

WATER TREATMENT SERVICES



DATCOMP

Wasseraufbereitungsdienstleistungen

WE VALUE EVERY DROP OF WATER



AQUADEMICA

Aqua Circular
International Conference

4 - 6 octombrie 2023, Timișoara, România



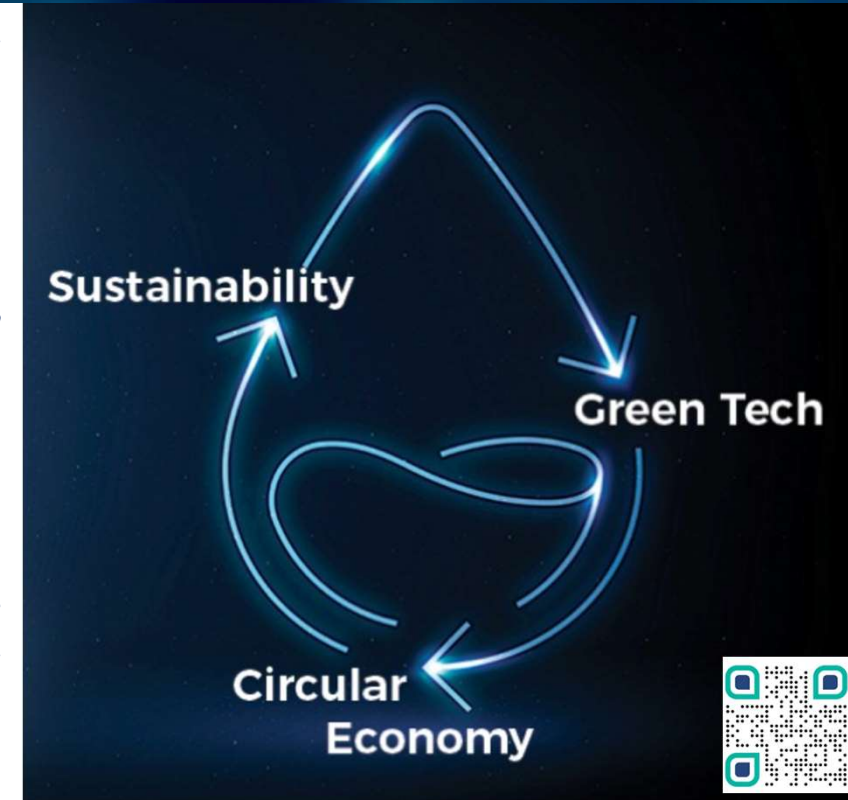
*Innovative &
Water-Sustainable
Technologies*

- ✓ *to contribute to a more water-sustainable future*
- ✓ *to counter climate change*
- ✓ *to differentiate from competition*



Factsheet

- ❑ *DATCOMP GmbH approaches a new vision that prioritizes sustainability and circular economy in the water domain*
- ❑ *DATCOMP GmbH's mission is:*
 - ✓ *to promote and implement industrial wastewater reuse by designing and building advanced customized treatment*
 - ✓ *expanding the company's scope and advancing R&D efforts in the water industry.*
 - ✓ *to identify and promote innovative and water-sustainable technologies and incorporate green-tech solutions into its projects*
- ❑ *Doing so contributes to conserving water and decreasing energy usage and CO2 emissions*



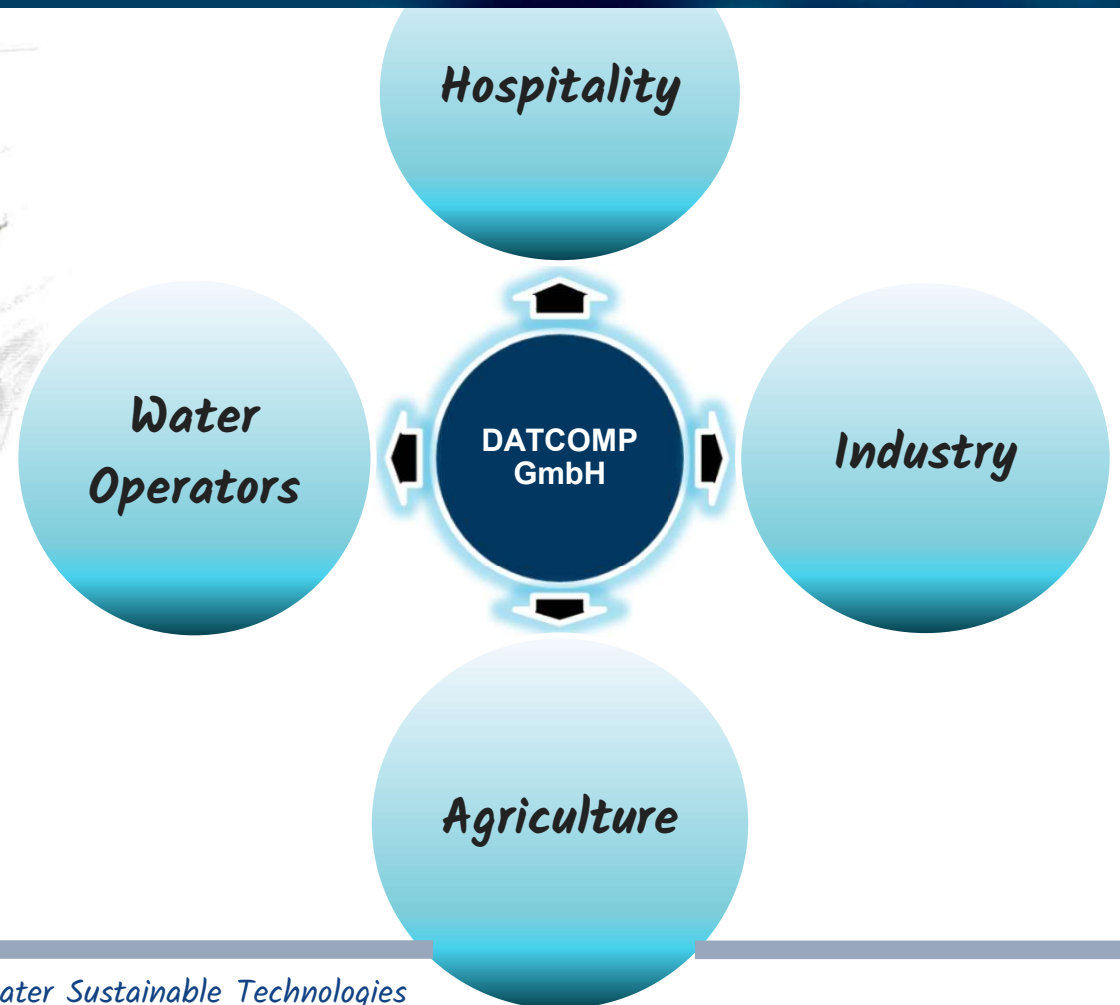
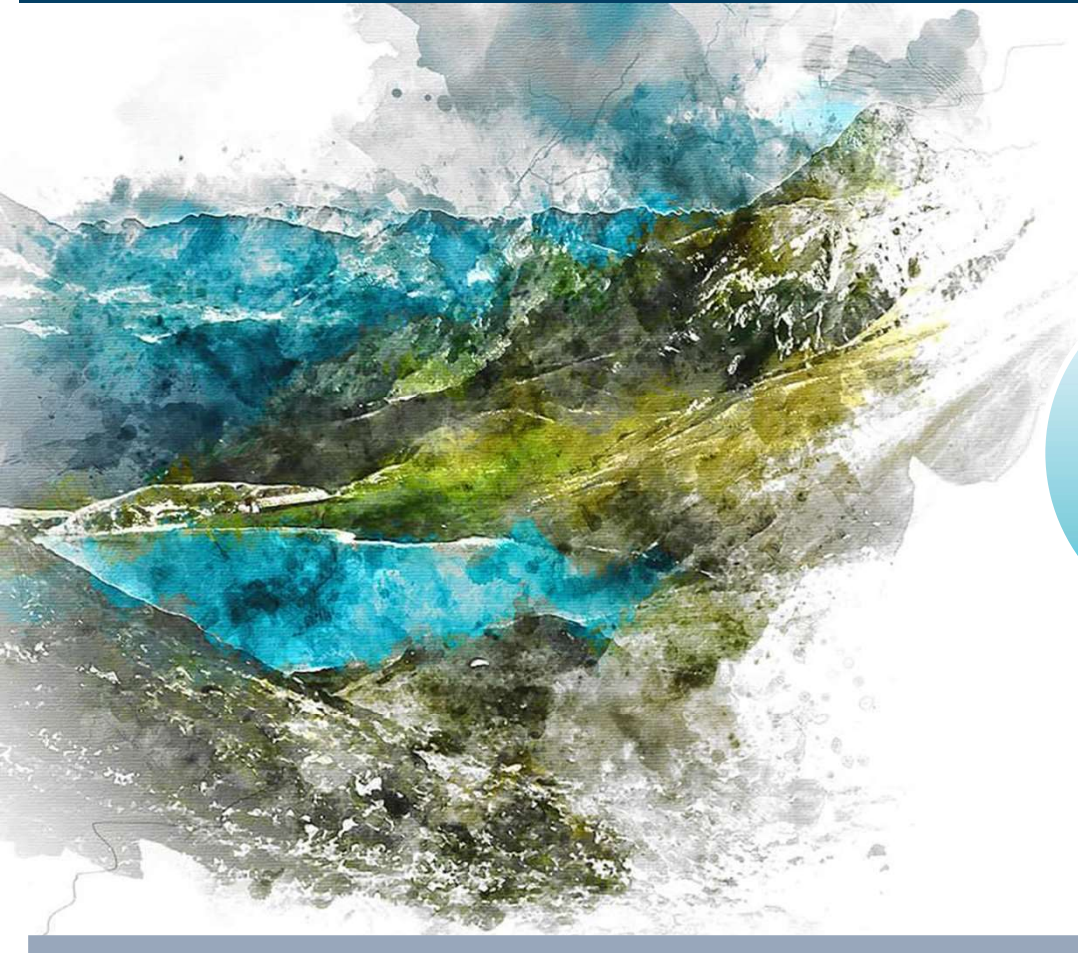
We continuously search for new, reliable, and energy-efficient technologies.

Innovation areas



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Water Treatment Services

Your provider of innovative and sustainable water technologies



Innovative & Water Sustainable Technologies

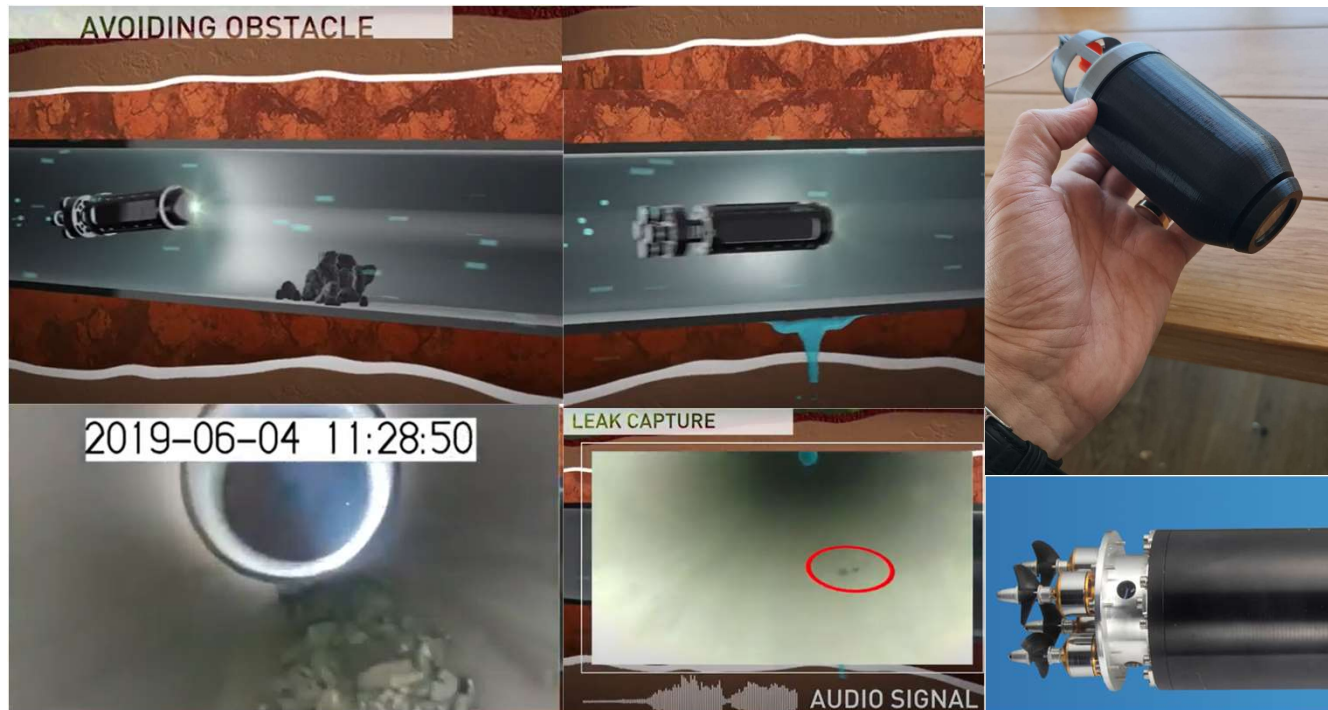
Water Operators



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- *Mini wireless autonomous device ("mini-submarine") with visual, noise, pressure, temp, and flow sensors (capable of maneuvering inside active pressurized water distribution networks while in use)*



- *Helps you to:*
- ✓ *detect network leakage*
- ✓ *mapp water distribution networks*

Note:

With a diameter of 40 mm, it can fit into pipes with a minimum internal diameter of 90 mm.

Water Operators & Industry

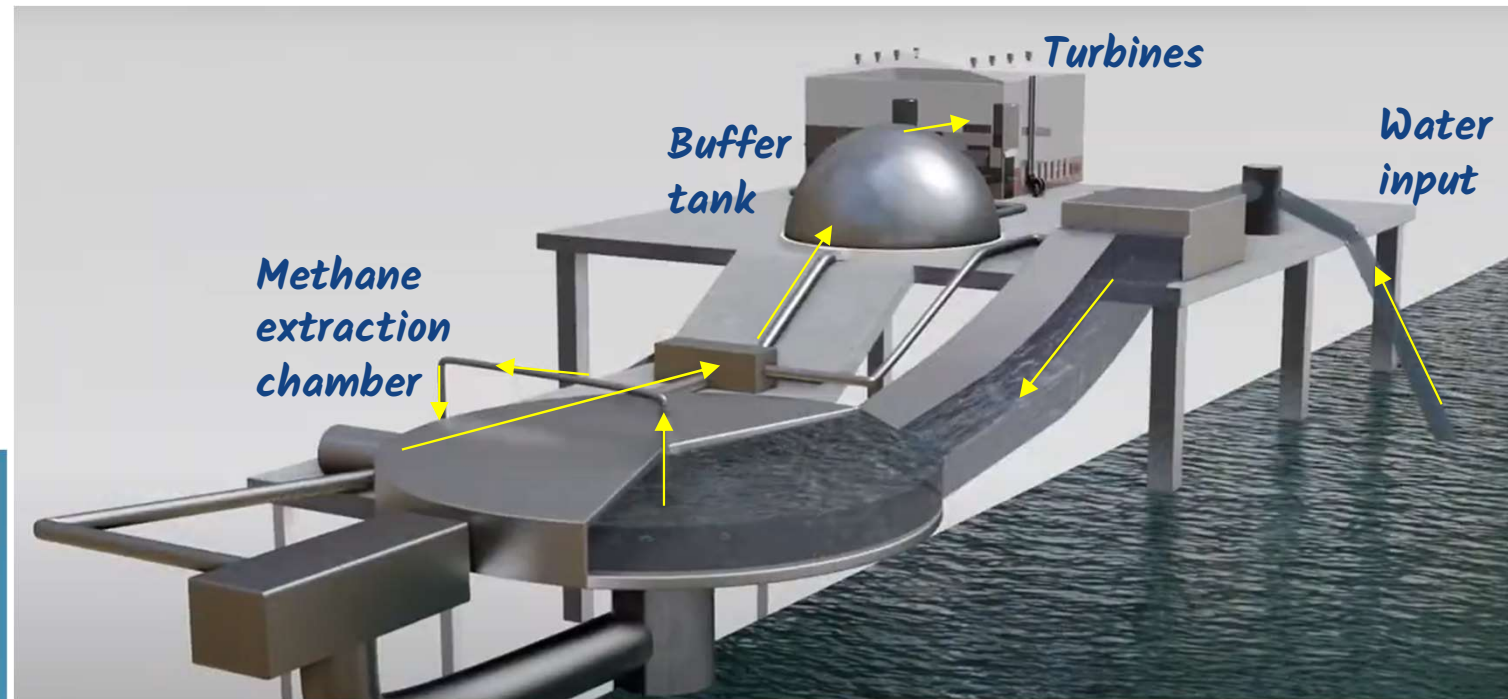


➤ *Capture methane from your wastewater and use it to generate a new source of bioenergy*

It works as a vacuum cleaner; however, this capture technology separates methane from water instead of separating dirt particles from the air.

- ❑ *Methane is responsible for nearly half of net global warming to date.*
- ❑ *It is 34 times more effective in trapping atmospheric heat than carbon dioxide.*

Wastewater and water treatment systems are responsible for a billion tonnes of greenhouse gasses escaping.



Water Operators & Industry



➤ Implement a pre-treat technology based on nanobubbles

A form of chemistry that increases productivity and solves climate-driven challenges, sustainably

Observed Benefits with Nanobubble Pretreatment

Wastewater
Pre-treat to improve treatment performance



Increase treatment capacity by up to **25%** and reduce energy usage by up to **40%**

4

Primary Clarifier



Up to 10% more solids removal

Aeration



Up to 43% less energy required

Secondary Treatment



Up to 20% more treatment capacity

Anaerobic Digestion



Up to 98% increase in biogas production

Disinfection



Up to 44% less chlorine demand

Water Operators & Industry



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- **Detect and Monitor your water quality online 24/7 by analysing parameters that typically require several days in real-time (these parameters include BOD, COD, BTX, TOC, DOC, etc.)**



1

Process Control & Control

2

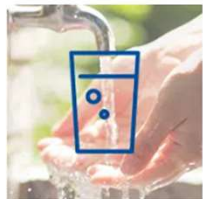
Industrial Wastewater Flow & Compliance Monitoring

3

Industrial wastewater inlet

4

Detection of product loss & spills of toxins and hydrocarbons



Drinking Water Monitoring

Applications from water intake to tap



Waste Water Monitoring

Applications from discharge to effluent



Environmental Monitoring

Applications from river to sea water monitoring



Industrial Monitoring

Applications from food processing to heavy industrial waste water

The advantages

- Detection and prevention of product losses
- Optimization of processes and chemical dosing
- Continuous monitoring of industrial wastewater
- Toxic and hydrocarbon leakage detection
- Adherence to compliance regulations
- Fulfillment of regulatory requirements
- Minimizing the discharge of waste water
- Low maintenance due to various cleaning devices
- Protection of the inlets
- Dynamic billing

Innovative & Water Sustainable Technologies

Water Operators – Industry – Hospitality



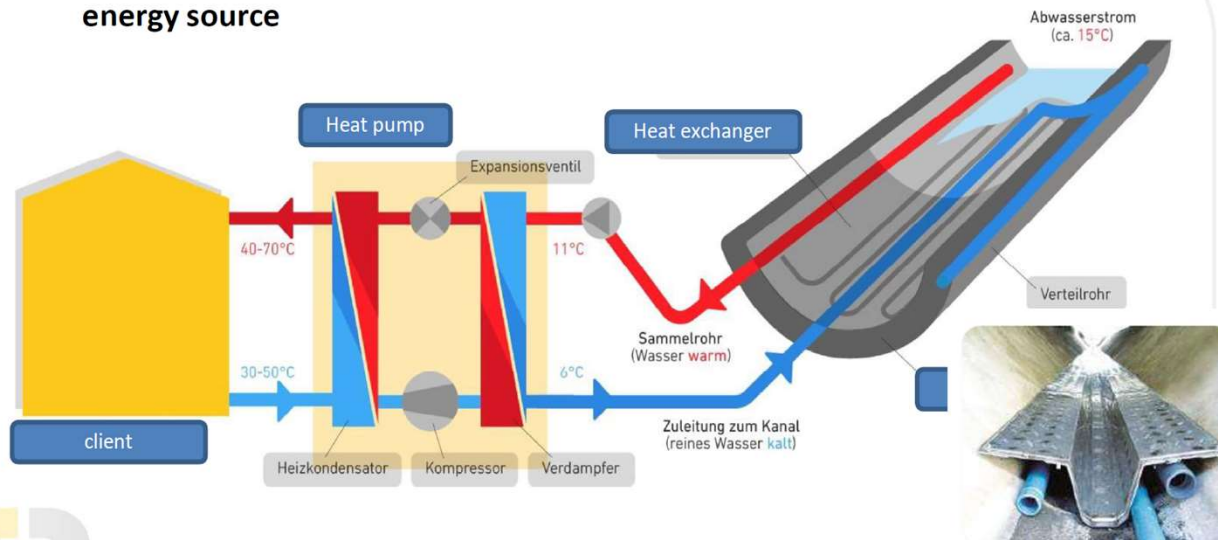
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- Recover the heat from your wastewater - to reduce the cost of thermal energy consumption

Why energy from wastewater?

- Wastewater heat recovery - since 12/2018 EU classification as renewable energy source



Energy from wastewater is a sustainable solution!

What criteria must be fulfilled?

- Sufficiently large channel, DN 400 or larger
- Dry weather flow rate > 10 l/s
- Temperature > 8°C
- Distance of the consumer to the sewer max. distance 900 m for big solutions, 200 m for small projects
- Requirement of heating-/cooling load > 50kW

Water Operators – Industry – Hospitality



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- *Protect your pipes and household appliances from hardness by using an innovative and sustainable solution*



- ✓ *Easy to mount*
- ✓ *It does not require maintenance*
- ✓ *Up to 40% savings compared to traditional softening systems*



Innovative & Water Sustainable Technologies

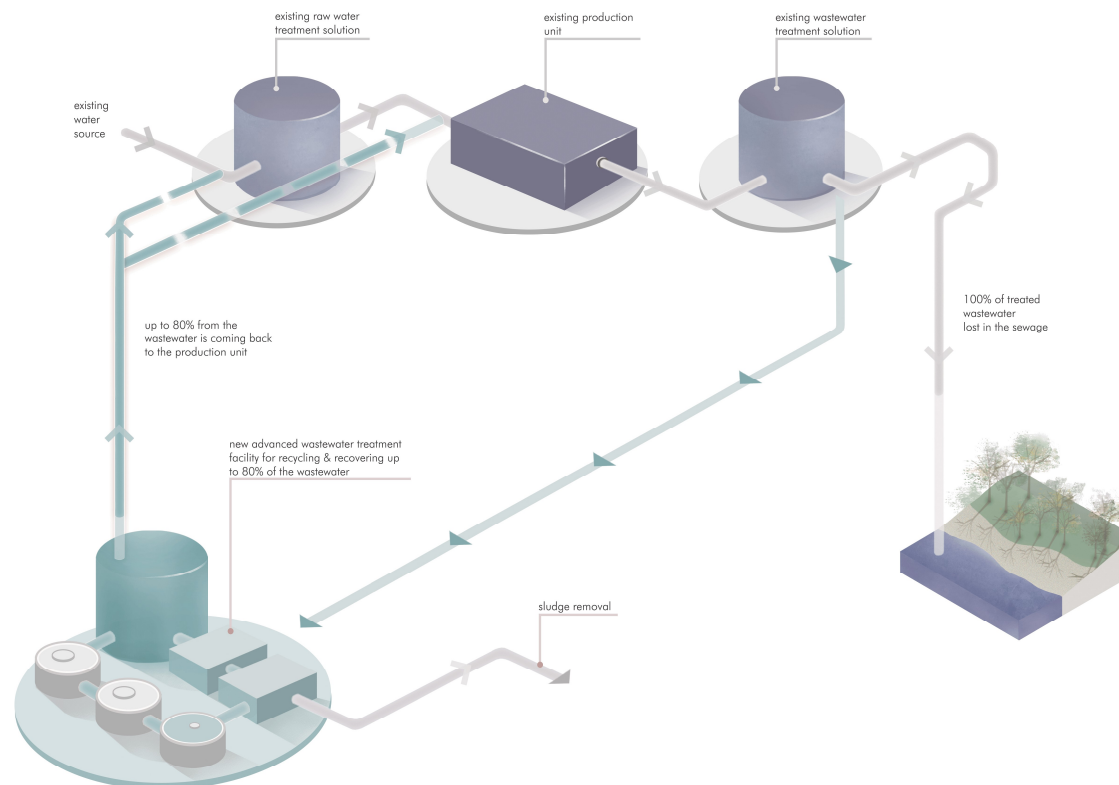
Industry



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- **Recycle and recover up to 80% of your industrial wastewater and turn it back into your production unit by using an advanced customized wastewater treatment solution**



Innovative & Water Sustainable Technologies

Agriculture



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Water Treatment Services

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➤ Implementing nanobubble technology to:

Agriculture & Orchards



Enhance soil structure, promote root health, and improve crop performance

Horticulture & Greenhouses



Increase dissolved oxygen levels, control pathogen, and biofilm, and boost plant vigor

Irrigation Reservoir



Reduce chemical applications and cleaning to treat issues like algae, biofilm, and root pathogens

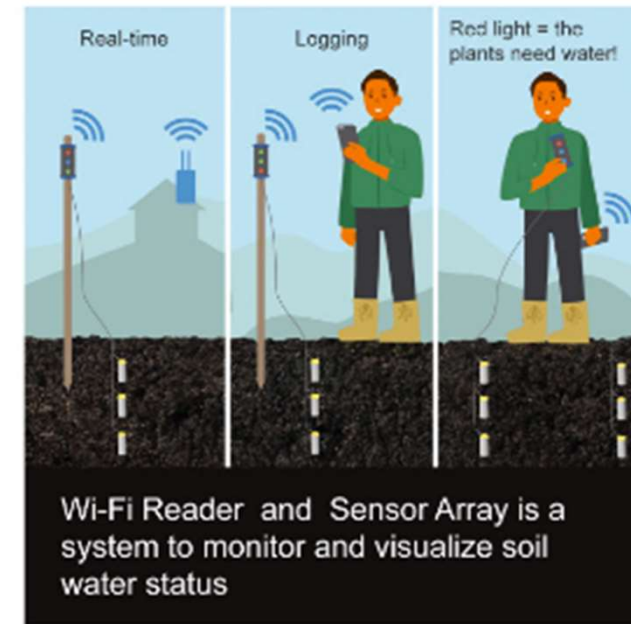
Agriculture



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- *Online monitor and control water stress of the plant using a Wi-Fi virtual irrigation tool*
- ✓ *The sensors measure soil water suction, or how hard a plant can extract water from the soil (like a tensiometer)*



- Blue means the soil is wet (do not irrigate)
- Green means the soil is moist (get ready to irrigate)
- Red means the soil is dry (plant experiencing water stress)

Agriculture



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- *Save fertilizer by using special sensors for monitoring and analysis*



- 1. Place the funnel-shaped detector halfway into the active root zone.*
- 2. The funnel captures infiltrating water.*
- 3. Saturation at the funnel's base raises a float, held up by magnets indicating the depth of water penetration into the soil.*
- 4. Use nitrate test strips and a salt meter with the detector to monitor nutrients and salt levels..*

Industry & Water Operators



- Local SCADA – for monitoring and controlling your production unit in real-time
- Centralized SCADA – for integration and real-time monitoring of all production units
- Hosted SCADA for worldwide process control
- SCADA-based software for corrective and preventive maintenance – to monitor and control in real-time the status of breakdowns and repairs
- A technology used 24/7 for predictive maintenance of critical equipment, which helps you to identify potential issues before they occur, enabling timely and efficient repairs to prevent major breakdowns.
- IoT implementation using process instrumentation and communication sensors for flow, fluid level, positioners, temperature, pressure
- Cyber Security Services in accordance with European regulation 2023the
- Energy management software** – to keep an eye on company-wide energy consumption **to identify and optimize to lower energy costs**
- CO2 footprint of your products** – for the identification, optimization and management of CO2 emissions KPIs
- Process Control Software standardized across complete plant life cycle
- Process Operation Simulator – process optimization and operator training
- Life Cycle Data Management of the production unit (cost optimization and risk reduction in the engineering process, reduced data complexity, shorter process cycles, close interaction between planning, operation, and maintenance)

Digitalization of the production process

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Thank you!

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