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Aarhus Water Ltd

IOT WEEK 2019 Aarhus · Denmark

Aarhus Vand Ltd.

The company's activities comprise rainwater disposal (including climate adaptation projects), production and distribution of drinking water, transport and purification of wastewater, emptying of private holding tanks as well as safeguarding a balanced and healthy water cycle.

Our mission is to offer and develop resource-efficient services throughout the entire water cycle, creating a sound, climate adapted environment, growth and export, all of which will be of benefit to customers and stakeholders.

Our vision is to be Denmark's leading water company.



Operator of the entire water cycle







Business strategy

VISION

AARHUS VAND WANTS TO BE DENMARK'S LEADING WATER COMPANY

STRATEGY 2020

Focuses on the development of a value-creating water company which is environmentally sound, resource-efficient, energy-neutral, well-run, innovative and partnership-promoting.

GROWTH	PRODUCTIVITY	INGENUITY
GOALS FOR 2020	GOALS FOR 2020	GOALS FOR 2020
Grow by	Grow by	Measured on the effect of
20%	20%	productivity and growth
GOALS FOR 2019	GOALS FOR 2019	GOALS FOR 2019
Grow by	Grow by	Obtain an ingenuity
DKK 51 million	2%	score of 93%

CROSS-CUTTING PRIORITY AREAS

New products and services, water knowledge, research and development

FOUNDATION

VALUES: 'We' feeling, responsibility, innovation and dialogue MISSION: Offer and develop resource-efficient services throughout the water cycle in an attempt to create a sound, climate-adapted environment, growth and export of benefit to customers and stakeholders

UN's global goals for sustainable developments



Clean drinking water:

None-observance of the limit values resulting in a recommendation that water be boiled. Goal: 0

Climate adaptation:

Areas which change their status from shared sewer to separate sewer system. Goal: >80 hectares

Climate action: The energy produced at our wastewater treatment plants should cover 100% of the company's energy consumption for electricity and heat in 2030. Goal: 55%

Climate control measures:

The total energy consumption at our wastewater treatment plants. Goal: <23 GWh

Resource utilisation: Production of PhosphorCare.

Goal: >200 tonnes

Water environment: Non-observance of the emission requirements for wastewater treatment plants having an impact on the aquatic environment. Goal: 0

Water environment: Non-observance of the emission requirements for waterworks having an impact on the aquatic environment. Goal: 0



Water problems





50% of drinking water is wasted before it reaches the consumer

Globally, **80%** of waste water discharge is not purified











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Climate adaptation



The Aarhus River and Harbour Project

- Improved water quality in Lake Brabrand and river of Aarhus
- Prevent flooding
- Bathing water quality in the harbor







The Aarhus River Project

- Retention tanks
- From 2006 to 2013
- Capacity of 50.000 m³







The Aarhus River Project

- The lock at Aarhus River mouth







Bathing Water Quality











Strengthening our ability to meet our strategic goals and secure our business foundation



Industry 4.0, Water 4.0

The digital water industry



SCADA systems connected to auto calibrated water demand models and rain water radar based prediction models

Increased realtime "trusted" sensors + "sensor" capability in components and increased plant controllability



... proactive customer engagement





Customerservice

- Reducing support calls handle majority w cognitive services
- 360degree customer view

Customer

- Getting to know my utility much better, they do more than deliver water. Their purpose is actually much higher, they take care of the environment, improve liveability, resillience...
- I can get to my utility when ever, where ever and service is good
- Services and support is available when I need it and I can easily configure to suit my needs (also when they change)
- I receive and handle all alarms, notifications, payment, etc on my mobile

Installation af 4 teknologier på 5 sites i Aarhus

Vi vil: installere målere og opsamle data herfra med fire teknologier fem forskellige steder i Aarhus.

Hvilke teknologier? WM-Bus Sigfox LoRaWAN NB-IoT

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Og hvor?

Eksempelvis i NYE, Viby J, Brabrand, Aarhus C og Riisskov.









Water Intelligence and Data Platform



We have a strong focus on creating accessibility, overview and openness of data.

We have embarked on an ambitious project to develop and implement a scalable **Water Intelligence and Data Platform**.

The platform will support and promote Open Data access and integration. The data platform will set the foundation for Aarhus Vand and partners to share data, apply data science and augmented intelligence and use new IoT based sensor platforms to support integrated water management.

The scalable and flexible data platform will encourage the **breaking down of** data silos, promoting data sharing, innovation and communication.



