TOP DUTCH
A good place to be great

GROW YOUR WATERTECH BUSINESS

3 reasons to grow your WaterTech business in Europe with TopDutch

Many companies and organizations with links to water technology are located in the Northern Netherlands. And for good reason: The good logistics, strong networks, ample knowledge and institutes that support SMEs in the water sector, together make the Northern Netherlands the perfect place for your business and to serve the steadily growing global market. Here's three reasons innovative WaterTech businesses are choosing the TopDutch region.

3 REASONS TO GROW YOUR WATERTECH BUSINESS IN EUROPE WITH TOPDUTCH

1.

NEW MARKETS

The water technology sector is moving quickly. The demand for water technology is increasing because there is an ever-growing shortage of clean drinking water, stricter environmental demands, a growing need for more sustainable technology and a constant demand for more efficient and cheaper production processes. A shift that creates a growing market for innovative developments worldwide.

Reason #1 A growing, innovative market

Driven by legislation

Many water technology ideas are developed into new products and applications. Unfortunately, it sometimes seems to take a long time before they make it to the market, according to Reinder de Jong. He works for the NOM, the investment and development agency of the Northern Netherlands, and deals with water technology in the TopDutch region. 'The water technology market is quite conservative. The industry is unlikely to invest in improved technology when the existing technology still serves its purpose. They don't see a need to change unless it really cuts costs. As long as it's allowed, most companies prefer to dispose of waste-water instead of investing in further purification.'

But the demand for wastewater and drinking water technology is increasing worldwide, he indicates. 'Along with pollution, the need for drinking water is increasing. We are also becoming more and more aware of the need to handle the environment and waste responsibly. But most of the pressure comes from authorities that tighten their legislation: This forces companies to adapt their processes to comply with regulations.'

'We are becoming more and more aware of the need to handle the environment and waste responsibly.'

Reinder de Jong, Project Manager WaterTech at NOM

De Jong's predictions are confirmed by a report from Future Market Insights. In 2017, they predicted that the water sanitation market would increase by 7.4% annually, up to 88 billion USD in 2027. That growth is mainly caused by the increasing demand for process water treatment in the industrial sector and desalination of seawater for the production of drinking water. Enforcing environmental guidelines and criteria for drinking water gives an extra boost to this growth.

There are plenty of examples. In China and the Middle East, regulations for the disposal of brine have been tightened: So companies producing brine as a waste product in those countries have to find ways to filter it out of the wastewater and process it in a different way. Changing these regulations advances water technology because it increases the industry's demand for new technologies. In the TopDutch region, various companies are developing technology to treat the brine stream.

Need for clean drinking water

The demand for clean and safe drinking water is increasing worldwide. New desalination technology makes it possible to turn salt water into drinking water. Dry regions, such as the Middle East and Africa, have been

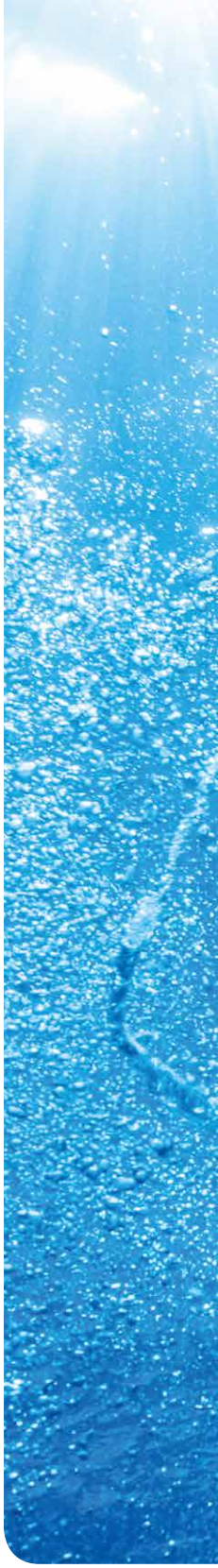
using these technologies for decades. Local authorities are currently investing in large-scale implementations of this technology, thus increasing demand.

But even in less arid regions and coastal regions, such as North America, Asia and Europe, the demand for desalination technology is on the rise. Because of water-intensive applications, such as agriculture, the oil & gas industry and the chemical industry, the demand for clean drinking and process water will increase, creating opportunities for desalination technology.

So, development of these techniques will not stand still. TopDutch company Solteq developed a desalination system. 'The current systems were big and used a lot of energy,' says CEO Herre Rost van Tonningen. 'We developed a more energy-efficient system that uses wind or solar energy. But there are places without wind and sun that pose other challenges for providing the necessary energy.' According to Rost van Tonningen, the increase in demand for these types of systems and the large diversity in areas where they are needed means there is still lots of room for innovations in the years to come.

Closing the circle

The need for better wastewater sanitation is growing worldwide. Joost Paques, whose company Paques is developing anaerobe water treatment systems, does not like the term wastewater; he prefers to use the term process water instead. 'The term wastewater makes it sound like there is nothing you can do with it. But process water actually contains a lot of useful materials.' For example, by using bacteria, organic matter can be transformed into biogas, and sulfur oxide and ammonium into minerals that can be used as a basis for fertilizer. And - one of the brand-new developments - bacteria can possibly even transform organic matter into biopolymers, i.e. biodegradable plastic.



This way water technology even contributes to a more sustainable process water treatment. This can be implemented in industries, where they can extract most of their own raw materials, generate energy and re-use the sanitized water in their own processes as well as in households. There are neighborhoods under development in the Netherlands, Sweden and Canada where local wastewater is separated and treated so that it generates energy, produces raw materials for fertilizer and returns heat from shower water to the houses. What remains is sanitized water that can be disposed of as surface water.

These types of systems are particularly interesting for densely populated areas where clean water is scarce and the need to save water is high. It is not just about sanitizing efficiently, but also about saving water in the household. Systems also exist for that purpose. Hydraloop, for example, designed an in-house water recycling system that recovers, sanitizes and disinfects water from the shower, bath and washing machine. That water can be re-used immediately in the house to flush toilets or in the washing machine, the yard or the pool. This saves up to 45% of the water, which means 45% less water goes into the sewers. A perfect way to save water and produce less waste.

Sensors generate knowledge

Another growing market in water technology is sensors, driven by the need for efficient processes and measuring data to comply with the ever-stricter water sanitation requirements. Mateo Mayer, CEO at Aqua Color Sensors, and his business partner Frank Akkerman are working on developing sensors. ‘More sensors are being developed that can continuously monitor the water quality. As soon as the quality of the water changes somewhere, digital alarms go off.’

He sees challenges and opportunities. ‘Those sensors produce a big data load. If we can analyze and interpret that data, we can not only help to discover exactly where the water quality is bad but also develop ways to resolve the quality problems efficiently.’

Mayer foresees growth in the market of sensors and big data in water technology. 'I think that the costs for these technologies have already dropped to a tenth or even a hundredth of the original price over the last twenty years. And in the next twenty years, costs will go down to a tenth of that again because electronics and data traffic are getting cheaper thanks, for example, to 5G.'

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Mateo Mayer, CEO Aqua Color Sensors

Biotechnology

Another branch of water technology that will grow is the challenge of filtering nanoparticles from, for example, plastics and fibers, medicines, pesticides and antibiotic-resistant bacteria from the water. Oxidation techniques exist for this but, in principle, bacteria could also be used. 'More and more micro-pollutants are present in wastewater, surface water and, finally, in our drinking water,' says Mayer. 'And awareness about the danger of these particles is increasing. I think we will be seeing a lot of developments in the field of biological water treatment and sustainable oxidation techniques. We need chemical technologists and biotechnologists that have knowledge about these micro-contaminations and bacteria. DNA techniques to map and modify bacterial traits will also probably play an important role in this.'

2.

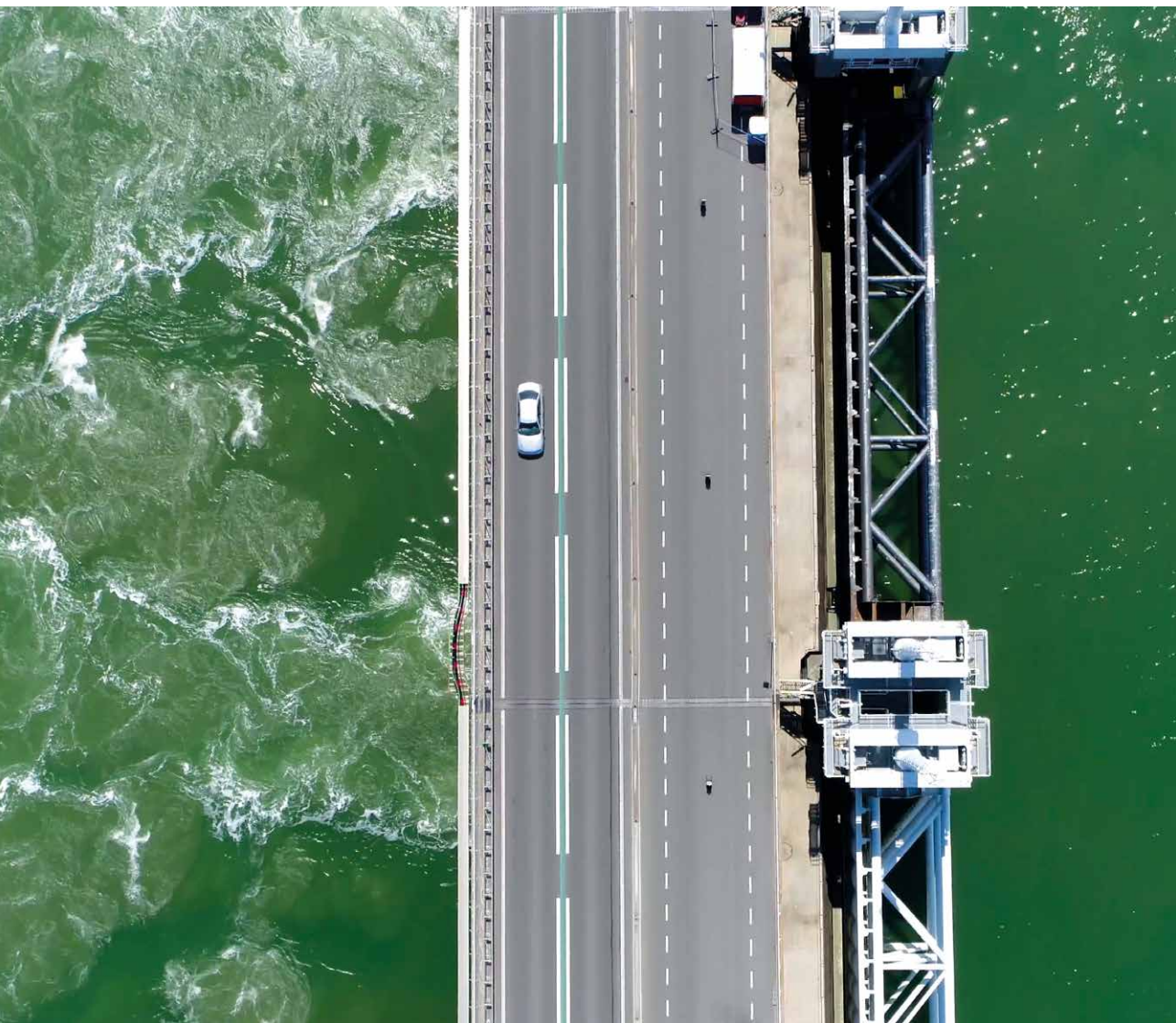
INNOVATIVE ECOSYSTEM

The TopDutch region is home to quite a few water technology companies. One of the reasons for this is the opportunities available in the Northern Netherlands for research, upscaling, sales and business development. The innovative ecosystem also gives smaller companies a chance to establish themselves and grow. Over the past few years, more than 50 new companies have been established at the WaterCampus.

Reason #2 Surrounded by knowledge, networks and growth

The Netherlands, a water country

The Netherlands has always had a good reputation when it comes to water. Because a large part of the country is located beneath sea level, it has often been faced with new challenges to prevent flooding. The experience with dikes and the impressive Delta Works have turned the Netherlands into a real water country.



But this water knowledge has not been limited to the Delta Works alone, the Netherlands is also renowned for its water technology. This is why so many companies working with process water, drinking water and wastewater have established themselves in the Netherlands.

Stronger together

Talking logistically, the Netherlands is ideally located for reaching the rest of Europe, by sea and by land. This makes the Netherlands an interesting home base to serve the entire European market. Another thing that makes the Netherlands - and the TopDutch region in particular - unique, is the presence of many SMEs. Each company has its own niche market and specific knowledge. Each company can offer its own partial solutions to customers. In the Northern Netherlands, these companies join forces to offer joint solutions for water technology problems throughout Europe: from the arid South and the less economically developed East to the richer, more high-tech oriented West. Thanks to parties like the Water Alliance that help the SMEs join a larger international network and find customers, these companies can sell their solutions in Europe and far beyond.
The innovation programs, such as Wetsus, the CEW, CiV Water and the Water Application Center and the collaborative climate between the companies, authorities and knowledge institutes, make the Northern Netherlands a perfect place for every company in the water technology sector, even the smaller ones.

Aqua Color Sensors: Growth thanks to the Northern Netherlands

Mayer's company Aqua Color Sensors is one of the water technology companies benefiting from the innovative ecosystem in the TopDutch region. 'Ten years ago, I was working as an innovation manager at a large multinational. I came into contact with knowledge center Wetsus to explore whether the company should join them. I was so impressed by the possibilities offered by Wetsus and the WaterCampus that I decided to become a WaterCampus entrepreneur myself. I started EasyMeasure, which focuses on the production of sensors.'

Mayer makes good use of the facilities offered by the Northern Netherlands: ‘I joined knowledge center Wetsus. The network of universities and companies was very important to me. Their intellectual property rules make it possible for small companies such as mine to access new technologies. Usually, it’s the one who pays the most for a copyright that gets the rights, and that's most often a multinational. Not so at Wetsus! Every Wetsus member who is interested in a certain technology pays a proportionate amount of the legal fees and can then use the knowledge. So you don’t have exclusive rights but you can start using new technology at an affordable price.’

But Wetsus does more: it connects companies that have questions with those that have the corresponding answers. Mayer has experienced this too. ‘A poultry farmer from the Northern Netherlands, Frank Akkerman, was looking for a sensor to monitor drinking water quality since drinking water is essential for his animals’ well-being. Such a sensor did not exist, so he turned to Wetsus. Wetsus referred him to me. And that was the start of an interesting and valuable collaboration. Within six months, we developed a

functional sensor together. Drinking water and wastewater quality could also be of importance in other fields, such as greenhouse horticulture, so we developed similar sensors for those applications as well. That's how Aqua Color Sensors was established. We're now at the stage where our customers are satisfied with how our sensors are functioning, and new year we will market our sensors through EU distributors.'

Mayer also uses the WaterCampus facilities for the acquisition of his products. 'I am a member of the Water Alliance. We present our new products in their national and international newsletters once in a while. Water Alliance has also brought us into contact with Innofest, an enthusiastic organization that helped us test our sensors at the Eurosonic Noorderslag and Oerol festivals. This has led to some interesting contacts, and through them we've found a number of launching customers.'

No wonder Mayer is very pleased with his decision to establish himself in the Northern Netherlands. 'There are plenty of companies active in water technology, working with sensors as well as with wastewater and drinking water. For any problem, there is a company that has a solution. And there are enough companies to develop and test new products together before marketing them; this way we don't have to fly a new product to other countries for every problem we encounter.'

3.

ALL-ENCOMPASSING SUPPORT

Water technology companies that want to start their business in the Northern Netherlands do not have to do this on their own. NOM can help with specific and practical information about the business climate, finding a suitable location, networking and support with all the formal and practical issues that come along with establishing a company.

Reason #3 Quick and easy establishment

Why the TopDutch region?

Because of the strong business climate. The Netherlands has the third best economy in Europe and sixth worldwide. It is a great country to live in, with one of the best health care systems in the world and excellent education across all academic levels. There are also training courses specifically aimed at the water sector - at vocational schools and at the colleges and universities - so there are opportunities galore for both interns and personnel. Language is usually not an issue - Dutch people learn English from a very young age, and often also German and French.

'The Northern Netherlands, home to so many water businesses, offers collaboration possibilities.'

Arthur Valkieser, CEO of Hydroloop

The innovative climate at the WaterCampus in the Northern Netherlands is also a great climate for innovative companies; the Netherlands is in second place on the Global Innovation Index. The Netherlands's ambition to become the European Water Technology Hub, with TopDutch city Leeuwarden as its center point, has created an innovative agenda when it comes to water technology. The Water Alliance helps to establish contacts and find a market for their products, which makes it an attractive spot for start-ups and scale-ups. Funding and risk capital are sometimes available to help businesses innovate and grow. Networking and collaborating is second nature to many Dutch people, so a company does not have to do everything on its own.

From orientation to establishment

The investment and development agency NOM offers help and support to companies that are interested in starting up in the Northern Netherlands. Reinder de Jong helps companies in the water technology sector that want to set up here. 'This often starts with an initial interview. We go over the plans and discuss the terms and conditions. We also try to get some

insight into infrastructure and housing wishes. For example, will there just be administrative work or is a production plant needed? What are the transport needs, where are the suppliers and the customers located? All these questions are taken into account, and they form the basis for location scouting. We also look into possible collaborations with other companies in the region, for example, suppliers.'

The location search is usually followed by one or several so-called fact-finding trips. The company looking to start up here comes and visits the region. 'We visit possible locations and talk to authorities and other relevant parties.' Once a location has been found, there are still a lot of other things to be taken care of. 'Sometimes this can be done very quickly, within a couple of weeks even, for example, if we only need to find an office building. For a production company that needs various permits, this takes longer, of course.'

But NOM's guidance does not end with finding a location and applying for permits. The human angle is also considered. For the many practical matters that foreigners have to deal with in the Netherlands, NOM refers them to the International Welcome Center. They provide the expat with practical support in matters such as dealing with the authorities or finding an (international) school for their children. So, thanks to NOM's support and guidance, it is not all that difficult to set up a company in the Northern Netherlands.

The team at NOM are ready to help international companies do business in TopDutch

Hydraloop's experience in the Northern Netherlands

TopDutch company Hydraloop started up in Leeuwarden a few years ago; at the time it was a start-up. CEO Arthur Valkieser specifically chose to establish the company on the WaterCampus, to be able to use its facilities. 'We were a member of the Water Alliance from the beginning and I thought it was a great idea to have a company and work in an environment with other people proficient in WaterTech. That makes it easy to bounce ideas off each other.' Valkieser calls the region a 'knowledge center' in the field of WaterTech.

'In November 2017, we introduced our new system at the AquaTech in Amsterdam, in collaboration with the Water Alliance. This garnered a lot of attention, so it was time to start production. First, we were looking for a place of our own because our offices on the WaterCampus did not have room for production. But then it was suggested that we outsource the production. We got told about a factory in Emmen, not far from WaterCampus, called Technologies Added that produces for other companies. This was ideal: we could keep our own offices on the WaterCampus, we did not need to invest in our own production plant, and we were still able to produce.'

Valkieser is enthusiastic about the opportunities offered by the WaterCampus. 'It's an inspiring environment, also because the Wetsus research institute is located there. And the Northern Netherlands, home to so many water businesses, offers collaboration possibilities. As an example, we worked together with other companies to figure out how to recycle paint residue from water.' The Water Alliance also offers the company opportunities to expand its market. 'The United States is becoming an important market for us. We need local contacts there to help us explore the market. Thanks to the Water Alliance, we have now found an entrance to further explore the market and to expand. They also introduced us in the UAE, United Arab Emirates, and other countries.'

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Are you interested in exploring what your business possibilities could be? Connect with Reinder de Jong, our WaterTech expert.

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