waterproof

wateralliance 10 YEARS
accelerating business with WaterCampus

HENK OVINK AT WATERLINK

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EUROPEAN WATER TECH WEEK 2020

GOOD WATER VIBRATIONS IN LEEUWARDEN

10 YEARS OF WATER ALLIANCE!

NUMBER 01, 2020

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WaterProof is the magazine of the Water Alliance, a partnership between government, research institutions and industry in the field of innovative and sustainable water technology. From its base, the WaterCampus in Leeuwarden, the Water Alliance builds on the 'water technology innovation chain'; a process whereby new ideas from universities, laboratories and test sites are converted into worldwide marketable products. WaterProof provides regional, national and global information on developments, results and background in the field of water technology.

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Editor in Chief Menno Bakker
Journal Management Brenda de Jong, Narvic Media | narvic.nl
Text Contributors Casper Ferwerda, Menno Bakker
Translation Context Talen
Graphic Design Jan Robert Mink | minkgraphics.nl
Photography Frans Fazzi, Nico Pakvis, Lucas Kemper and many others
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Dear reader,

We are aware that some of the stories in this edition of Waterproof originate from before the outbreak of COVID-19. Although it is difficult to divert attention from the dramatic situation we live in, it is even more important to plan for the future and to focus on the positive developments that are also happening around us. New innovations brought onto the market, bold moves from companies we work with and award-winning members, for example. Therefore, we have actively chosen not to twist any of the features and interviews. For current developments, we refer you to our website **wateralliance.nl**

'SAVE THE DATE' by Hein Molenkamp

As a networking organization, we are very aware that many companies are facing a difficult and uncertain time. It is also within our working range that a great number of events have been cancelled. But by remaining available for questions, offering webinars, sharing information and referring to other relevant organizations, Water Alliance aims to keep giving our network a helping hand.It is also now that we focus on growth. Mutually, we have to look for ways to adapt to new changes, make our talents available to those who need them, live in the past and focus on the future.

We started 2020 celebrating our tenth anniversary and the growth we have achieved for and with our members. In addition to this anniversary, we had another highlight earlier this year: our esteemed member Hydraloop winner of the WIS Award 2018, won three prizes at the Consumer Electronics Show (CES), an international tech fair in Las Vegas. The company, which offers home water recycling systems, won Best Startup, Best Sustainability Product and Best of the Best, outperforming over four thousand other companies in doing so. Since then, their phones at the WaterCampus have been ringing off the hooks.

Nevertheless, our raison d'être is not ourselves or our individual members; we want to be there for every water technology company with great innovation and a healthy dose of ambition. Even more in the time we are in at this time. With our network, marketing tools and years of experience at international trade fairs, we can help those companies seize the greatest opportunities. We serve as a pinch hitter for the Dutch water technology sector. But I would like to add something here. Whether you are from the Netherlands, the US, China, France, Spain or Germany, our doors are open. Water tech companies are always more than welcome, as are suppliers such as steel companies or pump manufacturers. We are here for customers, too; hospitals, breweries and water boards, anywhere in the world: we, along with our network of over 100 member companies, can help you. That starts with getting to know each other; exchanging ideas. We already did that at a national scale with all our business relations at WaterLink (more on that in this edition of WaterProof). In September, we hope to continue this with all our international relations, during the European Water Technology Week (also discussed in this edition).

I hope I can meet you there,

Hein Molenkamp
Managing Director, Water Alliance

'we want to be there for every water technology company with great innovation and a healthy dose of ambition'

Party in Prague

In early February, during a ceremony in Prague, six members of the Water Alliance were awarded financial support for the project Value-added Innovation in Food Chains (VIDA). The financial support will allow the companies to continue the development of their food and water innovation. The EU supports the project because they believe in the necessity of water technology innovation in the food industry. The Water Alliance members involved are Brightwork, NX Filtration, BW Products, WaterFuture, ISS tanks, Enable and AquaColorSensors.

A VIDA voucher awarded to Mateo Mayer (WaterWaves) and Martijn Wagteveld (Lamp-Ion)

Patience

'Patience is waiting. Not passively waiting. That is laziness. But to keep going when the going is hard and slow - that is patience. The two most powerful warriors are patience and time.'

Leo Tolstoy
Russian writer (1828-1910)

Photo: Wikipedia/Public Domain

AQUATECH ON **REMOTE WORKING** IN THE **WATER SECTOR**

The April Aquatech newsletter addressed the experiences that cluster companies such as Water Alliance and other members of the Global Water Technology Hub Alliance (GWTHA), have with working remotely and through virtual meeting techniques, such as Zoom. Also discussed was the question whether the current Corona crisis can teach the water sector to work differently in the future. Here, a few quotes from Yossi Yaacoby, VP of engineering from Israeli water utility, Mekorot; Dean Amhaus, president and CEO of The Water Council from Milwaukee in the US and also Hein Molenkamp, managing director of the Water Alliance in the Netherlands.

Yaacoby reported that around 95 per cent of Mekorot's 2200 employees, which provide water to 80 per cent of Israel, are successfully working remotely.
"The way of working is changing dramatically," he told Aquatech Online. "I didn't meet my employees for over a month, yet we are working 12-14 hours a day without compromise."

When it comes to ever-changing collaboration techniques, Dean Amhaus also made some comments, referring specifically to program for start-ups and small entrepreneurs: "There's something really important about having people sit down to dinner together with the CEO and 10-15 start-up companies, "adds Amhaus. "You can't do that from a video standpoint… there's a dynamic that occurs only when you have that personal interaction. As humans, we crave that as well. "

Hein Molenkamp said to believe there will be a middle ground between the two approaches moving forward. "If you see how quickly everyone is moving to digital meetings, I'm sure a lot of those meetings will keep going," he said. "I also think that once in a while, people see each other and shake hands, which will be important. There will be more we can do more efficiently around the world. "

Source: Aquatech newsletter.

Photo: Joint declaration of the Global Water Hubs, at the EWTW, Leeuwarden, 2018.
Second from the left: Yossi Yaacoby, VP of engineering from Israeli water utility, Mekorot. Third from the left: Dean Amhaus, president and CEO of The Water Council from Milwaukee in the US. Second from the right: Hein Molenkamp, managing director of the Water Alliance in the Netherlands.

LANDUSTRIE AND DESAH SUPPLY SWEDEN

Water Alliance member Landustrie in Sneek shipped a black water treatment unit to the Swedish town of Helsingborg in February this year. The device is part of a new wastewater treatment plant in the Oceanhamnen district. Water Alliance member Desah designed the system, which recovers valuable raw materials such as fertilizers and biogas as well as heat. Helsingborg is a great showcase in the Dutch companies' portfolio. The city is one of the fastest growing cities in Sweden. In fifteen years, the city is expected to have attracted more than 40,000 new residents, and the construction of new housing is in full swing.
One of the first new districts is Oceanhamnen. The grey and black water from the new buildings will be collected and processed. The kitchens will be equipped with waste disposal units to grind food waste. Because the black water is highly concentrated, it can be treated much more effectively and more resources can be recovered than in a normal wastewater treatment plant. The majority of the micros is removed in the black water fermentation step, according to Landustrie.

The new Oceanhamnen district

DRYLET AND BRIGHTWORK: **NEW 'BIO-BOOSTER'** FOR THE **DUTCH MARKET**

Two years ago, at the IFAT in Munich, the foundation was laid for a partnership between consulting firm Brightwork Products (Water Alliance member) and American technology supplier Drylet. Drylet's Aqua Assist technology, which introduces a substrate enriched with microbial material into bioreactors, reduces sludge production, improves sludge characteristics and –when used in a sludge digester– increases biogas yield.
In 2019, the system was tested at the water treatment plant in Halsteren (Southern Netherlands) in close cooperation with the Brabantse Delta water board. The result was positive: a significant reduction in secondary sludge production and an extremely stable biological process. For the water board, it was reason enough to continue using the technology.

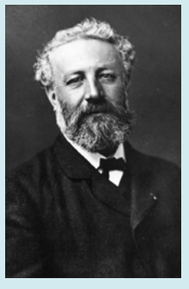
Nano-filtration for the Philippines

Nijhuis Industries and NXF Filtration, both members of the Water Alliance, recently tested a plug-and-play, single-stage nanofiltration system to treat water for the city of Davao in the south of the Philippines. In April 2019, East Asia Solutions commissioned the construction of the system as part of a larger project to increase freshwater availability for the city.

The water is pumped up from the borehole and collected in a buffer tank before filtering it through the nanofiltration system to produce drinking water. The nanofiltration system combines particle filtration, colour removal and partial desalination. The system also does not require pre-treatment with a sand filter, converting borehole water to drinking water in a single step.

Science

'Science, my lad, is made up of mistakes, but they are mistakes which it is useful to make, because they lead little by little to the truth.'



Jules Verne
French novelist, poet, and playwright (1828-1905)

Photo: Wikipedia/Public Domain

Henk Ovink

WATER ALLIANCE GOES ALL OUT IN 10TH ANNIVERSARY CELEBRATION AT WATERLINK

Henk Ovink: ‘We need to share this knowledge with the world’

2020 marks the Water Alliance’s 10th anniversary. The annual —and mostly national— symposium WaterLink proved an excellent opportunity to celebrate this extensively. Around two hundred guests at the WTC WestCord Hotel in Leeuwen looked back on the last decade and shared knowledge at stands and during theme sessions. “Water is the key to sustainable development”, said water envoy Henk Ovink.

The special edition of WaterLink was opened by the country’s first water envoy, Henk Ovink. As an ambassador for the water sector, Ovink travels the world to showcase the Dutch expertise on water. He admires the entrepreneurial spirit and specialised knowledge of the Water Alliance members, many of whom are SMEs. “We are not afraid of innovation and excellence; we are a breeding ground. But we mustn’t keep it to ourselves; we need to share this knowledge with the world.” Cooperation and scale-up are essential, according to Ovink. “It’s not only the water sector that needs to be considered. Water also plays a role in issues such as global population growth, climate change and food security. The UN has set seventeen sustainable development goals, and water plays a role in each of them. Water is the key to sustainable development. Investments in the water sector will benefit other sectors”, said the water envoy.

Looking back with partners

Water Alliance invited a large number of partners to reminisce about the last ten years and the successes during that time. The retrospective was attended by members such as Aquatech Amsterdam, Wetsus, the Municipality of Leeuwarden, the Province of Friesland, Wetterskip Fryslân, and original members such as Landustrie. “Water Alliance has grown from a start-up with a handful of members to a club with 110 affiliated companies”, said managing director Hein Molenkamp. “We started as a cluster in the Northern Netherlands, but have grown to national organisation with connections all over the world. I travel all over the world. We considered a respected interlocutor. As the Water Alliance, our goal is to convert that to business cases for our members.” During WaterLink, attendants could participate in a variety of theme sessions. The sessions concerned issues such as the opportunities for water technology in climate-adaptive cities and the use of the right marketing and communication tools.

WIS Award

The Water Alliance Innovation Stimulation Award is a recurring element at WaterLink. The prize will once again be issued during the European Water Technology Week in Leeuwarden in September 2020. The first popularity poll took place at WaterLink. Nine nominated parties gave a short pitch, after which the audience declared their preference. The winner was the Susfire, a technique for recovering phosphate from wastewater. This means the invention by Amsterdam-based start-up SusPhos, which also collaborates with the Biobizz Hub by Paques, from Balk, is the favourite for the final selection in September.

Report WaterLink

10 YEARS OF WATER ALLIANCE!

‘If this doesn’t prove that Leeuwarden is the water capital, I don’t know what will’

The complete Water Alliance team takes to the stage to celebrate at WaterLink

Hydraloop

Winning the WIS Award can be a business accelerator, as evidenced by Hydraloop in the past year. The company from Leeuwarden won the WIS Award in 2018 and went on to win the most important award at the Consumer Electronic Show (CES) in Las Vegas earlier this year. “The CES has nothing to do with water, it’s a consumer electronics fair”, said CEO Arthur Valkieser at WaterLink. “We were surrounded by companies like Samsung. It all started in Leeuwarden for us; this is where the foundation was laid. The WIS Award was a huge accolade.”

Hydraloop’s success did not go unnoticed by the new mayor of Leeuwarden (home to the WaterCampus), Sybrand van Haersma Buma. He congratulated the company in his closing speech at the end of WaterLink. “If this doesn’t prove that Leeuwarden is the water capital, I don’t know what will. This is a time in which not only large companies, but also small start-ups with guts are taking the world by storm, and water is the theme of the 21st century.”

Water Alliance MD Hein Molenkamp (left) raises glasses with Leeuwarden’s mayor Sybrand van Haersma Buma

Excellence

Support for the Water Alliance and the WaterCampus is flowing in from all sides, and water ambassador Henk Ovink was not unmoved. “Looking back on ten years of the Water Alliance, I see incredible dynamism, the result of the place, the environment, the governance and the cooperation. It is a so-called soft space; a safe place where people can dare to innovate. There is also a harder side, as the level of ambition is high and companies have to excel. That combination can be seen here. My message is this: don’t keep this to yourselves. What you have at the WaterCampus is unique. You need to share it with the world, using water to connect to other sectors, such as food and energy. I can already see it happening, but we have to foster it strongly in the coming years.”

Focus: CirTec

Don’t trust your intuition, research!

On commission by CirTec, the University of Groningen (RUG) has researched the public acceptance of products made of recycled toilet paper recovered from sewage. It’s not surprising, as this has been CirTec’s specialism for years. “At first you might think that there is little public acceptance for such products”, says Coos Wessels, CirTec’s technical director. The results showed quite the contrary, however. A story about ‘biospheric’ and ‘hedonistic’ values, which affect all of us. They also affect how people view certain innovations. Researcher Olivia de Hoog reached some surprising conclusions.

“It’s easy to imagine that these products elicit strong emotions, both positive and negative”, says De Hoog. “That is why this study focused on the emotions these products evoke.” Human values were studied as the key predictor of emotions. Depending on which values a person strongly adheres to, the products could arouse different emotions, the researchers reasoned. Two values were most relevant in that context:

“People have varying degrees of biospheric and hedonistic values, i.e. values related to the importance placed on the protection of nature and the environment and to the improvement of personal comfort and enjoyment, respectively”, says De Hoog. The stronger the biospheric values, the stronger the positive emotions towards the products could be, because they have positive implications for those values. In other words: people feel that it is good for nature. Conversely, stronger hedonistic values would lead to more negative emotions, because products made from raw materials from sewage can be diametrically opposed to pleasure and comfort. They also investigated whether these value effects depend on product presentation. “Values are not always active in the brain. Highlighting relevant product characteristics for different values could activate them and enhance their effect on emotions”, continues De Hoog.

The study was carried out on a group of 168 RUG students and a more representative group of Dutch society of 295 people, which showed different results. In general, the positive emotions that these products evoked were quite high, and people with stronger biospheric values had more positive emotions. For the RUG students, this was the case regardless of whether the environmental or hedonistic product characteristics were emphasized. “You could, therefore, interpret that the biospheric values, with the associated awareness that it is good for nature, are chronically active among these students”, says the researcher. “It could be because the RUG is a very green university, and that students immediately see the positive implications of the products for their biospheric values, no matter which characteristics are emphasized.”

For the general public, emphasizing the environmentally friendly characteristics had a positive influence; only then did stronger biospheric values lead to more positive emotions. In addition, no strong effects were found for hedonistic values in either group. Against expectations, the products do not appear to threaten or support hedonistic values. In simpler terms: the fact that the products are made of raw materials recovered from sewage is not off-putting to the user. It will, therefore, not stand in the way of a circular economy.

However, it won’t happen on its own, as evidenced by the study. “These results underline the importance of ensuring a representative sample in scientific research”, says De Hoog. “In this case, it led to the revelation that emphasizing the products’ environmentally friendly characteristics is necessary to arouse positive emotions.”
Entrepreneur Coos Wessels concludes that active communication of environmental benefits is, therefore, important in the creation of a circular economy, and that you should never blindly trust your intuition. “It could be reasonable to assume that people would have no interest in products recovered from sewage, but this study shows the opposite. You cannot blindly trust your intuition, you have to research.”

Coos Wessels and Olivia de Hoog

And the nominees are...

Nine contestants for the WIS Award 2020

It's raining awards in the business world. Presenting an award is a tried and tested means of putting companies and innovations in the spotlight. That is one of the goals behind the WIS, the Water Alliance Innovation & Stimulation Award. Winning the award is guaranteed to attract international attention. Hydraloop Systems won the award in 2018, and the results speak for themselves. Other smart entrepreneurs are also knocking at the door; some are start-ups, others are already highly experienced. In this edition at a glance: the WIS candidates for 2020. We summarize their innovations, sometimes including extremely precise information for the mathematicians among us. The candidates also share their vision with the reader in soundbites in passing.

wateralliance innovation stimulation award2020
powered by waterallliance

company: **Susphos** innovation: **Susfire**

The SusPhos technology upgrades various waste streams from wastewater to directly marketable phosphate products. We are currently largely dependent on polluting fossil mines for phosphate. One interesting development is that an increasing number of water purifiers remove phosphate from wastewater in the form of struvite, but due to its insolubility and contaminants such as drug residues, the European market for struvite is limited. With the patented SusPhos process, this residual flow can be upgraded to high quality, market-based products such as flame retardants and fertilisers at competitive prices.

Susphos' vision:
'In three years, we hope to have completed the plant to convert phosphate-rich waste streams to phosphate flame retardants and be close to opening a second plant abroad.'

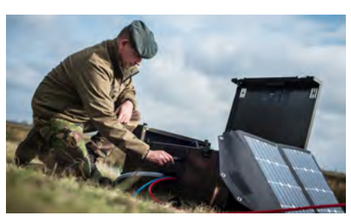
company: **Noria** innovation: **Plastic-waste scoop**

Noria develops systems which remove plastic waste from Dutch rivers in a sustainable way (no CO2 emissions). The Plastic-Waste Scoop is a hollow shaft with five blades that scoop through the water in the upper metre of the water column, against the current. A waterwheel converts the water current to the rotational motion of the scoop. Any waste scooped out of the water drops into the hollow shaft and is discharged to the side. The company says it is a sustainable, fish-friendly and affordable solution.

Norias vision:
'In three years, we hope to have a sustainable and affordable solution to stop the plastic streams that float along rivers from our homes to the oceans. Our autonomous systems offer a very sustainable solution both nationally and internationally.'

company: **Jotem Waterbehandeling** innovation: **Smartbox**

The Smartbox is a compact, mobile water treatment unit based on membrane technology and smart engineering. What makes the Smartbox unique is its sophisticated and robust construction, which makes it easy to operate and use all over the world. Due to high demand, the unit can also be used for nanofiltration and reverse osmosis, to rid water of colour and odour and desalinate it. The Smartbox offers users in remote areas safe drinking water that meets the WHO standards. Designed by water experts, the unit removes bacteria, viruses, colour, odour, metals and salts. The user-friendly operation makes the unit exceptionally suitable for base camps and emergency hospitals, according to the company.



Jotem's vision:
In three years, I hope Jotem will be considered a complete solution. We have entered into various partnerships; hormone removal from wastewater, defence projects and pilots with water companies. I also hope that Watermiracles becomes just as well-known as Jotem Waterbehandeling. Safe drinking water remains the number-one priority worldwide. Our Watermiracles offer reliable, robust and safe solutions.

company: **Befil Pure Cleantech** innovation: **VBBR VORTEX BIOCHIP BED REACTOR**

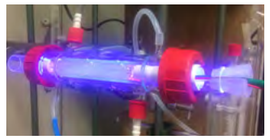
The biofilm carrier used (biochips) guarantees highly effective biological water purification. For the math heads: biochip active surface area up to 5,500 m²/m³ (up to 1,677 ft²/ft³). The flow from the circulation pump creates a vortex current which requires no extra energy. The vortex current forces the water from the outside to the inside, allowing it to flow through the chip package without creating a short-circuit current from the input to the output. The reactor is self-cleaning. The high biochip filling level (up to 60%) results in a compact product with a small footprint. The VBBR has no moving parts and it is possible to supply extra air.

Befil's vision: *'In three years, we want the international market to be just as excited about Befil's filters as our small team. From regional to international, from 50 filters to 500 filters in 3 years.'*

company: **O3 Systems Technology** innovation: **FOX Friendly Oxidation**

The FOX is a gas-discharge lamp; an excimer laser filled with Xenon gas instead of the toxic mercury found in energy-saving bulbs and fluorescent tubes. The Xenon gas-discharge lamp produces light at a single wavelength: 172 nm. The shorter the wavelength, the more radiant energy is released. Forty per cent of the power is converted into high-energy light with a wavelength of 172 nm, which photochemically kills almost all harmful compounds in water, gases or air. The rest of the energy absorbed by the lamp is emitted as heat. This technology is the latest possibility to breakdown harmful non-biodegradable compounds into biodegradable compounds, according to the company.

O3 Systems' vision: *'In three years, we hope that people are more aware of the harmful effects of the extremely concerning substances in the water, and that people are happy to have a simple solution –a laser in the FOX– to eliminate those substances.'*



company: **Semiotic Labs** innovation: **SAM4**

SAM4 monitors assets and detects emerging failures up to months in advance. The unit uses advanced algorithms to monitor the condition of critical assets around the clock. This unique monitoring method works for all assets powered by AC motors. Unlike traditional vibration sensors, SAM4 can also detect electrical failure and provides insight into the overall performance of the motor or pump, including power, power factor and energy consumption. SAM4 eliminates the need for physical site inspections: only when an asset appears to exhibit deviations does it need attention. This prevents unnecessary replacement of healthy assets and late replacement of assets failing before planned maintenance, leading to major cost savings and contributing to more sustainable business operations, according to the inventors.

Semiotic Labs' vision: *'In three years, together with our customers and partners, we will have created the 'digital pump house of the future' The pumps exchange information to meet demand with 100% reliability, emit at least 20% less CO2 by optimising the process, and report when they need maintenance.'*

company: **CTSTwente** innovation: **CMF**

The CMF (Continuous Micro Filtration) units were developed to separate and compress small particles from liquids for use in labs and pilot plants. The unit can handle and compress particles with an individual size of 5–40 microns. The concept is compact, light and energy efficient. It is also modular, allowing easy replacement of parts and simplifying maintenance.
The advantages, according to the company include a compact design, lightweight, low energy use, simple operation, quick to clean and easy to scale up.

CTSTwente's vision: *'We want to offer high-tech filtration and separation applications and solutions derived from our innovative technology, combined with excellent service. This enables our customers around the world to treat their industrial waste to reuse it or dispose of it responsibly, saving them costs and energy. More importantly, they will be contributing to a sustainable future.*

company: **Berghof** innovation: **Tubular Forward Osmosis**

Berghof Membrane Technology GmbH has developed membrane modules for tubular forward osmosis (TFO) which result in energy savings and reduced fouling of the membrane compared to traditional membranes. Traditional forward osmosis technology cannot handle high concentration levels without fouling the membranes, and is unable to deal with concentration fluctuations in the inflow. This innovation in membrane technology offers superior tolerance to suspended matter and exceptional fouling resistance, designed for dewatering and concentration of different flows. TFO's main advantages include a low operating pressure, low fouling potential, high repulsion rates for difficult pollutants, operational stability, Inside-out Forward Osmosis Membrane Filtration, according to the company.

Berghof's vision: *'Our company's vision is to create a clean environment for all generations and to offer the best solutions for sustainable industrial growth.'*

company: **Royal Brinkman** innovation: **Nanobubbles**

Nanobubbles is a technology that keeps oxygen in the water and keeps it oversaturated for a long time. Nanobubbles (e.g. 100% oxygen) have a negatively charged surface and therefore do not clump together, preventing them from dissipating on the surface of the water. This means that all the oxygen is kept in the water and is only released when it reacts. The water can also be oversaturated with oxygen. This leads to large energy and time savings, as the water does not need to be aerated as long. The business case is already in use in the greenhouse horticulture sector, where the installation costs around half the price of a traditional aeration system. Lowering the operating hours saves labour and maintenance costs, according to the company.

Royal Brinkman's vision: *'In three years, I hope to see the sector working together to get innovations off the ground, investing not for our own benefit but instead focusing on the social problem to move the sector forward. If the sector is moving forward, we all move with it.'*

The Water Technology Innovation Chain

The WaterCampus brings together a complete chain of innovation for water technology, from first idea, research, specialized laboratories, various demo sites, launching customers to commercial international applications by commercial companies. Indeed from knowledge to business. It is driven by the idea that technological development and innovation is needed to develop new markets and create new business opportunities.

The Water Alliance Effect

In this, and future editions, we will use this feature to present short portraits of individual companies and the acceleration they have achieved with WaterCampus' innovative ecosystem. However, in this launching edition, let's zoom in on VIDA!

The Parthenon had likely only just been completed. It would have been brand new, at the top of the Acropolis in Athens, when the Greek doctor Hippocrates spoke these wise words: "Let thy food be thy medicine and medicine be thy food."

Hippocrates (460 BC – 377 BC) is still considered the founder of modern medicine. Humanity lost sight of his wisdom for awhile and led increasingly unhealthy lives. However, we are now fully aware of the truth in his words again. Healthy food is essential for our wellbeing. We also now know better than ever that the production of healthy food requires clean water. With over seven billion people on earth, we can combine all human knowledge and ingenuity to become smarter and more efficient in how we deal with food and water.

The EU agrees; 2018 saw the launch of the VIDA project: *'Value-added Innovation in Food Chains'*. The goal is noble: to use the knowledge and skills of hundreds of companies to develop smart solutions to use less water in food production and recover waste material for reuse in new products.

Let's take a short trip back in time, to early February 2020 in Prague.

Six Water Alliance members are awarded a financial grant from VIDA. With the VIDA voucher, Brightwork, NX Filtration, BW Products, WaterFuture, ISS tanks, Enabel and AquaColorSensors can take further steps in the ecological innovation chain offered at the WaterCampus Leeuwarden — steps that lead from idea to business. Sustainable business, for smart water use and safe food. Creating the Water and Food nexus, in the spirit of Hippocrates.

'Companies can take further steps in the ecological innovation chain offered at the WaterCampus Leeuwarden'

CEO Frank Tillmann (left) and Area Sales Manager William van Steenbruggen from Colubris Cleantech

In 35 years, Colubris Cleantech from Winterswijk [near the German border, Ed.] has grown from a machine factory to a global player in wastewater processes and waste streams. The company offers industrial wastewater treatment plants in seventy countries and is engaged in the valorisation of waste streams, waste separation plants and bioresource solutions. With the Water Alliance, the entrepreneurs from the Achterhoek [a region in the east of the Netherlands, Ed.] want to grow further in the future.

Sharing is growing

Colubris Cleantech is starting to look more and more like a knowledge-oriented company with production facilities, according to general director Frank Tillmann. He has been the CEO of the family business founded by Gertie van den Hurk in 1984. "We provide mechanical, electrical and process technology engineering, but we also have welding and assembly facilities." Water recycling, scarcity and pollution are keystones for Colubris Cleantech in the coming years. "We enter the picture wherever there is a waste stream", says area sales manager William van Steenbruggen. "No matter the industry; food, paper, automotive, you name it. We also offer solutions for urban wastewater issues, not with giant sewer pipes, but with local treatment systems with plant roots. A local, ecological greenhouse water treatment system that purifies the wastewater while you walk through it."

Winterswijk

The company opted for clarity in 2019. A single name for the entire organization, where it previously operated under various company names. Colubris Cleantech comprises five brands: Redox Water Technology, Redox Waste Recycling, K-pack Water Technology, Ingenieursbureau Schneider and UCY Waste-Water to Energy. It's no surprise that Winterswijk is buzzing with activity in the water technology sector, says Tillmann. "Traditionally, a lot of water technology knowledge comes from the east of the country, not only Friesland. Several families in the Achterhoek were highly active in the water industry, resulting in a lot of business activity. Winterswijk is also ideally situated, between the universities of Wageningen and Enschede. They provide valuable knowledge."

Cooperation

Colubris Cleantech is working with various competitors in the region. "The water technology world is small", Tillmann knows. "I encourage cooperation. That is why we joined the Water Alliance at Aquatech last year." Van Steenbruggen: "I was already a member of another organization which resulted in a lot of work abroad, partly thanks to international trade fairs. Colubris Cleantech wants to grow further and be wherever closing the cycle is an important theme. To that end, we recently opened offices in Moscow and Budapest. We hope to close the remaining gaps in our international networks together with the Water Alliance."

Holistic perspective

One of the benefits of the Water Alliance is that many of its members are SMEs and start-ups, according to Van Steenbruggen. "They have fresh ideas which trigger us to look for opportunities to collaborate." Tillmann is missing a holistic perspective in the network. "There is a lot of smart technology that could be combined. Many members are specialised in drinking water, ground water, wastewater or surface water, for example, but knowledge gained from working with ground water can also be used for wastewater. Let's exchange knowledge; sharing is growing.

Hydraloop's Arthur Valkieser (right) and collegue Sabine Stuiver with their CES Awards

Sowing and reaping

2020 marks the Water Alliance's 10th anniversary. On 16 January, around two hundred guests at the WTC WestCord Hotel in Leeuwarden looked back on the last decade as part of the WaterLink symposium [more on this elsewhere in this magazine, Ed.]. "Looking back on ten years of Water Alliance, I see tremendous dynamism and fruitful collaboration between numerous parties", according to water ambassador Henk Ovink. The international breakthrough by Leeuwarden company Hydraloop Systems is a great example of what this can lead to. WaterProof talked to two major players: Arthur Valkieser, CEO of Hydraloop and Hein Molenkamp Managing Director of the Water Alliance.

Arthur Valkieser:
'Rapid growth is really just a business management challenge'

It's hard to imagine, but in case anyone missed it, what happened to you in January 2020?
Hydraloop is a household water recycling system that collects the water from the shower and washing machine and treats it for reuse.
It won the most important awards, including The Best of the Best, at the Consumer Electronic Show (CES) in Las Vegas. It is a huge, prestigious trade fair. The awards have triggered a huge acceleration for our company, and an overwhelming amount of media attention. In our business plan, we planned to focus on conquering a specific world region every year. That is no longer an option. Requests are pouring in from all over the world."

And this comes just over a year after you won the WIS Award in 2018.
Yes, the WIS Award was an important step for us; the participation alone resulted in a lot of publicity. It is also good to have a professional jury of respected experts critically examine your product. Winning confirms what you already knew: you have something special on your hands. It's a great mental boost. Water Alliance also brought us into contact with several important international organizations in the past year.

And now? We can imagine that you're now running before the wind.
Yes, that's pretty accurate. It feels like we've overcome the largest hurdle to success. Suddenly everyone knows who we are and the world is at our feet. Rapid growth is really just a business management problem; it's a challenge that needs to be solved. Right now, scale-up is the name of the game; finding resellers in different countries, hiring people, finding specialists and expanding production. That's our main focus this year."

Hein Molenkamp:
'Plenty to do!'

To put it bluntly: one of your members won the WIS Award in 2018 and makes global headlines a little over a year later. How does that feel?
It feels jubilant. We are very happy for Hydraloop. They deserve it; they have a great innovation and are extremely passionate when it comes to business development. We are also extremely proud. Hydraloop regularly stresses the importance of their Water Alliance membership in opening up markets. We helped sow the seeds, and it's great to see a company reaping the benefits.

Can you expand on that sowing?
We do our best to build bridges all over the world for our members; bridges to markets and potential clients. One thing we have done is attended the main trade shows in the water industry for the last ten years. You cannot go it alone, you need to combine forces with various parties. You have to be able to work well with others; with governments and knowledge institutions, as well as organisations like the Netherlands Water Partnership. The close contacts we have established world-wide with organizations such as water clusters, among others, also make a difference; our GWTHA partner, The Water Council, in Milwaukee, the United States, is one such example. We introduced Hydraloop there in October last year, and then at the Weftec in Chicago.
Of course, Hydraloop winning the CES Best of the Best Award at the Consumer Electronic Show (CES) in Las Vegas was a highlight and a real breakthrough. This is an amazing result."

What happens next? You probably face a busy period too.
Hydraloop will manage on its own with the surge in demand, but part of an innovation ecosystem like the WaterCampus is that you keep helping each other when necessary.
As far as our day-to-day work is concerned, we are already focusing on the international trade fairs and many upcoming events at home and abroad, including IFAT, Munich, KIWW in South Korea, and SIWW Singapore. The European Water Technology Week will be held in Leeuwarden again in September; that's a huge event. The WIS Award 2020 is also on its way, with close to a dozen really interesting new Dutch innovations. In short: plenty to do!

Dutch Water Export

Dutch water export tops 8,4 billion euro in 2019

The Dutch water sector reports a further growth in their export in 2019. The latest edition of Water Sector Export Index (WEX) shows a growth to 8.4 billion euro. This is 4 percent more than in 2018. Especially the export of water technology is doing well with a growth of 13,5 percent.

The new export figures were published in the latest edition Water Sector Export Index (WEX) that shows new – more definitive – figures of 2018 and the first temporary figures of 2019.
In 2019 the Dutch water technology companies did extremely well. Since 2015 their export has increased significant and is now showing a double-digit percentage gain. In 2019 the export of water technology is expected to top 3,8 billion euro. According to the WEX-report the companies with water technology are benefiting, among other things, from the increasing focus on water management and the growing demand for clean fresh water.

The WEX-report is optimistic for the future though. There is still overcapacity in the oil and gas sector, but the market is expected to have reached its bottom. In recent years the Dutch hydraulic engineering companies have compensated the declining oil and gas offshore orders with more contracts for the construction of offshore wind farms and the laying of undersea cables.

For 2020, two thirds of the water technology and hydraulic engineering companies expect an increase in their foreign activities, as more new offshore wind and solar energy projects are on the horizon worldwide. Although international trade conflicts, for instance over the undersea pipelines for Russian gas, may temper their expectations.

Dutch water technology companies are optimistic as well. The increasing demand for fresh water will not only increase the demand for drinking water installations, but also the demand for waste water treatment installations. Especially the re-use of waste water is expected to become a major topic. According to the latest WEX-report the Dutch water sector foresees a growth of foreign water activities by nearly 8 percent in 2020.

More collaboration
The Netherlands Water Partnership (NWP) is one of the organizations involved in the annual export survey and links the Dutch water sector with the international (water) sector. According to managing director Bianca Nijhof the recent figures are promising.

Nijhof: "Over two thirds of the Dutch water sector has a positive outlook of doing business abroad. This shows that Dutch collaboration and its integrated water solutions are still in high demand, as the sector expects a turnover increase of four percent from international business conducted in 2019."

"We as Netherlands Water Partnership will continue to identify new business opportunities and partnerships while contributing to a more sustainable world", she added.

The latest WEX-report gives insight in the definitive figures for 2018, provisional figures for 2019, and a global estimate for exports in 2020. The research was carried out by agency Panteia within the framework of the Partners for Water Programme of the Dutch Government. The Netherlands Water Partnership, Water Alliance and Envaqua are the initiators of the survey.

150 YEARS OF QUALITY

For nearly 150 years, Hubert Stavoren has been involved in water treatment systems. Founded in 1880, the company joined the Water Alliance last year. With this membership, Hubert Stavoren is taking the next step in achieving its global ambitions.

Hubert Stavoren is a major international player in large-scale water intake. The company supplies systems to parties that need a large feedstock of process water that requires filtering. Hubert Stavoren also provides equipment for water purification. . As a result, they have a broad customer base, from water boards to oil refineries and energy companies.

Experience and quality

Hubert has multiple branches and produces a wide range of products of all sizes: from aerators to complete water intake systems. The Stavoren branch, located in the south of the Province of Friesland, opened in 1970, making it 50 years old. As a result, Hubert Stavoren is deeply rooted into the region. Most of the employees have been with them for years. The low staff turnover means that Hubert Stavoren has a lot of in-house knowledge and experience, such as in machining types of steel and seawater-resistant metal, for example. The products are also made in-house, which is fairly rare in the water technology industry. Many players do carry out their own engineering, but outsource production to low-wage countries. By keeping their production in-house, Hubert Stavoren keeps control of the quality.

Nuclear market

High quality is a top priority for the Frisian company. It provides them good references. Those are essential in their business, because they make long-term projects possible. If a large new factory is being built,, Hubert Stavoren wants to ensure that the contractor contacts them. Currently, Hubert Stavoren is working on interesting projects for 2023. The company expects that there will be many opportunities in the coming years, partly due to the energy transition. One of them are water intake solutions for various parties, for example to nuclear power plants in France. Clean water is essential for nuclear reactors, they say, because it is used for cooling.

Membership

Hubert Stavoren believes that the Water Alliance membership—which originated during Aquatech 2019—will play an important role in their plans for the future. They are looking for partners for global projects and are convinced that an internationally active network organization such as Water Alliance, will be a good fit. “Becoming a member was only the first step in this long term relationship”, the company states.

European Water Tech Week Leeuwarden 2020

International water event in Leeuwarden

Winston Churchill once stated that "it is always wise to look ahead, but difficult to look further than you can see." While much has changed these past weeks, we can take comfort in knowing that, through all of this, one thing remains unchanged: the future truly is ours to create.

As such, the WaterCampus Leeuwarden partners have started the preperations for European Water Tech Week Leeuwarden 2020, which will be held from 21–24 September. Innovation leaders from companies, universities and governments from all over the world will meet in Leeuwarden, the city that was previously awarded the status of Innovating City for Water Technology by the United Nations.
A few key elements in the programme: the Wetsus Congress 2020, the meeting of the Global Water Tech Hub Alliance, and international business programme, the finals of the WIS Award and a European Water Tech trade fair, in cooperation with the WTC Expo Leeuwarden.

The week will kick off on 21 September with a plenary opening session, followed by Talents for Innovation, under the guidance of moderator Prof. Cees Buisman, Executive Board at Wetsus. This will be followed by the Marcel Mulder Award 2020, which will be presented by Ed Nijpels, member of the Supervisory Board at Wetsus.
During and after lunch, there will be plenty of time for matchmaking and visiting the Water Tech Europe trade fair. Several parallel sessions will be held in the afternoon, with titles such as 'Connecting thoughts', 'Connecting the X-factor in cluster collaboration'and 'Connecting Dutch Innovations'. The day will end with the trade fair and a welcome dinner for the hundreds of expected attendants.

Tuesday 22 September will open with a plenary session, including an interesting keynote speaker, followed by a variety of parallel sessions on numerous scientific topics. In cooperation with communication professionals from the Water Alliance, marketing strategist Andrew Walker will host a session with an impressive theme: Marketing lessons learned from 6 months of quarantine. The WIS Award nominees will also be presenting their sensational innovations to the international audience. The exhibition floor will be open all day.

Wednesday 23 September also starts with a plenary opening with keynote speakers, followed by parallel sessions. During the Wetskills Water Challenge, students and young professionals will present solutions they have devised for real problems submitted by companies. An impressive number of parallel sessions are scheduled throughout the day. Some of the themes: 'Circular Water and Recourses, what are the challenges?', 'Water tech in Southern Europe', 'The true value of water, Connecting Global Water Tech Hubs', 'Water technology for resilient cities' and 'EU programmes bring tangible opportunities for SMEs'. The winner of the WIS Award 2020 will also be announced.

The full programme of the EWTW 2020 is considerably more extensive than we have space for in this article. For the most up-to-date programme overview, please visit: *ewtw2020.eu*

'Innovation leaders from companies, universities and governments from all over the world will meet in Leeuwarden, the city that was previously awarded the status of Innovating City for Water Technology by the United Nations'

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WaterAlliance

Agora 4

8934 CJ Leeuwarden

The Netherlands

E-mail: info@waterallliance.nl

Tel. +31 58 284 90 44

www.waterallliance.nl

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