

Drivers for innovation – Development in the water sector for the last 10 years	
<p>1. Welcome and introduction to speakers</p>	<p>It is a pleasure to welcome you all - thank you for being with us here in Denmark.</p> <p>More than 450 persons have chosen to register for the 3 days in Aarhus. This is to my knowledge the highest number of participants for a NORDIWA conference ever.</p> <p>Most of us are - in our daily lives - busy operating the water sector in the Nordic countries, but I am very pleased to see that people have come from other countries around the Baltic Sea.</p> <p>It is also a pleasure to welcome you to Aarhus – which happens to be my hometown. This year Aarhus is the European Cultural Capital, so it was natural to select Aarhus as the venue for the NORDIWA 2017. We have interesting tours and there is a lot of extra to see in Aarhus this year, if you have the opportunity to spend a little more time here.</p> <p>As usual the NordIWA wastewater conference presents the state of art within: Wastewater treatment – Sewer systems – And how to adapt to the consequences of a changing climate.</p> <p>When I leave the stage you will meet 3 excellent speakers who focus on the challenges, the solutions and the actions.</p> <p>I am sure we can look forward to three interesting presentations – and let me add - three interesting days here in Aarhus.</p>
<p>2. Intro to own presentation</p>	<p>In my experience the wastewater sector, and the water sector in general of course, is truly innovative. I always meet people that are driven with an urge to improve and make better solutions for people, for the benefit of the utility and not least to improve the environment.</p>

	<p>So, what is the reason for this? What are the drivers you may ask? I cannot promise you a full answer and some of our successes surely depend mostly on the very dedicated people that are working in the sector. However, I will look into at least two sets of drivers:</p> <ol style="list-style-type: none"> 1. The first are drivers that have been induced by government in the form of changes in our regulatory framework? This is EU legislation implemented in our countries and it is national legislation, such as the Danish Water Act. 2. The second are our own activities. What are we doing ourselves – how is the water sector itself pushing to become more and more innovative in our daily activities? <p>And finally I will look into Nordic cooperation that also contributes to increasing innovation.</p>
<p>3. Why do we need innovation</p>	<p>Why do we need to focus so much on innovation? Is it not just another buzzword?</p> <p>After all, we do supply safe drinking water, we do handle wastewater, and we do manage climate change adaptation.</p> <p>Perhaps the single most important contribution to public health comes from our work?</p> <p>Should we then rest on our laurels? Should we say that we have actually done well enough and then focus on operating our business as usual?</p> <p>I say no!</p> <p>I am sure most of you will agree with me. We will be confronted by new and increasing challenges – climate change, the SDG's, the need to protect our groundwater and water resources from micro-pollutants and emerging pollutants.</p>

	<p>Just some weeks ago we were confronted with a pesticide in Denmark that has recently been discovered in the water, even though it has been forbidden since the mid-90'ies. Just one of many examples of emerging challenges.</p> <p>We will surely meet other new threats in the coming years - and our customers and municipalities will expect more from us; smarter and cheaper solutions and improved services.</p> <p>The conclusion is that we need to be innovative in order to deliver efficient solutions for the future in a world with increasing challenges.</p> <p>We must be able to foresee future challenges and find innovative and adaptive solutions for our cities.</p>
<p>4. New Water Sector Law in 2009</p>	<p>In Denmark a new Water Act came into force in 2010. This completely changed the focus of utilities from being part of a “rather dusty” municipal structure to becoming business entities with a strict focus on efficiency.</p> <p>Even though the companies are still owned by municipalities they are organised and regulated as private entities. They are managed as limited companies (with shareholders) and governed by a board.</p> <p>With the new water act an independent national regulator was introduced to the sector. The regulator sets an individual revenue cap for all the companies and individual goals for efficiency. There is a demand to reduce prices and still provide at least the same service.</p> <p>The first couple of years the sector was fighting the regulator but in general we now accept that the individual targets are supporting and push the sector towards innovation and finding or developing better and cheaper solutions.</p>

<p>5. Benchmarking</p>	<p>One of the tools a regulator use is benchmarking. I think benchmarking alone – when implemented correct - is a driver for innovation.</p> <p>In DANVA we have carried out benchmarking among our members for more than 15 years, and since 2010 with the water act it became compulsory.</p> <p>From 2018 our government introduces mandatory performance benchmarking for utilities on service and environmental parameters such as energy consumption, combined sewer overflows, water leakage etc. The transparency is another incentive to improve services.</p>
<p>6. Activities jointly with government</p>	<p>The Next topic I will touch upon is the Danish Water Vision 2025 and the benefits from this Vision.</p> <p>In 2015 the Danish water sector adopted a joint Water Vision. The aim is, that by 2025 Denmark is among world leaders in delivering intelligent, sustainable and efficient water solutions – that we have doubled our export and have created 4.000 new jobs.</p> <p>Many of you have probably heard about the Danish water vision before. I will not go into much detail here, I just want to point out two major benefits of the vision.</p> <p>First of all, in setting a clear vision for the sector, achieving the water vision is and will be a joint effort for the water sector and the government. For this reason and with the water vision we have managed to maintain the attention on water from changing ministers and governments, who understand and are dedicated to promote the water sector globally.</p> <p>The other key benefit that I want to point out is that the water vision is very much about innovation as well.</p>

	<p>To stay as a world leader in 2025 we need constantly to improve our business. This is important for researchers, companies, and utilities and the common vision has brought us far in developing our solutions jointly.</p> <p>In this way the water utilities have an important role to play. utilities can participate in research and innovation projects, utilities can be test sites for new technologies and utilities can demonstrate technologies and solutions for potential customers from abroad,.</p> <p>It will not be possible to succeed in achieving the goals of the water vision if we do not speed up innovation all across the sector. There are government programs for technology innovation, even though some could use improved funding of course.</p>
<p>7. Activities jointly with municipal -lities</p>	<p>One of the areas where we have seen an immense boost of new and innovative ideas is within the field of climate change adaptation.</p> <p>I remember I attended the first IWA conference on Climate Change in Amsterdam. The second was in Copenhagen in 2009 with DANVA and the Danish IWA national committee as organisers. In Amsterdam I remember the IWA CEO Paul Reiter said: “Climate Change is the Water sectors best friend”. It created a need for innovation.</p> <p>Flooding events in practically all major cities in Denmark since 2010 have created a sense of urgency and have paved the way for new solutions that contribute to urban liveability in greener cities. You will see examples of this at a number of sessions here in the coming days. And on Thursday there is a field trip in Aarhus on Climate Change Adaptation.</p> <p>These projects are developed in partnership with municipalities, but they are also driven by a strong vision from the utilities and from DANVA.</p>

	<p>In 2009 DANVA developed a Climate Change vision, where one of the strategic goals was handling of storm water without damaging flooding. I am of course not saying that this was the only push factor, but our vision, a new funding model and focus from many organisations jointly put climate change adaptation very high on the agenda, with many interesting projects to follow.</p>
<p>8. Activities jointly with municipalities</p>	<p>Another goal from the climate vision is a carbon neutral water sector. This corresponds real nice with targets from many cities to become carbon neutral, for instance the municipality of Aarhus where we are today. Utilities from all over Denmark are taking on this challenge and are doing what they can to contribute to carbon neutral cities, which has also sparked development of improved processes and new technologies.</p> <p>There will be presentations and workshops on this topic the next couple of days, and we have organised field trips on Thursday to inspiring examples of energy efficiency in the water sector; projects that are driven by strong, joint visions in the local area.</p>
<p>9. Our own activities –VUDP</p>	<p>To further promote innovation, we developed our own foundation for innovation and demonstration of new technologies. The program is funded by water companies on a voluntary basis.</p> <p>In 2016 we were able to fund 8 projects with a total of 10,2 mill. DKK.</p> <p>These are projects that improve the operation of the water sector by making it more effective, improving quality, reducing climate gas emissions and by energy optimization, just to mention a few.</p>

<p>10. Governance project</p>	<p>Good governance and good cooperation with the owners and the authorities is a precondition for well-managed utilities. There has been some public attention to this topic in Denmark and as a reply to this DANVA took the initiative to develop a code for governance in publicly owned utilities</p> <p>The Code gives guidance for improving cooperation between municipalities, utilities' daily management and their boards and includes 35 recommendations for Good Governance. The recommendations are not prescriptive, but all utilities should somehow be able to follow the recommendations or give a sound explanation for reasons not to do so. We call it comply or explain. It is soft law so it is flexible and can be changed when needed.</p> <p>Among areas in the Code are conditions for public ownership and cooperation between the utility and the municipality in its different roles as owner, authority, customer and service provider.</p> <p>We believe that this work will improve governance in the Danish water sector and give room for engaging also more in development projects.</p> <p>We have translated the guidance document into English and we are happy to share it with you.</p> <p>EurEau's president Bruno Tisserand has, based on the Danish experience, proposed the ISO-system to create an ISO guidance-document on good governance in the working group ISO TC224, where Bruno Tisserand is the chair.</p>
<p>11. Knowledge sharing</p>	<p>The projects I have mentioned are just examples of activities that drive the innovations in the Danish water sector. I look forward to the coming days to learn from other countries and their examples of new, innovative projects. There will even be a workshop right after this session, looking into Nordic models for innovation.</p>

	<p>Now, I will proceed to look into what we – representatives of the Nordic water sector can and are doing jointly.</p>
<p>12. Nordic cooperation in the North</p>	<p>N We carry out Nordic cooperation on many topics. To mention some, besides our annual Nordiwa conferences, we also work together on standardization, legal matters, innovation, microplastics and wastewater. Among new topics that have come up in recent years are phosphorus, where we now have a joint project looking into recovery of this important resource.</p> <p>All these activities are important to increase our common knowledge base of challenges, solutions and actions and we should all be proud of, how far we have come together, and perhaps we may market this regional cooperation more broadly.</p> <p>If you have a proposal for a common Nordic cooperation or project do not hesitate to contact my colleagues Anna in Sweden, Toril in Norway, Osmo in Finland, Pall in Iceland or me here in Denmark or any of our clever staff members in the Nordic associations.</p>
<p>13. Nordic cooperation in other fora</p>	<p>N We also meet regularly at European meetings and events, for instance within the European association, EurEau and within the International Water Association, where we, besides these conferences, also have regular meetings.</p> <p>And as a new activity, we will work closely together in preparing the IWA 2020 in Copenhagen to make it a truly Nordic event.</p> <p>I have learned that for the IWA 2018 in Tokyo the aspiration is to organise a Nordic corner at the exhibition, where we can have joint activities and perhaps enjoy a beer.</p> <p>Before I leave the stage allow me to thank the organisation committee of the conference - which is the DANVA staff. Thank you for your big effort and with the beautiful setup the next 3 days.</p>

	<p>Also a big thanks to the programme committee for your time, your competences and not least for the very impressive programme you have produced for the next three days. You find the participants in the programme committee in the conference programme.</p> <p>Thank you for your time.</p>
14. G ive ordet videre	<p>The next speaker is a very good colleagues of mine. The person was the first elected president of EurEau, the European Federation of National associations of water services. The person is currently the chairman of the most important committee in EurEau on legal affairs and economics.</p> <p>The speaker is working with Veolia and is an expert of the Polish chamber of Commerce representing the Polish Water Association. Please welcome Mrs. Klara Ramm who will speak about The Challenges on water issues that have been overcome by Poland.</p>
15.	<p>The next speaker is Tom Williams representing the International Water Association, IWA. Tom has been with IWA for almost 15 years. We have met Tom in many different situation – from liaizing with IWA members, event manager for IWA conferences, Programme Director and coordinator of IWA thematic programme and finally as CEO of IWA as an interim.</p> <p>It is always a pleasure to meet Tom Williams who will speak about the IWA activities promoting UN Sustainable Development Goals and securing clean water, adequate sanitation and sustainable cities.</p> <p>Welcome Tom.</p>
16.	<p>The last speaker in this opening session is Björn Grönholm.</p> <p>Björn Grönholm is Head of Secretariat at the Union of the Baltic Cities Commission of Environment since 2006. He has more than 25 years of experience in designing, co-ordination and leading several international co-operation projects and experience in fitting together research, capacity building and dissemination activities. Björns previous scientific include environmental politics and sustainable development with</p>

	<p>specific emphasis on diffusion patterns for innovations in the Baltic Sea Region.</p> <p>Today Björn will speak of Cooperation to improve water management in the whole Baltic Sea Region.</p> <p>Welcome.</p>
17.	<p>And now my last task in the session is to hand over to Helle Kayerød from DANVA for some practical remarks. Before I leave the stage I will ask you to help me to give a big applause to Helle. Helle is our Project Manager on this big NordIWA event and Helle has acted as the spider in the middle of the spiderweb managing all the different tasks.</p>