each other, we have the same goal in mind"



Scan the code for the full story by Jeroen Oosterveld.



JOEP KRAEIMA

Virtual surgery planning makes it easier for both surgeon and patient. That is what Joep Kraeima (33) of the University Medical Centre Groningen (UMCG) is working on. After his training in Enschede, the North is the place for him to make a career. Together with his colleagues, he runs a lab where virtual surgery plans are created using simulations, test set-ups and finally 3D models. Here, Joep can continue to develop. He obtained his PhD in 2019. The University of Groningen and the UMCG offered him this space. "Here they are open to new things, to young and ambitious people, to those who want to research and invent. So we work here with an awful lot of different techniques. You don't easily find those under one roof," he explains. But this innovative power is not limited to the UMCG. "That is also what characterises Groningen: it is a city where you can invest in yourself. The training and advancement opportunities are great here, whatever field you are in," he explains.

"That's also what characterises Groningen: it's a city where you can invest in yourself."



Scan the code for the full story by Joep Kraeima.



GRONINGEN START-UPS

ENATOM

How do you ensure greater educational equity within medical education? Groningen start-up Enatom is working on an e-learning application that could have a significant impact on medical education. They are developing a digital anatomy atlas that realistically displays the anatomy of the human body in 3D. With this, they intend to make anatomy education available to students all over the world. Students and professionals will have access to high-quality anatomical knowledge anytime and anywhere using this app.

With this, they are responding excellently to the digital future of teaching and learning. For example, the 3D models are also highly suitable for applications with VR and AR.

Of particular note is the start-up's close cooperation with the University Medical Centre Groningen. "Without the UMCG, we would never have been able to do this," says co-founder and CEO Lusanne Tehupuring. This is mainly because Enatom has benefited greatly from the knowledge and expertise within the UMCG, but also because Enatom's target group is one that

the UMCG knows very well. This therefore led to a co-creation of great value for the digital education landscape for student and teacher.

Groningen was the ideal place for this start-up to be established. In addition to the knowledge of the UMCG here, they have also benefited greatly from the Groningen ecosystem where there is room to meet up and network. Lusanne: "I think that is really typical of Groningen, big enough to be ambitious and small enough to find and help each other".

NUWA PEN

Never forget where you wrote down your ideas again - Nuwa has revolutionised the writing experience by digitising handwritten notes. Almost everyone quickly writes down an idea or note somewhere, but afterwards you're often searching for the piece of paper or notebook page where you scribbled it down. Although to-do and note-taking apps exist, there is nothing like being able to just write. For Marc, CEO and co-founder of Groningen-based start-up Nuwa, pen and paper also works best. "The problem was just that there was not yet a pen in the world that bridged this gap between analogue and digital". Nuwa has come up with a progressive solution.

They decided to build three tiny cameras around a normal pen. With these, the pen sees what you put on any kind of paper. As you write, it feels like a normal pen, and at the same time you get a digital copy on your phone via

the NUWA app. In the app, you can easily search for notes, share them, zoom in and out, and more. This makes indexing and finding specific notes very easy. With this, Nuwa has developed the first truly 'smart' pen.

Nuwa is located near the Zernike campus, the ideal place for them. They see that many international students come to Groningen and would like to stay here. Working with a very international team, Nuwa is eager to accommodate this talent. "We like to offer employment opportunities to talented people who might otherwise leave Groningen".

Marc also likes doing business in Groningen: "Groningen is convenient, beautiful, there is a lot of knowledge available and many people here who really want to make something of it", and "Groningen is down to earth", a mentality that Marc also thinks suits Nuwa well.





THE ADDED VALUE OF GRONINGEN'S ECOSYSTEM

Groningen. Bursting with young talent. And traditionally a place of innovative tacklers. It has the fastest-growing campus in the Netherlands and is home to renowned knowledge and research institutes with the latest knowledge on 21st-century issues.

Add to this the excellent geographical and digital connections, and you can justifiably speak of a multidisciplinary ecosystem. And in this system, all parties are committed to positive growth and building a green, healthy, and human-scale digital future.

START-UP ECO SYSTEM

Groningen start-ups have been high in the rankings of the fastest growers for many years, and for good reason. Founded in Groningen connects, supports and inspires entrepreneurs, start-ups and scale-ups. This creates favourable dynamics in the start-up ecosystem. The connection between entrepreneurs ensures that companies innovate with greater impact and grow faster. In other words, a win-win situation!

MUSIC MEETS TECH

Especially for entrepreneurs from the technology and creative sector, the Music Meets Tech, or MXT event was held during music festival Eurosonic Noorderslag. The objective? To connect. Innovative entrepreneurs and investors from all over Europe came to Groningen to network, meet, share and gain knowledge.

ROOM FOR TALENT IN GRONINGEN

Groningen is the number one digital city and region. United in networks such as the NOO and Yes!, online entrepreneurs pool their knowledge and create jobs. Innovative start-ups, scale-ups and big boys: they all have jobs for digital talent with guts - talent that wants the opportunity to work in and on the future and have an impact on the world a whole. Will you join us?