

Xylem: From Source-to-Tap-to-Souce

SUSTAINABILITY. RESILIENCE. AFFORDABILITY

Water Essential to Life



2021 Revenue \$5.2B

Employees ~17,000

Countries ~150

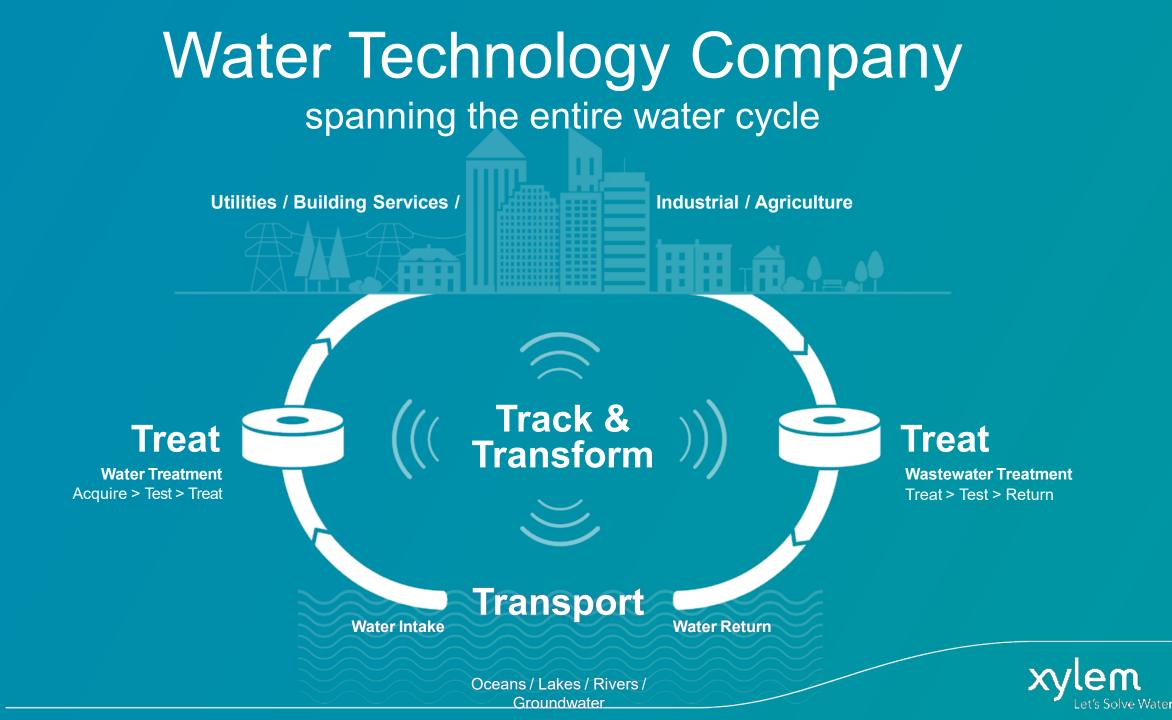
Continents 7

(\$)

xylem

As the world's leading global water technology company, Xylem has a unique opportunity and responsibility to solve water and smart infrastructure challenges.





From intake to effluent, we can help

Xylem delivers holistic impact to the entire water cycle.

WATER TREATMENT PLANTS

Make better decisions in realtime and reduce risks of unplanned incidents

WATER DISTRIBUTION SYSTEMS

Manage real losses and gain realtime operational awareness

METERING AND REVENUE Ensure financial resiliency to keep revenue flowing

COLLECTION SYSTEMS

Detect blocks and forecast flows, prioritize capital improvement plan to ensure reliability and best value for investments

WASTEWATER TREATMENT PLANTS

Reduce costs by maximizing energy and chemical consumption while increasing margins of compliance

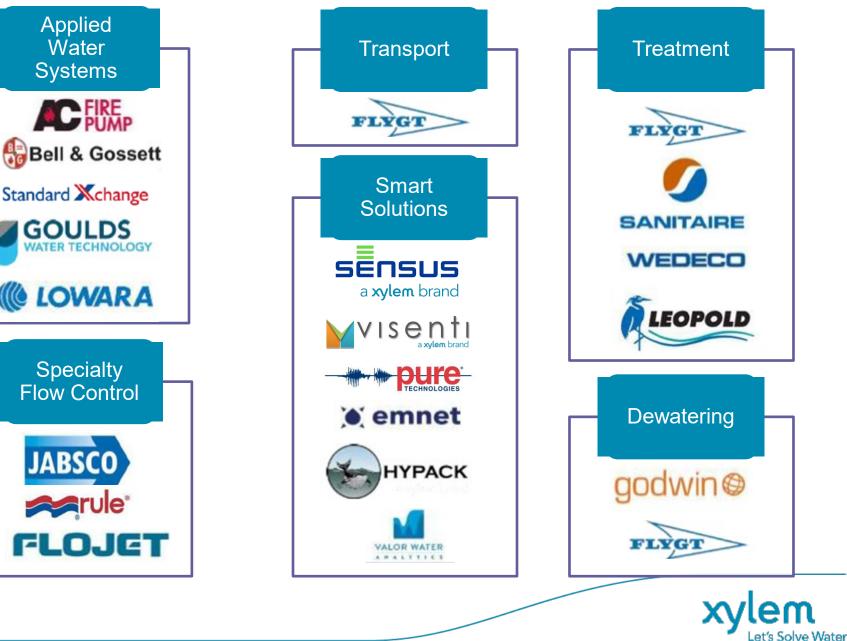
WASTEWATER ASSETS

Coordinated control of pump stations, lift stations, tanks, tunnels, high-rate treatment; manage water capacity in real-time leading to optimized capex spend



Xylem Brands





Xylem Turkey

Xylem is expanding its organization in Turkey

At the en of the 2021, Xylem acquired Anadolu Flygt. The company has been operating since 1991.



Local facilities to serve you better and faster



Head Office, Istanbul Branch Office, Ankara Manufacturing Plant, Kocaeli

Many equipments, blowers and pumping stations used for various purposes in treatment plants are produced



TOGETHER WE CAN SOLVE THE WORLD'S WATER

CHALLENGES

Public Utility Transport: PPS Prefabricated Pumping Stations

- PPS registered trademark
- Range of 1m-4m diameter and up to 13m depth
- Chamber is made of GRP (and optionally from PE) material
- Inner piping is made of 304 (and optionally from 316) SS
- Optional components;
 - ✓ basket screen,
 - ✓ penstock,
 - ✓ maintenance platform,
 - ✓ ladder,
 - ✓ external valve chamber,
 - \checkmark forced ventilation with an activated carbon filter, etc.
- PPS stations can be sold with pumps, panels, shipping, installation and commissioning services.







Public Utility Treatment: Wastewater Plants

- Municipal Wastewater Treatment Plants
- Industrial Wastewater Treatment Plants
- Packaged Wastewater Treatment Plants
- Drinking Water Treatment Plants
- Reuse Treatment Plants
- Biogas Power Plants



- Submersible Pumps
- Centrifugal Water Pumps
- Submersible Mixers
- UV Disinfection Systems
- Ozone Disinfection Systems
- Aeration Systems
- Roots Blowers
- Turbo Blowers
- Progressive cavity pumps & Munchers











The Needs & The Answers

Global Non-Revenue-Water Estimates

Current Estimated Figures*:

- 126 Billion m³/year;
- On average 70% of NRW are Real Losses;
- 77 Litres per Capita per Day;
- \$39 Billion per Year.

Carbon Dioxide (CO_2) :

- 187.2 million metric tons CO₂ / year;
- 0.6% of global CO₂ emissions;
- Comparison:
 - Aviation: 1.9% & Shipping 1.7%.
- To offset current carbon emissions due to real losses, 218.4Ha of trees need to be planted = ¼ size of Brazil....

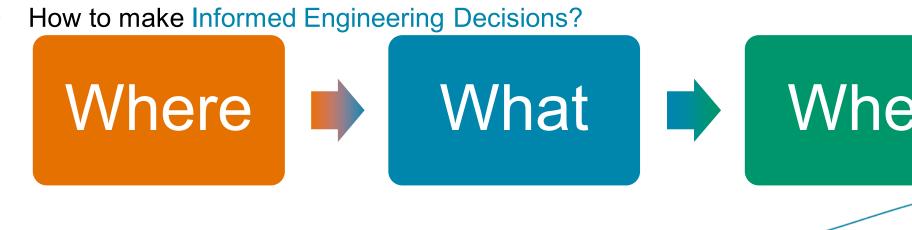
*Source R. Liemberger & A. Wyatt





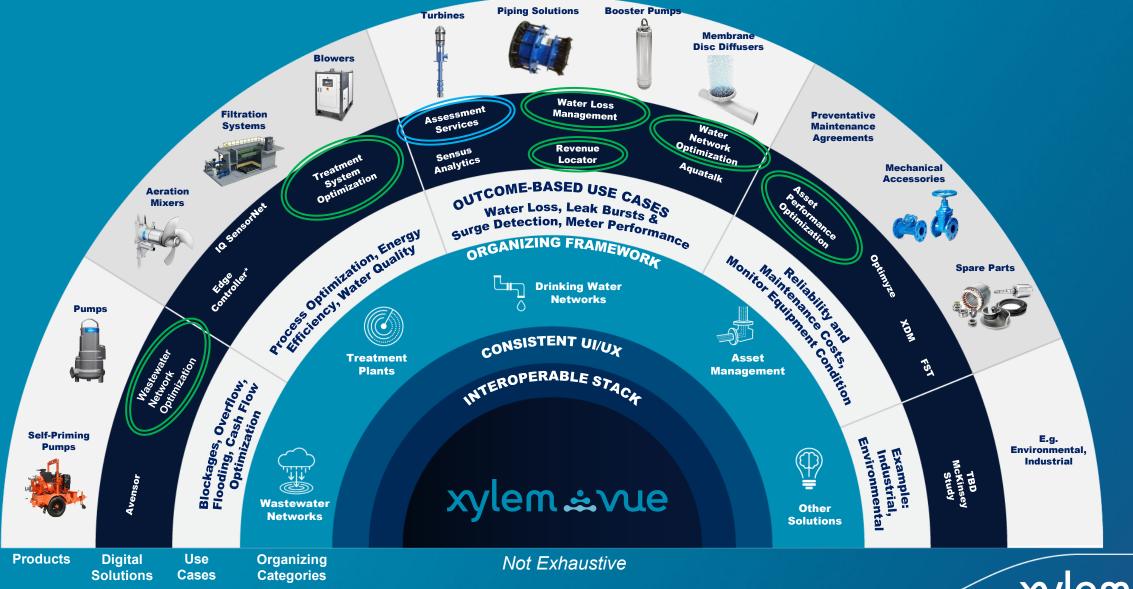
Utility Operation & Maintenance Challenges

- Transmission or Distribution mains?
- Leave alone, Repair or Replace?
- Real or Apparent Losses as main issue?
- Replace customer meters, but which ones?
- Any harmful transients being generated?
- How can I reduce sewer overflows?
- How do I reduce treatment plant power consumption?
- CAPEX & OPEX planning.





An Enterprise-wide Solution Ecosystem



Let's Solve Water

Data: The Starting Point

Hydraulic Modelling Data Analytics Optimization Systems
Data Integrations Data Lake Visualizations
Cellular Networks Radio NB-loT Telemetry Units
Pressure Acoustic Flow Water QualityImage: Construction Leak Noise LoggersImage: Construction Sensus SmartImage: Construction YSI / WTW Water Quality SensorImage: Construction SmartBallImage: Construction SmartBallImage: Construction System Pressure Transient Sensor
Pumps Pipes Valves Reservoirs

6

Let's Solve Water

Assessment Services

Water and Wastewater Pipeline Leak Detection and Condition Assessment Services

SmartBall



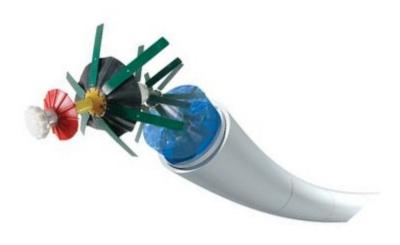
- Free-swimming tool;
- Ideal for long pipe sections up to 30km per day;
- Over 8,000km inspected.

Sahara



- Tethered tool;
- CCTV (Internal)/ leak survey and pipe alignment verification;
- Up to 1.9 km per run;
- Over 6,000km inspected.

PipeDiver^{*}

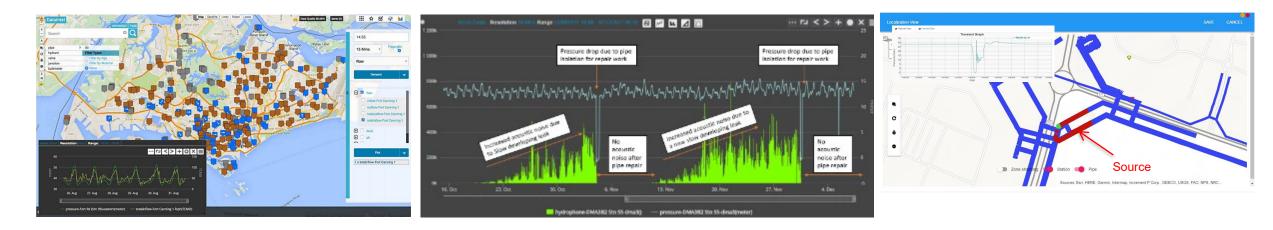


- Free-swimming tool;
- Corrosion detection on metallic mains;
- Broken wires on prestressed pipes.
- Over 2,000km inspected.



Water Loss Management

Water Network Monitoring and Analytics



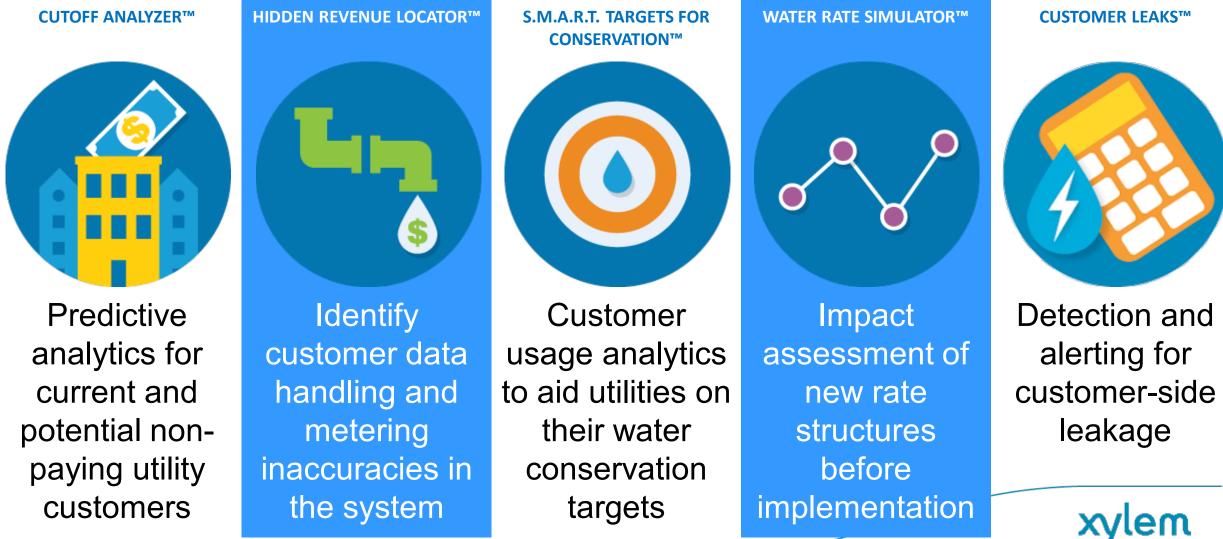
- Platform to integrate all of client's database and sensors;
- Network performance monitoring & analytics;
- Customizable
 dashboards and reports.
- Pipe burst/leak detection & localization via pressure transient sensors & acoustic hydrophone units.
- Pressure transient source location;
- Identification of network points under stress due to transients.



Revenue Locator

Water Loss and Billing Analytics and Optimization

Boost Utility revenues through the following Analytics Software:



17

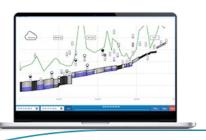
WasteWater Network Optimisation

Storm and Wastewater Network Monitoring and Analytics

- BLU-•
- Custom Real-time Monitoring System with the latest sensor and communication technologies
 - Analytics derived from realtime hydraulic and hydrologic models to help utilities in decision making
 - Real-time Control
 Optimization of the
 collection system
 - Leads to significant deferment / cancellation of capital expenditure







Treatment System Optimisation (TSO) Wastewater Treatment Plant Optimisation

Act: Optimize

Run 1000s of scenarios Reduce energy/chemicals Automatic/guidance mode Increase compliance margin

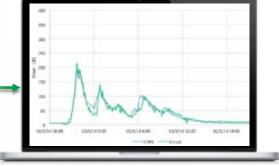
Predict: Create Digital Copy

Assimilate last 12-36 months of history Run real time models Recalibrate model on demand

Sense: Turn On the Lights ™

Data Collection Real Time Alerts Full SCADA Integration















Turkiye Case Study

Turkiye SmartBall Case Study

Ankara Municipality in 2011:

- Ividik-T17 Güzergahı:
- Uzunluğu:14.5 km;
- Çapı: 2200 mm;
- Malzeme:Beton;
- Tip: ÖGBB;
- Kapasitesi: 360000 m3/gün.



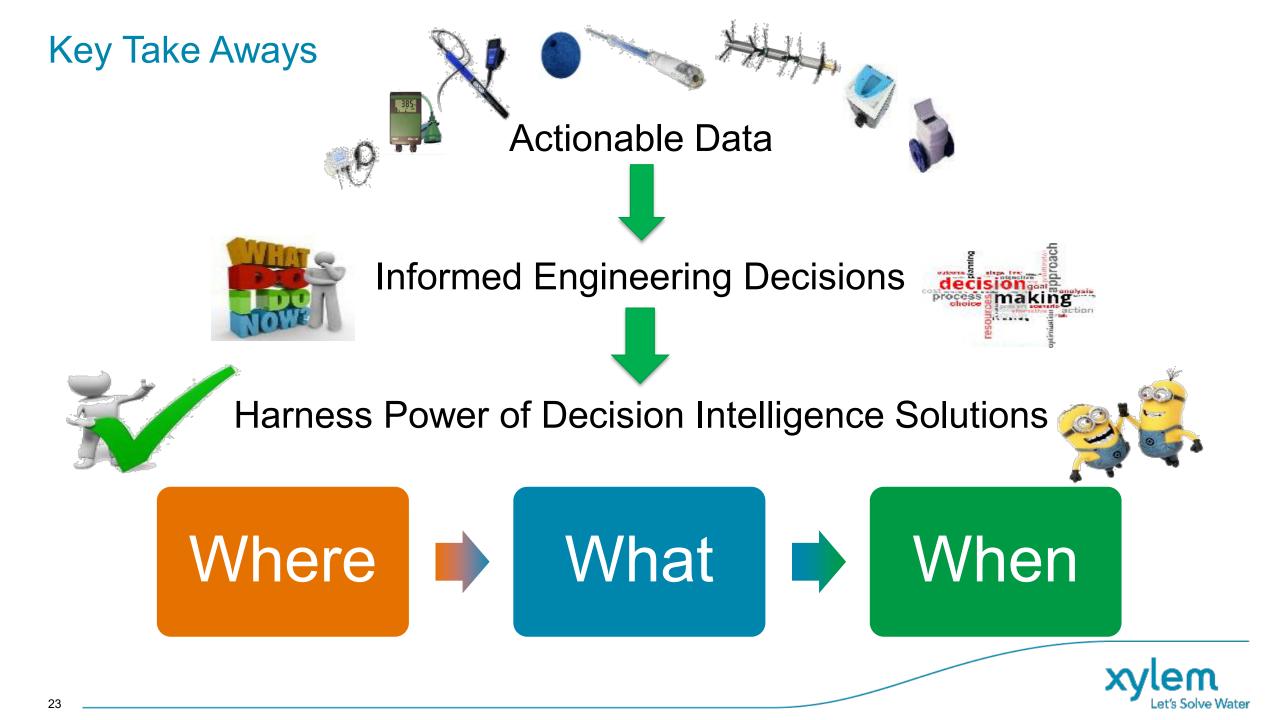
Survey Results:

Leak Positions From Insertion					
1: 2,688m	2: 4,101m	3: 4,721m	4: 6,577m	5: 6,607m	
6: 7,057m	7: 8,651m	8: 9,102m	9: 9,416m	10: 11,423m	





Conclusion



OPPORTUNITY OF ALIFETIME

