

20th

anniversary

simplicity

ingenuity

integrity

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Welcome to our Birthday Celebration.

You have a booklet in your hands that will lead you back to the roots of s::can Messtechnik GmbH; celebrating the 20th anniversary of our company, and honouring the many who contributed to our survival, and success story. We will tell you how it all started, and how s::can became what it is today.

So, s::can is not a teenager anymore, even if I have heard people say: s::can is the oldest Start-Up in the world. We can take this as a friendly reminder to further professionalize our activities. Or as a compliment, indicating creativity, spontaneity, energy; and I do prefer the latter, if you allow. Hopefully, this can be experienced by our visitors during Innovation Day at our birthday celebration in Vienna.

Sure it is a moving moment, to look back at 20 years of trying hard to do something good, and special, exploring new lands... and not having totally failed. To remember the moments of success and celebration, but also not forget the moments of disappointment and tears.

Of the achievements we can look back to, some have even changed the world of water monitoring a bit: Online spectrometry as a new method has established and receives acceptance in many places globally, as a real alternative to lab analysis and reagent-based analysers. Many operators switched from lab analysis to online monitoring, and started to see the

s::can,

the oldest Start-Up
in the world

advantage of having analytical data in real-time. Maybe we even helped to make drinking water a bit safer, rivers a bit cleaner, and waste water plants a bit more efficient.

At least 3 main paradigms changed during these 20 years: Analysis moved from the lab to the field; from a few samples per year to continuous, real-time data streams; and from local display to any smartphone, PC, or cloud, wherever connected to the internet.

For sure, we were surfing a wave here, but maybe, we were not only surfing but also triggering the wave, at least a bit.

Success has 100 fathers (and failure is an orphan), as John F. Kennedy said, in deep concern about Cuba (copying from Tacitus 1900 years before him). In our case, there are even more fathers (and mothers). The truth is, success is not the success of one or a few heroes. Success is a global project of many, people, years, ideas, places, products.

But first come the pioneer customers, the early adopters, the curious, creative, entrepreneurial ones, who trusted success very early, and exposed themselves in their organisation, took a risk for a new method, for a new tiny company far away, trusted some Austrians that do not look and behave like normal sales people should do.

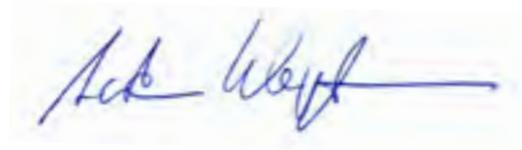
We build a Hall of Fame for them today.

Next come the employees: the inventors, the makers, the supporters, the sellers, the managers... they all are sprockets in an always growing gearbox, the basis of all success, each of them of great importance, the whole orchestra, and not just a few heroes or geniuses who show their faces.

Then comes our global network: Daughter companies, sales partners, agents, key accounts, OEMs... a colourful chain of supply, distribution and application, our global capillaries that pull thousands of sensors into all parts of the world, the Amazonas jungles, the Ganges river basin, the Mexican mountains, the Mongolian plains... a complex network that is being directed from our small headquarters in Vienna. Almost un-imaginable 20 years ago, but a reality today thanks to digitalisation and automation, brought into reality by clever logistics people, equipped with enormous know-how and motivation.

To end with, allow me to hand over this brochure with some ideas we accumulated over these 20 years:

- » Our interests and activities always have a long-term perspective
- » Selling always the same product is boring, fun comes with innovation, and disruptive products
- » Our business is products and services, we will never be a consumable company
- » Profitability is important, but happy customers come first
- » Happy employees make the best products
- » We design products to last, with the user perspective in mind
- » Online monitoring will go really broad only with the most simple, reliable and smart sensors, connected via the internet
- » From our today's broad range of products, we always recommend offering the most cost efficient combination to best serve our customer's needs



Yours truly,
Andreas Weingartner

Milestones

1999

siemens Messtechnik GmbH founded, to develop the „spectrometer in a tube“

2000

Automatic cleaning by pressure air introduced most successfully to the market, “Merkur” Innovation Prize 2000

2001

Introduction of con::stat industrial terminal

2002

Introduction of G::series at IFAT, Munich

2004

Introduction of con::lyte industrial terminal

2005

Introduction of stainless steel spectro::lyser

2006

Introduction of ammo::lyser (NH4) siemens China opened in Shanghai
siemens LLC opened in USA, Cincinnati OH

2007

Largest project ever in WWTP monitoring in UK / Thames Water: first phase with 150 stations

pH::lyser, redo::lyser and condu::lyser introduced

2008

micro::station introduced. Establishing the business of a complete monitoring stations provider

2009

Introduction of chlori::lyser
siemens France opened in Bordeaux

2010

Framework contract for the second phase of the Thames Water project, another 150 stations

Several US Homeland Security projects
Several large online monitoring projects in China starting up
Framework contract for the probably largest river / intake monitoring project ever in Canada

2011

Introduction of moni::tool software, bringing a new level of user friendliness, smartphone touch-and-feel, truly outstanding performance, and modularity to the water market

Introduction of the con::cube terminal
Introduction of i::scan and nano::station

2012

60 micro::stations - project for protection of First Nations communities in Canada
New ownership structure: siemens is a family business - again

2013

siemens awarded a grant by the European Union under the FP7 program „Smart-water4europe“ to install a grid of smart water quality sensors, with main partner Vitens in Netherlands
Presentation of the 5 mm i::scan for wastewater applications
siemens wins the “Merkur” innovation award for the i::scan

2014

Release of moni::app – making it possible to access data from a monitoring station directly via a smartphone

2015

siemens Iberia opened in Barcelona, Spain

2016

Presentation of the new con::lyte terminal

siemens and Axis win data supply contract for Clean Ganga Project, operating 36 monitoring stations along the Ganga river

2017

36 Monitoring Stations along the Ganga river installed and online

siemens opens offices in Italy and Portugal

„Data as a Service“ (DaaS) project in Mexico: siemens owns and operates 12 monitoring stations at the Atoyac River

siemens Mexico opened in Puebla, Mexico

2018

Launch of the pipe::scan for drinking water network monitoring

siemens office opened in Colcatta, India

2019

Launch of the spectro::lyser V3 True IoT water analyser in the world

Launch of the new con::cube terminal



The Challenge: To squeeze this spectrometer...



One of the first systems consisting of a spectro::lyser and a con::stat – still running today.



... into that tube

Pioneer Days.

The very first experiments took place in 1996 at the Institut für Wasserversorge [IWGA-SIG](#) at the Boku Wien, which was at this time chaired by [DI Dr. Prof. Werner Biffli](#). He provided the freedom, and the nutritive and supportive environment that is so crucial for any spin-offs to happen.

The first experiments are not documented, since before the age of digital cameras: An old, table-top Perkin-Elmer UV-Vis spectrometer, with integrated paper roll printer as the only data output, got equipped with a flow-through cell, which was fed via tubes from effluents of some activated carbon filters. It worked - to some extent - and some organic compounds could be monitored in real-time. At that time, nobody even imagined to squeeze that technology into an elegant futuristic probe, but still, a proof of concept of the method it was, giving great data to calibrate the activated carbon simulation models.

Based on this, Andreas Weingartner proposed his first ideas in 1997. The story became more concrete, still blue-eyed, but full of enthusiasm, in 1998, just like every University-Start-Up. Equipped with zero experience in technology, and less in product development; customers were far from our world of science, and business economics happened on a different planet. All we had was some water science, plenty of dreams, and miles of motivation: That was what we had to build on.

The predecessor company was the Weingartner OEG, or “wasser werk”, founded in 1998, in the Weingartner family garage in Korneuburg... and still exists.

Three University scientists, Andreas Weingartner, Nikolaus Fleischmann, and Thomas Zipper decided to try a break-out of the pre-programmed University career. 1998 was for testing and proofing of concepts, and leveraging of financial resources.

[Bernhard Weingartner](#), father and industrial veteran, played a historical role here:

During a Gasthaus meeting, he recommended to immediately forget Konzept A, (see picture section) and move on to full integration. He suggested to be more ambitious, and to squeeze the whole spectrometer into a small cylinder, instead of screwing a couple of modules together into a cooling box with connection to the water sample by fibre optic cables. Competitors went this latter path, not very successfully, but we gladly listened to Papa. By doing so, we developed a really disruptive product, and with this, had a huge head start. This allowed us to make some remarkable mistakes over the years, which a me-too product would not have forgiven.

Quite surprisingly, some critical components entered the market (mini Xenon lamps and micro spectrometers), and allowed us to start dreaming the probe-style spectrometer, first time in history.

The very first “business plan” was made. We dreamt of revenues of 26 million ATS until 2002, which would equal to about 2 million Euro today. It was a big number, however, for some poor University assistants, and we sure thought this was just megalomaniac. But we needed to display such projections to achieve funding to finance our plans. And we really received some university-spin-off funding from the Austrian government.

On January 12, 1999, s::can Messtechnik GmbH was founded with two additional members joining: Wendelin Weingartner and Andreas Lummerstorfer, to be the carrier of new products and services.



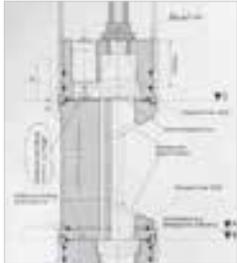
[Bernhard Weingartner](#)



[The first letterhead](#)



[The founding of s::can in Korneuburg](#)
[Andreas Lummerstorfer](#), [Wendelin Weingartner](#), [Andreas Weingartner](#), [Thomas Zipper](#), [Nikolaus Fleischmann](#)



A design mistake of historical dimension



Martin Loich, the first mechanical mastermind of s::can

The first logo contained the “liquid monitoring networks” slogan, which indicated what we really wanted: To use water monitoring products, self-made or existing third-party, for building and operating monitoring networks and providing services to our customers. However, the challenge was huge, because none of us had any idea what this plan really meant. In this initial phase, we made some design mistakes of historical dimension - just look at the angled windows... and please don't laugh.

Luckily, the genius [Martin Loich](#), an engineering teacher at the nearby TGM engineering school, and widely respected technical consultant, joined us, and brought with him some essential know-how in mechanical design... and the first spectro::lyser prototypes were born just a few months later. From this creative phase, some sketches on tissues and beer mats and on empty space on newspapers survived, as can be seen in the picture section, but sadly not much of the early time equipment.

Martin had i.e. every material constant stored in his amazing brain, and calculated whatever was needed without any electronic help. So the designs were ready to be converted from beer mats to digital typically after midnight, and only needed to be translated into CorelDraw (!) by Andreas Weingartner in the next morning. Martin remained our mechanical master mind over the coming years, until much too early he died in a motorcycle race accident. His spirit survives in each of the >10 000 spectro::lysers built until today, and his wife Nikola is still with us, supporting our customers.

In parallel, a small, fast and creative company of Salzburg by [Klaus Haber](#), HKE, helped us to develop the electronics and software base. [Kurt Schröder](#) and his company iines was another contributor who we owe substantial input in the early days. At this point, we also mention [Günter Langergraber](#), now a professor at our home institute. He was deeply involved in the development of our first algorithms and parameter calculations, and much of what we developed with him is still standing today.

By this joint effort, the first spectrometric sensor “serial” product was up and working already in late 1999. “Almost” ready, to mention this, since we still had some major beginners mistakes to fight with.

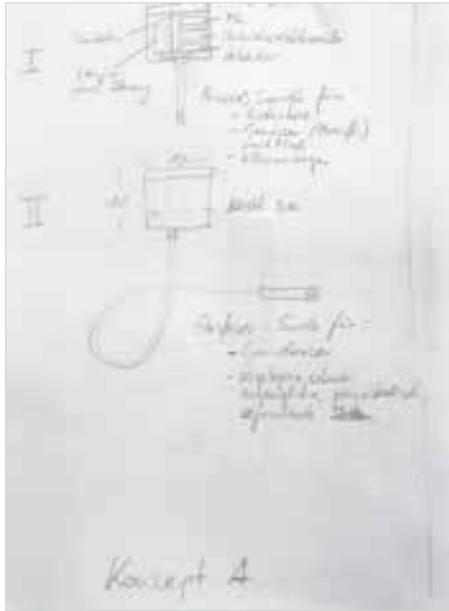
In 2001, we jumped into the next funding round, and we business-planned to achieve crazy revenues of 66 million ATS revenues within 4 years, which equals about 5 million Euro today. We thought this might be the total world-wide market potential of online spectrometry. Today, we are tripling this number, and we believe the global market might develop 100 times bigger, depending how far we go. And we thought again, this is never going to happen...

During this phase, and until today, we received substantial financial support from several Austrian agencies:

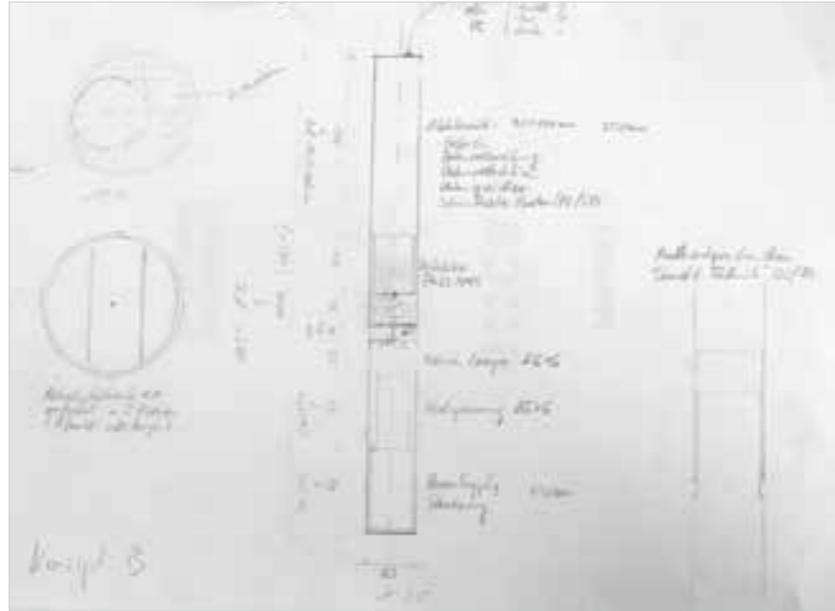
- The “Innovationsagentur” (with key person [Michael Fischer](#)),
- The “KABAG” of Wirtschaftskammer Wien ([Dr. Dieter Kaiser](#))
- The aws (Austria Wirtschafts Service, with [Jürgen Natter](#), [Anton Köszegi](#) and [Matthias Bischof](#) as our main supporters), and
- The “Wiener Wirtschaftsförderungsfonds”, now Wirtschaftsentur Wien, to name director [Gerhard Hirczi](#) as our biggest supporter.

» Today, it is time to express our gratefulness to all these wonderful people, and the represented institutions, who trusted us, and helped us to surf the rough waves of our early years.

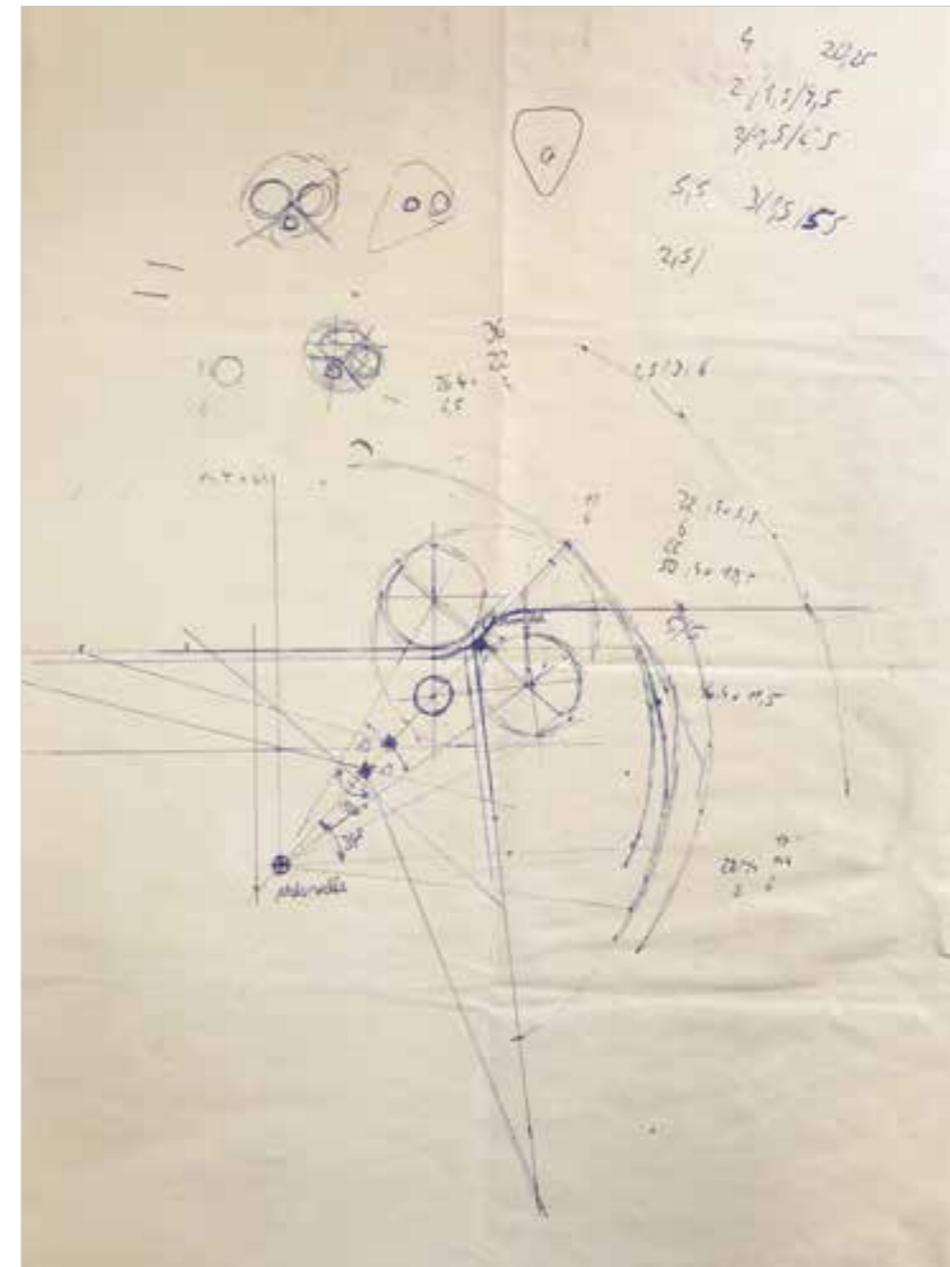
Financial support in the early years



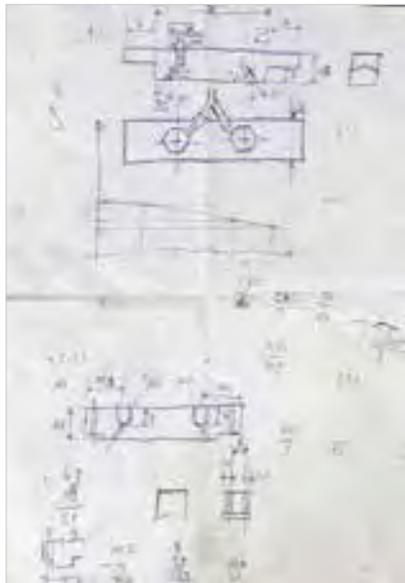
Konzept A - This road went nowhere



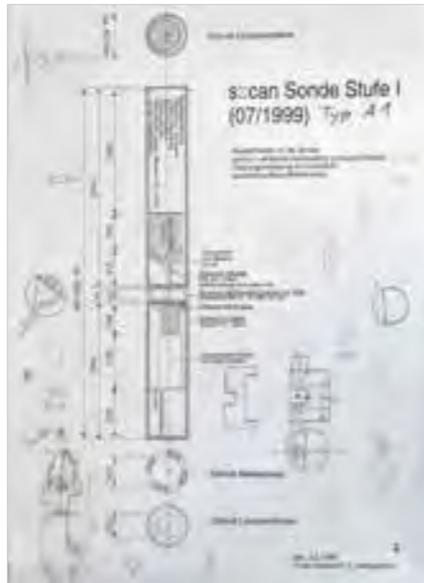
The very first approach towards Konzept B



Not clear yet that this design on wrapping paper will turn into our most fundamental patent



The first pressure air cleaning design, survived until today



Coming close to reality



Who needs computers when there are brilliant brains



Our first location -
a former post office in
Vienna's second district





20th
anniversary

Growing Up.

In spite of all this support, the market was not ready for our revolutionary ideas until 2004, so that s::can run out of money, again, in spite of all our desperate attempts. 2004 was a tough year indeed, and blood, sweat and tears were shed. Please allow me a personal remark: We can look back with good feelings today, but this year 2004 sure was the hardest year of my life, and I owe it only to my family, especially my wife Waltraud, to have dived through without major harm. My gratefulness goes to her, at this retro- and introspective point; without her support, s::can would not have survived.

End of 2004, however, the Athena funds of [Dr. Josef Taus](#), a well-known politician and industrial veteran, was introduced by father Bernhard Weingartner. Dr. Taus trusted us, took the risk to buy out 3 shareholders, provided investment, and with this, most probably saved the company. Remarkably, the same December 2004 was also the month of break even in perfect simultaneity, and since then, s::can has been profitable each single year. Would we have made it without Athena's investment? What we learned: When you stare from the valley up to the next peak, you never know if that's the final one, or just another elevation of many more to come after. So, this investment certainly brought the peace of mind and the back-up that we needed to relax a bit and do things properly; and it was a great partnership with the Athena funds over the coming 7 years.

To finish this story, in September 2011, the successful co-operation with Athena funds ended in a win-win situation for everybody, when the Weingartner brothers managed to finance a buy-out of the investor. Since then, s::can has been a family company, growing at an average 15% per year, with always good profits, and many interesting stories to tell, and hopefully many more to come.



„Many of life's failures are people who did not realize how close they were to success when they gave up.“
Thomas Edison

Looking back, it is amazing how fast we were in these pioneer days. How much more effort it is today to develop quality products along professional quality standards, how long it takes, and how much it costs to bring a new product on the market that we can be really proud of - such as the spectro::lyser V3 - and then support our customers at same quality standards. However, the first 5 spectro::lysers took us one year to build, and all of them needed to come back for some re-adjustment. Today, we are building 6 per day, and barely any at all come back to the factory during their life time.

Sometimes we are asked why we founded daughter companies, at unusual speed, in the last 10 years. For sure there is always a risk related to such investment. However, all our daughters are economically successful today, after about 3 years start-up time respectively. They build up market shares that are hard to achieve in classical sales partnerships.

However, the decision to start a daughter is, besides a sufficient market size, depending on one main criterion: To find the right person, who must be a good fit to s::can and our philosophy. s::can USA, s::can China, s::can France, s::can Iberia, s::can Mexico, and our offices in Italy, Portugal, India, they started in this sequence, and all of them are directed by wonderful characters with strong motivation and deep loyalty, always when the right person showed up and jumped on board. Dear subsidiary managers, Mike, Li, Philippe, Jordi, Efrain, Alessandro, Vincenzo, Sudhakar, please enter the stage!

Last but not least, to mention our wonderful sales partners, around 45 of them globally who are working hard for our customers every day. They represent our name, brand and values in their territories, so they are an important part of the s::can identity. They accumulate many talents, from technical to commercial, from application to marketing, and when they decide to go for it, they have tremendous success with s::can products. Even if the online monitoring market grows quickly, the competition does, too. We give them titles such as platinum, gold, and silver partners, and discounts to finance their investments, and they give expertise, passion, customer relationship, and professional customer support.

Together, we give a seamless, integrated offer that fits best the customer's need, combining best product and best service with best price. Types of relationship are plenty, from strong and trustful exclusive relationships, to project-based or multi-agent systems such as in China or USA. We have dedicated long-term partners such as GWU in Germany, Elscolab in Belgium, or Isoil in Italy; and sure to mention here is our strongest and most successful partner, Aaxis Nano in India,

the father of our tremendous success i.e. with industrial effluents monitoring (> 1000 systems installed), or 38 stations along the Ganges river. Only with [Sanjeev Gogia](#), the owner and motor of Aaxis, and the dedicated Aaxis team, s::can could become the market leader in India.

[Too many to mention all of them here - sales partners, please enter the stage!](#)



[Barcelona Dinner Steering group meeting with subsidiary managers](#)



[2010 Sales Partner Meeting in Traunkirchen, Austria](#)



2016 Sales Partner Meeting in Traunkirchen, Austria



Axis Nano, Sales Partner of the year 2015



Meeting with the Indian water minister Uma Bharti



Company trip to lake Traunsee to celebrate s::can's 20th anniversary

s::can's 20th anniversary celebration

In September 2019 s::can celebrated its 20th anniversary with over 180 people from all around the world. Customers, Sales partners, Friends of s::can and s::can team members enjoyed an unforgettable day together. The anniversary celebration started with the Innovation Day at the s::can headquarters, followed by an excursion to the pilot scale laboratories at the University of Natural Resources and Life Sciences "Boku", the cradle of s::can. The visitors traveled with us back to the roots and explored s::can's history together with the original founders of the company. Afterwards the anniversary was celebrated at the Imperial Horse Race Track "Kaiserloge". Apart from the great food and the familiar atmosphere, the evening also allowed many diverse people from all over the world to get together and to exchange, share experiences and to network.

20th anniversary -
a day to remember



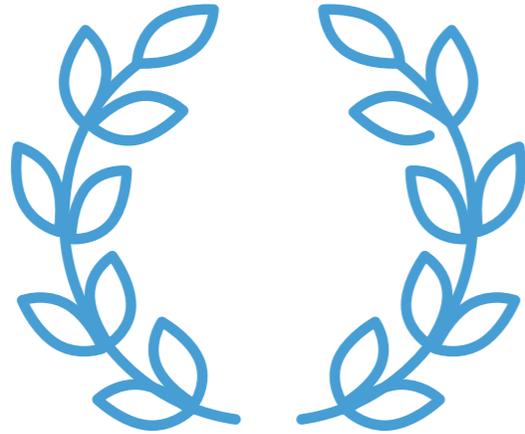
Back to the roots – Andreas Weingartner presenting at Boku during the 20th anniversary event.





20th
anniversary

Over 180 people from
all over the world
celebrated with s::can



HALL OF FAME

—
20th
anniversary

Prolog

After some sensors for Vienna Waterworks in the year of 2000, and some for Wupperverband in Germany in 2001, the first spectro::lyser somehow found its way to [Rob Dexter](#) in Australia in 2001, a true online monitoring pioneer who organised the first exhibition. Shortly after, Japan was conquered together with old friend [Mizumoto-San](#) of Kurita Industries in 2001, followed by [Takahashi-San and Ohira-San](#) of [Ebara Jitsugyo Co. Ltd.](#)

So, the early sales destinations appear to be more like Andreas' traveling destinations than following a commercial plan. And there might be some truth in that...



Japan, 2001



Australia, 2001

Wiener Wasserwerke, MA 31

[Wolfgang Zerobin](#)

[MA 31, Austria from 2000 until today](#)

The very first spectro::lyzers went to Vienna Waterworks / MA 31, starting with some serious tests at the springs high in the mountains, under the lead of [Dr. Wolfgang Zerobin](#) who is today the director of Vienna Waterworks. The outcome must have been quite ok because today, MA 31 are operating 70 systems from s::can. The very oldest spectro::lyzers are therefore 19 years old, soon no teenagers anymore, and still flashing! Dr. Zerobin and his team therefore can be considered the global pioneers of online spectrometry, and we cannot express enough our appreciation and gratefulness for their patience and support over so many years.



Compliance tests high in the Austrian mountains.



Those probes are under water!

Leiv Rieger, InCtrl, Canada

Leiv was one of the first users of s::can spectrometer probes during his PhD work. Actually, he did not want to be a sensor expert. He was deep into simulation of waste water plants, and he needed online data to calibrate his models, with the dream of “fractionation of organics”. However, sensors on the market were not good enough at the time, so he looked around - and found s::can. A long friendship started, and Leiv contributed substantially to what s::can is today. I.e. you can feel Leiv’s spirit when you measure NO₂ with the spectro::lyzer. Also, he was one of the pioneers to bring ion-selective NH₄ back to the scene, and s::can to become a leader in this technology. With his Canada and US based company InCtrl, he is still on the forefront of monitoring, modelling, and control.

There is sure a fixed place for Leiv in the Hall of Fame of online monitoring.



[Leiv Rieger](#)

[ETH Zürich
CH - from 2001
until today](#)

Wupperverband, Germany

[Catrin Bornemann](#) and her team were the first ones to test spectro::lyzers for waste water, in the plants and sewers of Wupperverband in Germany. It was there that we started to experiment with pressure air cleaning, again the first ones in the industry. Catrin and her team showed endless patience with all the flaws of our first waste water babies, lovingly fed them and cared for them, so they reproduced and they got more and more of them over the years, moving from the plant into the sewer and even storm water overflows. A big thank-you goes to Catrin and the Wupperverband, for all their pioneering enthusiasm and support in the early years.

[Catrin Bornemann](#)

[Wupperverband
Germany - from 2001
until today](#)

Günther Gruber, TU Graz

Günther Gruber
 TU Graz, Austria
 from 2001
 until today

Günther is maybe the most patient and enduring of all our pioneers. We first met in a water monitoring project of all the Austrian water institutes, which actually was quite a push for s::can. After that, he became a global pioneer in the monitoring of sewer overflows, and found its way into the hall of fame by being the first one who could seriously quantify the COD load during a stormwater event by online measurement in the Graz sewer system - using s::can probes. If anybody, he knows and understands how to best operate and calibrate sensors in this harshest of all environments. Günther is an authority for integral sewer system and plant management... and s::can owes him and TU Graz a lot.



Uwe Lorenz, Holger Hoppe, Germany

Uwe Lorenz
 Holger Hoppe
 RWTH Aachen
 Ruhr Uni Bochum
 from 2001

Uwe and Holger are German scientists and pioneers in sewer monitoring, starting from 2001. Uwe, during his work at the RWTH Aachen, was the first one to utilize sewer retention volume by controlling the overflow based on COD loads, and installed and operated a complex and well working system of spectro::lyzers at the overflows of the Burscheid Germany sewer system. Holger Hoppe came after him from Ruhr Uni Bochum, and still is a pioneer using sensors for sewer management, with a special focus on rainwater management in separated systems. Toady working for Pecher AG, he is still on the forefront, and they both sure deserve a place in the Hall of Fame of water monitoring.





Edith Kramer, Red Hook Wastewater Treatment Plant, New York



Krish Ramalingam, N.Y. City College, USA

One of the waste water modelling, measurement and control gurus of the USA, Krish started to use s::can equipment for waste water before anybody else in the USA, and has never stopped using it. He took Andreas by the hand and lead him into the magical world of waste water plants of New York City. Often, he was freezing his hands off at the Wards Island plant in the NYC winter, trying to calibrate a frozen ammo::lyser, while Andreas gave him important phone support, sitting behind his desk with a glass of red vine in the warm Vienna office evening.

Only for that, but for so much more wonderful support, and last not least, for the best calibration data ever provided, Krish must stand in the very first row of our Hall of Fame.



Krish Ramalingam

N.Y. City College
from 2005 until today

Roderick Abinet, Kemira

If in some US American sewers it smells less or different than in others, this is most probably because Roderick did a good job there, using s::can sensors. He is not only another pioneers in sewer monitoring, he also had the patience and endurance to be one of the first to measure H₂S in the dissolved phase, and use this measurement to control the optimal dosage of the wonderful chemicals that his company, Kemira, provides. This was Roderick in the USA, but now, he moved over to Germany and pushes Kemira on his track of innovation, and Kemira has already climbed up the value chain, from making boring chemicals to providing a full suite of services around the optimized management of those chemicals.

Without doubt, Roderick deserves a strong standing, not only in our Hall of Fame.



Roderick Abinet

Director of Applications
Development, Kemira
from 2011 until today

Greater Cincinnati Water Works, GCWW, OH, USA



Yeongho Lee

GCWW
Cincinnati OH, USA
from 2005 until today

Yeongho Lee is one of the global pioneers of online monitoring in drinking water, and network modelling. He started long before he met s::can, but was keen to add some parameters to his existing list, especially organics. Always looking for innovative ideas, and a true early adopter, he got extra support by the US EPA Water Security Initiative project to make drinking water even more secure, under the title of Homeland Security and in the aftermath of 9/11. It was a nice coincidence that US EPA had their testing facilities in his home town. Today, he operates one of the biggest stables of s::can tools together with many other tools and makes, and uses all his data streams to model, protect and control one of the best controlled drinking water networks, in Cincinnati, Ohio, USA. For sure, Yeongho has to take a front seat in our Hall of Fame.

US Environment Protection Agency

John Hall
Sri Panguluri

Cincinnati OH, USA
US-EPA
from 2005 onwards

Special mention goes to John Hall and Sri Panguluri, both working for US-EPA during the launch of the Homeland Security program in the aftermath of 9/11. Sri was a regular contact and support during the long testing phase at the EPA premises, of sensors but also of event detection software. While Sri was in the role of a consultant to EPA for Shaw, John was and is the promotor and innovation leader at the EPA in the fields of water monitoring and management, spreading his experience from drinking water over to all other water compartments. Their teams trusted s::can in a phase where drinking water network monitoring tools barely existed, and did a fantastic job in their testing facility, as well as in compiling the US-EPA recommendations for monitoring in drinking water distribution networks, an important milestone for water quality monitoring in the USA. John and Sri sure have their space in our Hall of Fame.

Rick Scott, City of Glendale, AZ, USA



Rick Scott

City of Glendale
AZ, USA, from 2008
Now Seattle Water SPU
operations director

During Rick's leadership, a Superbowl event was brought to the city of Glendale in 2008. The secure water supply of 80 000 fans was one of the main challenges, and to protect the stadium area from any type of contamination.

Rick, together with Ken Thompson and Raja Kadiyala from CH2M were the first ones in the USA to trust s::can's technology for protection of drinking waters from intentional contamination. CH2M-Hill designed the system with monitoring stations at all critical points, and the system was installed, commissioned, and trained well ahead the event. During the event, there was even a red phone line between the local security force and s::can in Vienna. This was the first of several Superbowls and sports events - such as the Beijing Summer Olympics 2008 - that s::can had the honour to be part of and helped protecting. Common goals are the best glue, so, beyond a rewarding and successful professional collaboration, Rick became a true friend and supporter. He is certainly a top candidate for a gold medal position in our Hall of Fame!



CH2M-Hill, USA



With this important reference of Glendale AZ, and the great work of US-EPA in Cincinnati, the market of Homeland Security came into focus, and turned into the most important one for s::can USA, over several years.

Ken Thompson and Raja Kadiyala were the pacemakers and innovators, and designed, built and operated several of the then established systems, such as in San Francisco, Dallas, Glendale, Fort Worth, and many other places. When they found s::can, our technology was right what they had been looking for, and they immediately trusted, and started the implementation into their systems. More and more, the software part of contamination event detection and management gained importance. At CH2M-Hill, Ken and Raja developed the most powerful and comprehensive tool for water quality management, integrating data and information from diverse sources into the most advanced platform for water managers who want to manage their system based on data and information, taking the guesswork out.

Since then, we worked with Ken and Raja in diverse projects, from Homeland Security over the whole range to legionella control in hospitals. Working together over the years, we also became friends, and we had them over to Vienna for some fantastic workshops and other gatherings. Without them, our presence in the USA certainly would look very different to what it is today. So, Ken and Raja are certainly standing in the first row of our Hall of Fame.

Ken Thompson
Raja Kadiyala

then CH2M-Hill,
now Jacobs
from 2006



Thames Water, UK

One of our biggest deployments of all. Thames Water wanted to monitor and control their 500 waste water plants from one central location. COD, BOD, TSS, NO3 and NH4 were the parameters of their interest. s::can won the first tender in 2007, and after good results and extremely high reliability over years, we also could win the second round in 2010. More than 300 systems are installed now, and doing their daily work to best satisfaction of the customer. Maybe the biggest deployment ever for WWTP compliance and efficiency control, and for sure the global reference.



Thames Water, UK
from 2007

Shai Ezra, Mekorot, Israel

Ezra Shai is the director of the Water Quality Division at Mekorot, the national water company of Israel, and with this, Mekorot's guru of water quality. Amongst others, he is responsible for design of treatment facilities, for online monitoring activities, for sampling in the distribution network, and for many other areas. When we started to work with Ezra in 2008, he was the Director of Water Security and responsible for the design of the security monitoring program, and the optimization of contaminant detection. He pushed online monitoring from the very beginning as he understood that the only chance to catch contamination in real time, and being able to react, is measuring in real time.

As a true pioneer he has not only driven the water quality concepts and strategies at Mekorot, but for the whole of Israel, and contributed globally - so we feel very honoured to offer him a seat of honour in the Hall of Fame.



Shai Ezra
Director of Water
Quality Division,
Mekorot, Tel Aviv, Israel
from 2008

CPCB - Ganges River Monitoring Network, India

The for sure richest project of ours, bringing us the highest level of satisfaction, but also the biggest challenges. Also the most difficult project for sure, only to mention the operation of 36 of our own monitoring stations along a stretch of 2500 km of one of the wildest and most polluted rivers in the world, all by our own staff. Same time a true mother for 500 million Hindus in the basin, the source of life for each single one of them, and even a person with person's rights at Indian courts. There is no other technology than s::can's that can be successfully applied under such conditions, with the enormous challenge that only data that pass the quality control steps are being paid. A steep learning curve for all of us, s::can India, our wonderful partner Aaxis Nano, the World Bank who brought up the ideas and enabled them, and the CPCB (Central Pollution Control Board in Delhi) with their never ending enthusiasm, patience, and always professional approach. All of them should enter the stage and walk into the Hall of Fame of global environmental achievements.

The Ganges
DaaS project



CPCB - Industrial Effluent Monitoring, India

The CPCB, which provides technical services to the Ministry of Environment in India, started an initiative within the Clean Ganga Mission, which is called "Regulation 17". Industries of 17 Categories, all in all more than 3000 industrial plants, had to install Online Effluent Quality Monitoring Systems (EQMS) for which Aaxis Nano and s::can set the reference with long lasting trials, thorough business development and powerful market penetration. It has been the biggest initiative so far where Online Spectrometry became a standard of monitoring industrial effluents and many countries have started the same or similar approaches since then. There are now about 1000 s::can systems installed in India and the number is rising every week still.

First Nations Technical Services Advisory Group

Protecting First Nations communities in the far north of Alberta certainly was one of our most rewarding projects. Together with [Jeff Simpsons](#) from Aquatic Life, it is incredible what [Paul Vaughn](#), [Lyndon Lobo](#) and [Don Ginther](#) from TSAG made possible. They monitor and control the water supply of rural villages from one central location with 60 local micro::stations. They use the s::can event detection software as well as their self developed software platform to visualise them continuously, and receive alarms in case of any abnormality in real-time.

It is exactly like Lyndon says: "s::can's system does not only work as a safeguard of the quality of drinking water in First Nation communities, but also acts as a verification of the equipment at the local plants."

Paul Vaughn
Lyndon Lobo
Don Ginther

Alberta, Canada
First Nations
from 2011

The Atoyac River Monitoring Project, Mexico

Another important river monitoring project for s::can, at one of the most polluted rivers in the world, is the Atoyac river. It is so polluted and toxic that the UN Human Rights Commission sent a letter to the Puebla government in 2017, to inform that human rights were violated as the river, its water, and even its fumes are an acutely toxic threat to all people living nearby. Check out the videos and information on our homepage to find out more. s::can technology was chosen to replace conventional attempts to monitor water pollution, that never worked.

We equipped 13 monitoring systems and have been operating them successfully since the start. We strongly believe that making pollution transparent, and data accessible to the public, will be the start of a real change, as decision makers and managers will feel motivation and support from civil society to react, act, and make changes. [Whoever](#) will take the lead in this long path of change, this person has not been found yet; please come and stand in front of the Hall of Fame for environmental and humanistic achievements.



Grundfos A.S., Denmark

In 2012, Grundfos – one of the largest pump manufacturers in the world – conducted a survey amongst all online water quality equipment manufacturers, to find the best candidate to team up with, to design and manufacture a new generation of disinfection control systems. Based on our innovative approach and the ability to provide the full range of online sensors, s::can became their major supplier for the “DID – digital dosing control” products. We developed together the new con::lyte D-320, they call it the “CU382”, and a full set of modular nano::stations including PID control for their pumps with disinfection parameters like pH, Chlorine, Chlorine Dioxide, Peracetic Acid, Hydrogen Peroxide and Conductivity. This relationship has proven extremely successful, and became a standard for many industrial applications.

We enormously enjoy the professional and productive collaboration with their international innovation and product managers, Michael Skovgaard and Matthias Woll, and their teams. Please join us in our Hall of Fame.

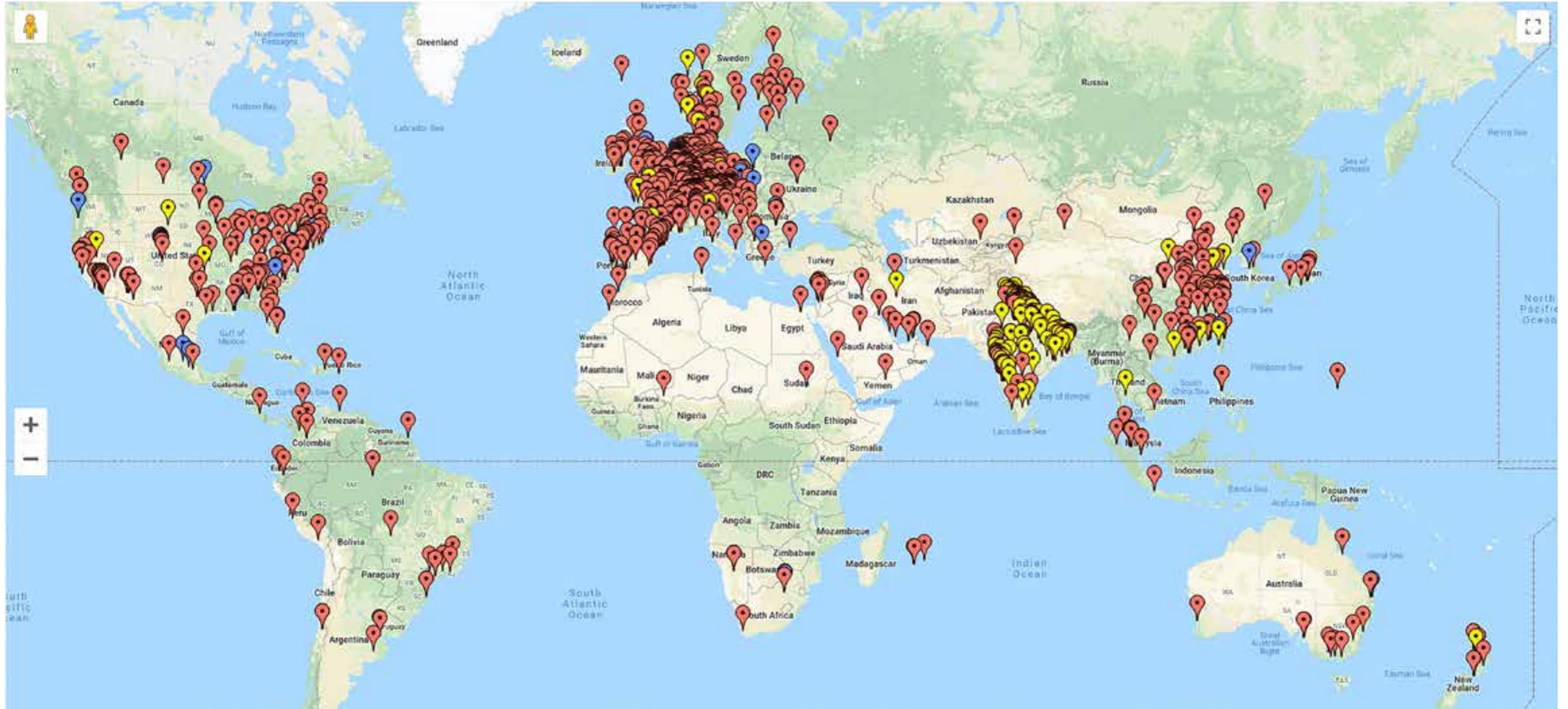


Michael Skovgaard
Matthias Woll

Grundfos A.S.
Bjerringbro, DK



The DID monitoring and dosing station "Grundfos by s::can"





The Team, the Location.

Right now, we are 55 employees in Vienna, and 75 globally.

You will see yourself that there is not much space left at our premises in downtown Vienna. However, we really love to stay in this urban environment, with all public transport, restaurants, hotels, and other infrastructure in walking distance. So, we think if we are smart enough, we can grow another maybe 50% here, by picking up some more space around us, and using it more efficiently, as our manufacturing department has proven already; and by outsourcing some non-critical activities locally, but also to our daughter companies.



Twenty years from now,

You will be more disappointed by the things you didn't do than glad by the ones you did do. So throw off the bowlines. Sail away from the safe harbour. Catch the trade winds in your sails. Explore. Dream. Discover." *Mark Twain*

Back to the Future. Our Vision

This booklet is meant to look 20 years back to the roots of s::can; but please also allow us a quick glance into the future, as we imagine it.

We all remember from our teenage years that growth always brings pain, and many things need to be considered in order to keep this pain acceptable. So, s::can is now in a process of what we call "industrialisation", which means to professionalise, streamline and automatise our main processes, protocols and tools, to become even more efficient, faster, and with this, scalable. If you visit our birthday celebration, you will see and feel the result of these efforts in our manufacturing department, where our new director brought the Japanese Kaizen attitude and implementation into the s::can world. Similar effects you can observe already in the "Loft", the new customer services department, where a new manager took over and with his enlarged team left no stone unturned. And last not least, our new chief of operations, together with our IT and QC teams, is busy with implementation of the new enterprise management and planning system, which should go online with beginning of next year. The new approach spans horizontally over all our daughter companies, and even docks onto our global sales capillaries.

Beyond these management topics, for sure everybody is curious about the future of technology and business, and how such technology can be applied for the advantage of all water consumers world-wide.

It is hard to condense this down to 3 topics, but we will try:

s::can 2.0

Our Vision.

IoT - The Internet of Things.

[Smart sensors
chatting with you
via the cloud](#)

The IoT hype has started already when s::can still was a baby. But only quite recently, it became evident that this trend first set by some big industrial players, now turns into a reality, on customer demand. It is not hard to predict that in just a few years, every sensor will have an I.P. address, will be connected to the cloud, and will talk with many other devices via the same interface. It seems a clear prediction, with a lot of advantages for the operators and consumers, but... it is still a long way to go, because in an industrial environment, conditions are different and more demanding, from security questions over energy consumption to protocol standardization.

With the spectro::lyser V3, the first true IoT analyser globally, s::can again sets the standard in our industry, implementing web server, Bluetooth and internet protocols, massive intelligence, and many new features, that rocket a 20 year old teenager into space age again - back to the future.



Our Vision.

DaaS - Data as a Service.

With this idea, we are coming back to our roots. From a space perspective, we can look at the last 20 years of sensor development as an intermediate phase. Initially, we wanted to provide "liquid monitoring networks", using mostly established sensor technologies. But unfortunately, the sensors available at that time did not work well enough. It took us 20 years to develop a full range of sensors that really work, and now we have them. So, it is time to go back to the start - and provide liquid monitoring networks and services to our appreciated customers. For sure, s::can will always remain a product company, and selling those products will always be our bread. But selling data, like in the Ganga, India, or Atoyac, Mexico, projects, is a lot of fun, too, can be a real win-win for everybody - and the butter on the bread. So let's go for it!

[Monitoring
services, coming
back to our roots](#)





20th
anniversary

Our Vision.

Spectrometry for the People.

It always has been our mission to help controlling water quality with a democratic attitude. Water of safe quality should be controlled and provided to each single citizen of the world. There is no reason and no justification that even today, millions of people must drink water of doubtful, not controlled quality.

For sure, we cannot clean all these water sources, but we can provide technology to control them in an extremely cost efficient manner. Spectrometry, especially if based on LED technology, has the potential to cut the costs to such level that it can be integrated into all those devices that are near to the points of use, and even water faucets.

s::can is the clear global technology leader in this field, and it is our target to accomplish this mission in the not too far future, in partnerships with others who have the same vision.

Not a completely
new slogan of our's,
but still the most
important one.



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s::can