

One view on every drop

How Integrated Water Management supports a more
resilient, efficient & sustainable water future

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With electrification, automation and software Siemens has been driving the Digital Transformation in Water Industry for more than 173 years globally and for xxx years in India

Passion & History in Water

In 1852 **William Siemens** designed an effective, reliable water meter (one of his 133 patents), sold >200,000 times in the UK making an important contribution toward expanding the public's water supply. [Learn more here](#)

Market leader with unique portfolio and domain expertise



#1 in industrial software, factory automation and motion control



>10,000 PLCs shipped per day



1 bn Equity of Siemens Financial Services



>1500 projects in W&W delivered

Innovation and technology leader in water and beyond



>1,400 AI experts



>€11 bn M&A executed



5.6 bn R&D investment

Global player close to our partners and customers



180,000+ customers



>500 consultants worldwide



>32,000 Industrial software/automation engineers



>500 partners active in water industry

India CHALLENGE AND OPPORTUNITY current situation

Shefali

Transparency to intelligent operations and data-driven decision making

SITUATION NOW



Widely distributed existing plants and stations



Plants built by different vendors across various levels of automation systems in different product generations



Control centers exposed to cyber attacks, with legacy OT still deployed network-wide



Water access and quality management requires operational monitoring

SOLUTION

Outcome oriented initiatives as a long term journey considering the baseline conditions and context



Over-arching platform with the highest levels of customization, flexibility and cross-platform technology



Cybersecurity integrated for the entire control system infrastructure



Distributed servers, scalable for big and complex projects

Modernised integrated system is when existing and new systems can operate together seamlessly across the water cycle and operational organisations, breaking down data silos to provide insights, value and outcomes

Let's make waves

Integrated Utility Control System HERA Group, Italy

Customer Challenge

- The project faced several challenges, including integrating different geographic regions into a single control center, maintaining the existing 15+ legacy systems and hardware, and managing a vast amount of historical data swiftly without compromising system performance. Additionally, due to the nature of the structure, it was crucial to ensure high system availability and comply to security regulations.

Solution

- WinCC OA with its openness, high performance, and scalability, was the ideal solution for handling large amounts of data. Additionally, its versatile architecture enabled our customer to easily monitor and manage various systems, both locally and remotely, from the main control room. The versatility of WinCC OA was crucial to the success of the project.

Benefit

- The Siemens solution and Hera's customization enabled the integration of existing hardware from various manufacturers without replacing functioning equipment. The system is powerful, flexible, and virtually unlimited. Today, Hera manages a large infrastructure: 11,000 remotely controlled systems, 54,800 km of water networks, 20,000 km of gas networks, and 40,000 waste containers.



Managing 11,000 km gas,
54,800 km water, 20,000 km electricity
& 40,000 waste containers

Seamless access to over 3 million tags
for visualization/analysis

More information: [Siemens References](#) | [Siemens Global Website](#)

Modular and Standardized portfolio to support Operations

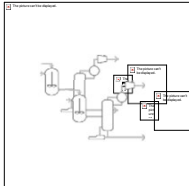
Integrating control, maintenance, and multiple Digital Twin technologies



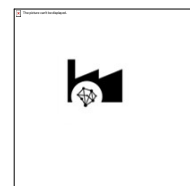
Technology Stack
Open and flexible



AI Agents with Eigen Engineering and Operator Co-pilot



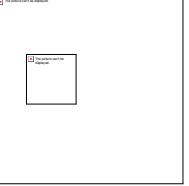
AI driven Optimized Operations with SIWA Suite for smart network operations and SIWA Wastewater Treatment and Desalination Optimizer



Predictive Maintenance with Senseye and COMOS Mobile Worker

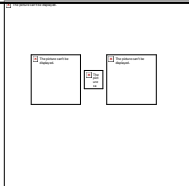
- Real-time production optimization
- AI predictive maintenance
- Link to PI&D and product sheets and use augmented reality

Technology Modules



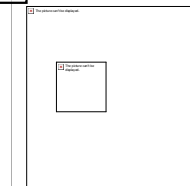
Plant simulation with SIMIT

- Virtual commissioning
- Operator training
- Library (control module types)
- Process simulation templates



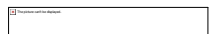
Plant engineering with COMOS

- PFD, P&IDs and EI&C
- Process & automation engineering
- Hardware configuration
- Signal engineering



Process automation with Siemens DCS and SCADA

- Library (control module types)
- Process display templates
- Sequence control examples
- Safety instrumented function



Siemens Xcelerator is a portfolio of interoperable hardware and software

Seamless integration from OT to IT to Impact across the water cycle

Reduce **leakage**
in transmission
lines



SIWA Leak Finder
Transmission

Save **energy** by
optimizing pump
schedules



SIWA Network
Optimizer

Using AI
to reduce
non-revenue water &
Monitor water quality



SIWA Leak Finder
SIWA Water Quality Inspector

Manage
& **Analyze**
Meter Data



SIWA MDM

Water transpor-
tation pipelines

Drinking water
strategic
networks

Drinking water
pump station

Drinking water
distribution
network

SIWA applications have proven global implementation



Leak Finder References

References integrated Siemens and non-Siemens OT and IT systems

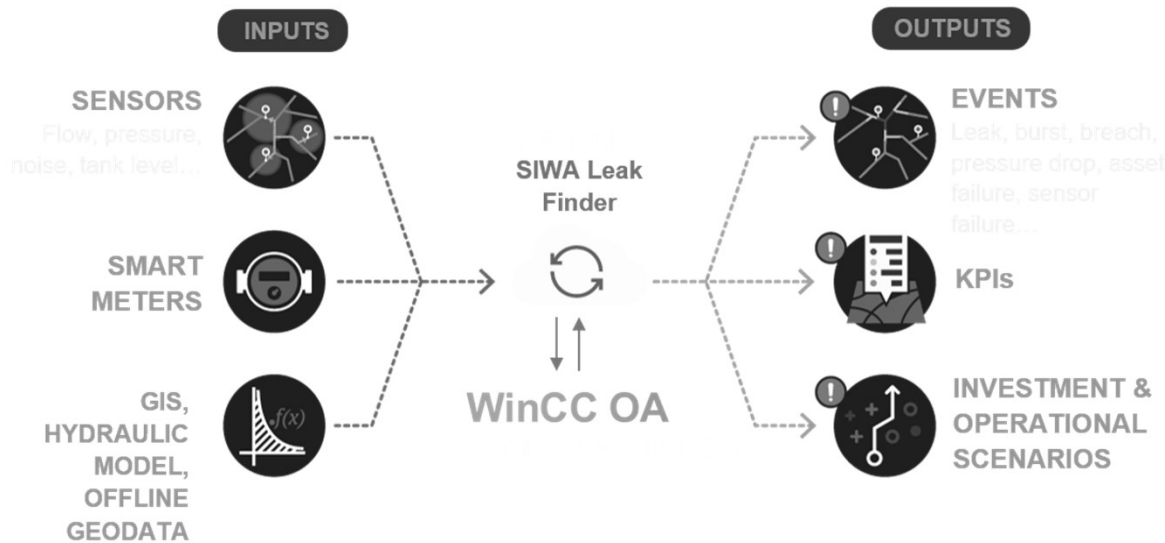
 Netze Duisburg	 SWF STADTWERKE FELLBACH
 TXINGUDIO ZERBITZUAK SERVICIOS DE TXINGUDI	 esVAL agua sana  AGUASDELVALLE agua sana
 Essbio	 NSVA
 EMAYA	 VASYD



Leakage detection and localization

15-50% of water is lost whilst water utilities face increasing regulatory, financial and operational challenges

SIWA applying AI to detect and reduce leaks on water pipes more efficiently, making **optimum use of the available flowmeters and smart meters or upgrade with self-deployment flowmeters** with integrated 4G module detect leaks as small as **0,25 l/s and within 200 m**



#1 in the market **battery powered flow meter** for water networks
Automate steps for **integrating data to** the SIWA Leak Finder Application. Data in 2hrs, AI in 1month.

Automated process for upload of **calibrated hydraulic model**

Thank you.

Let's make water work. Together.

Published by Siemens AG

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