March 19, 2020

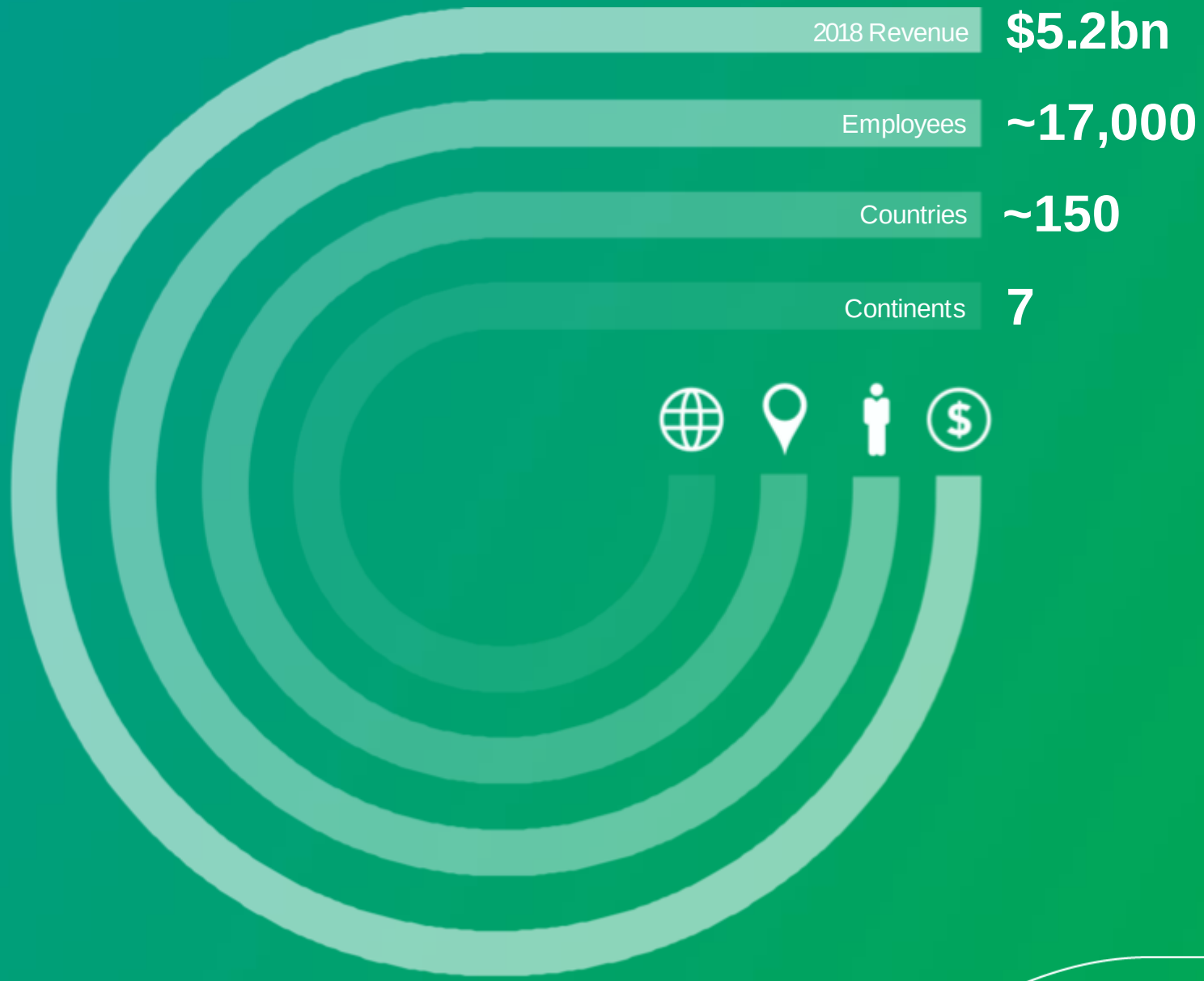
Harnessing the Power of Decision Intelligence



REDUCING SEWER OVERFLOW AND INTERNAL SEWER FLOODING BY ACTIVELY CONTROLLING NETWORK AND SEWER ASSETS

JOOST ALOSERIJ - CLIENT SOLUTIONS ARCHITECT XYLEM DIGITAL SOLUTIONS
CHRIS HARVEY - MARKET DEVELOPMENT MANAGER WASTEWATER

We are one of the world's leading water technology companies



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Residential / Industrial / Building Services / Irrigation



Treat

Water Treatment
Acquire > Test > Treat

Track & Transform

Treat

Wastewater Treatment
Treat > Test > Return

Transport

Water Intake

Water Return

Oceans / Lakes / Rivers / Groundwater

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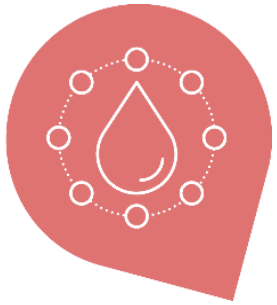
6 Connected Strategies for Affordable and Resilient Systems

Gain Control of Your Data

Empower your teams to extract real value from smarter water systems.





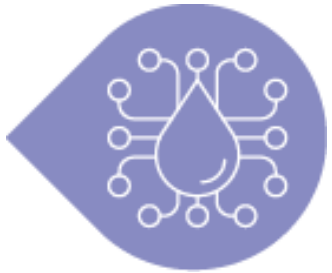
Reduce System Losses

Create comprehensive, lasting improvements in non-revenue water.

Advance Water Equity

Sustainably align system operation with stakeholder policy objectives.





Proactively Manage Your Assets

Multiply the impact of your capital investments and lower the risks of system failure.

Manage The Urban Watershed

Reduce the cost of safely reclaiming wastewater.





Ensure Quality From Source to Tap

Improve drinking water quality while optimizing energy and operating cost.

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6 Connected Strategies for Affordable and Resilient Systems



Manage The Urban Watershed

Reducing Sewer overflow and internal sewer flooding by actively controlling network and sewer assets

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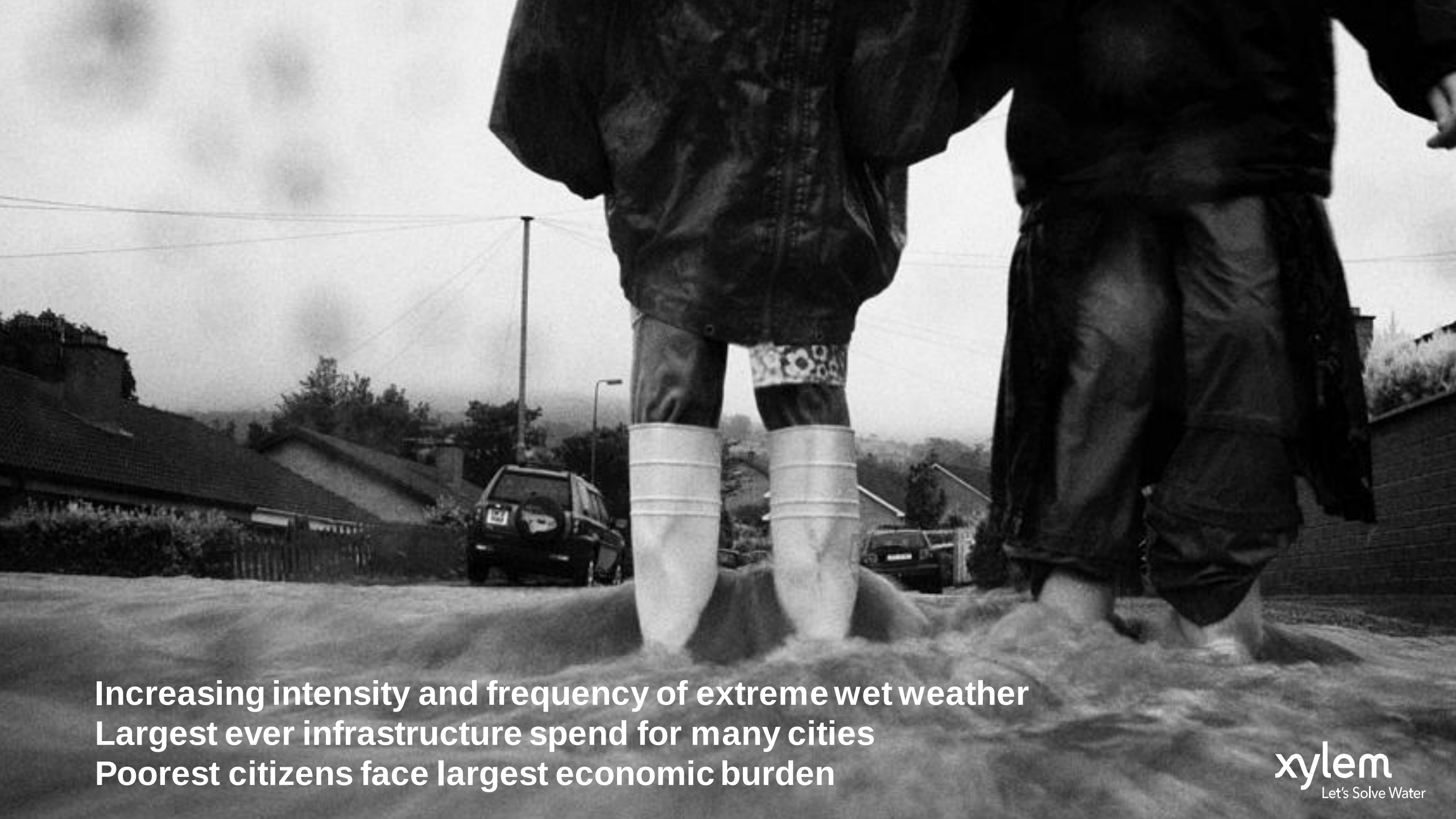
Framing the Problem



Increasing intensity and frequency of extreme wet weather
Largest ever infrastructure spend for many cities
Poorest citizens face largest economic burden

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Industry Status Quo

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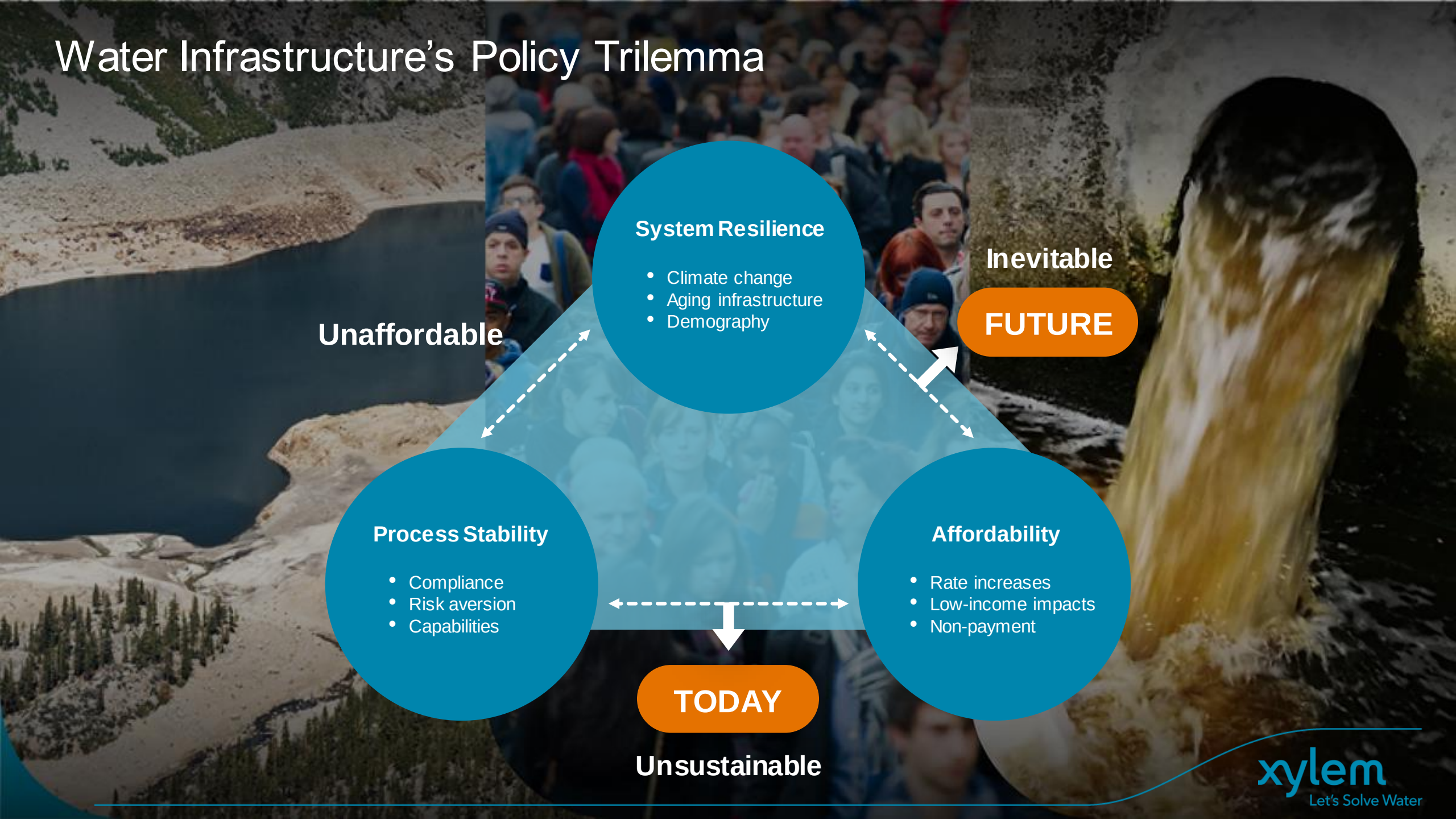
Water Infrastructure's Policy Trilemma



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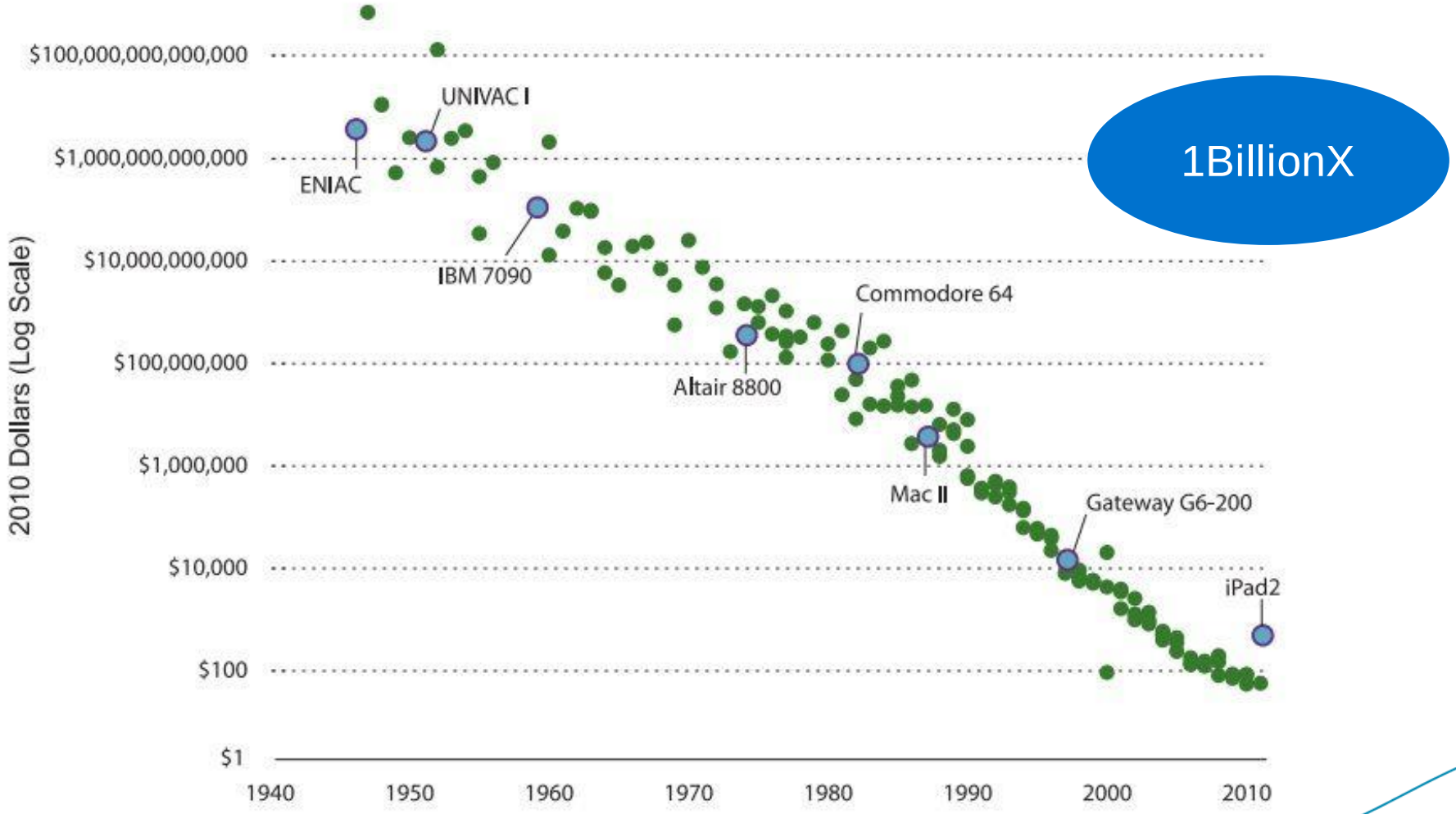
Computing Cost, Power and Accessibility

Cost of Computing Power Equal to an iPad 2



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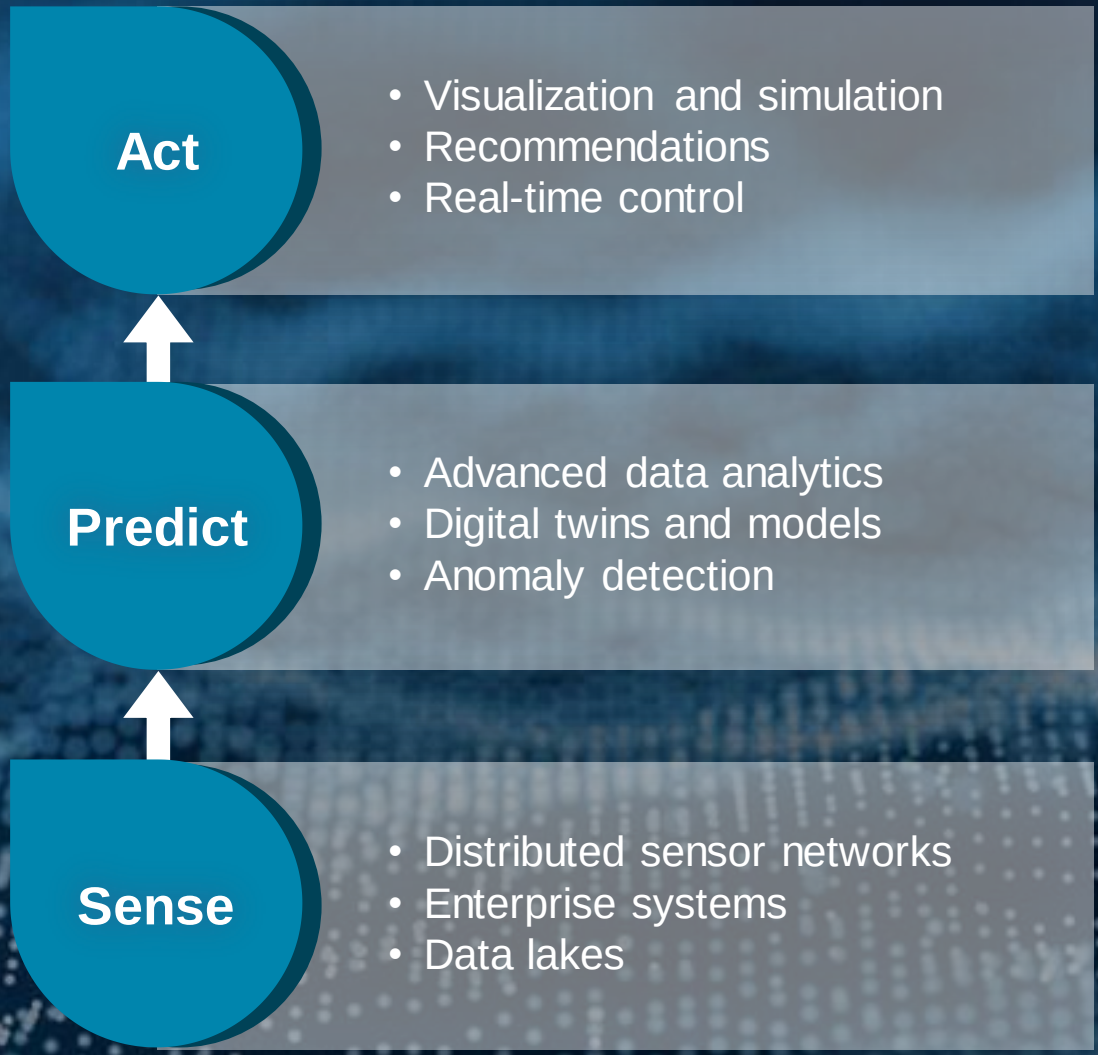
Our Solutions

BLU-X Collection Systems

The Decision Intelligence Approach



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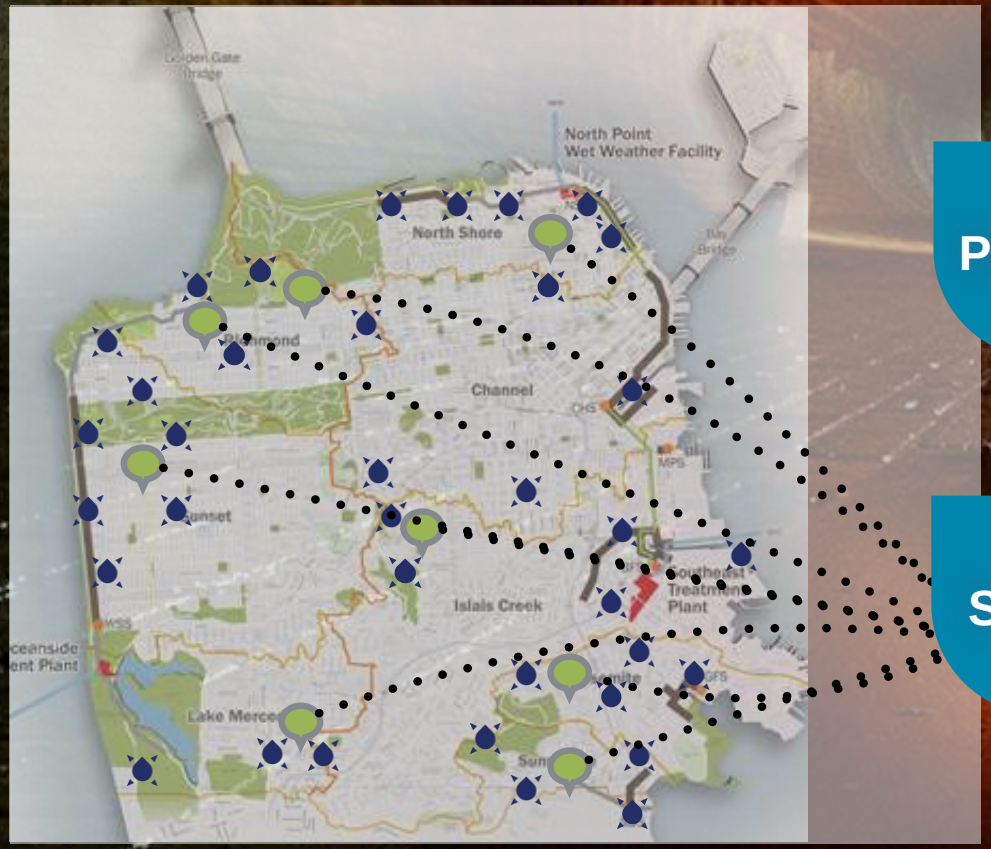
Optimizing the Urban Watershed: Digital Twins & Real-time Control



Act

- Dynamically adapts to changing conditions
- Decision Support and Real-Time Control



Predict

- Hydraulic models integrate with real-time data
- Data analysis engines deliver intuitive system insights



Sense

- Collect and acquire critical information
- Real-time monitoring
- **Turn on the lights!**



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South Bend, Indiana

- Population: 101,000
- Median Household Income: $34,000 USD
- Consent Decree: $860 million USD
- ~8 Billion Liters Annual CSO Volume



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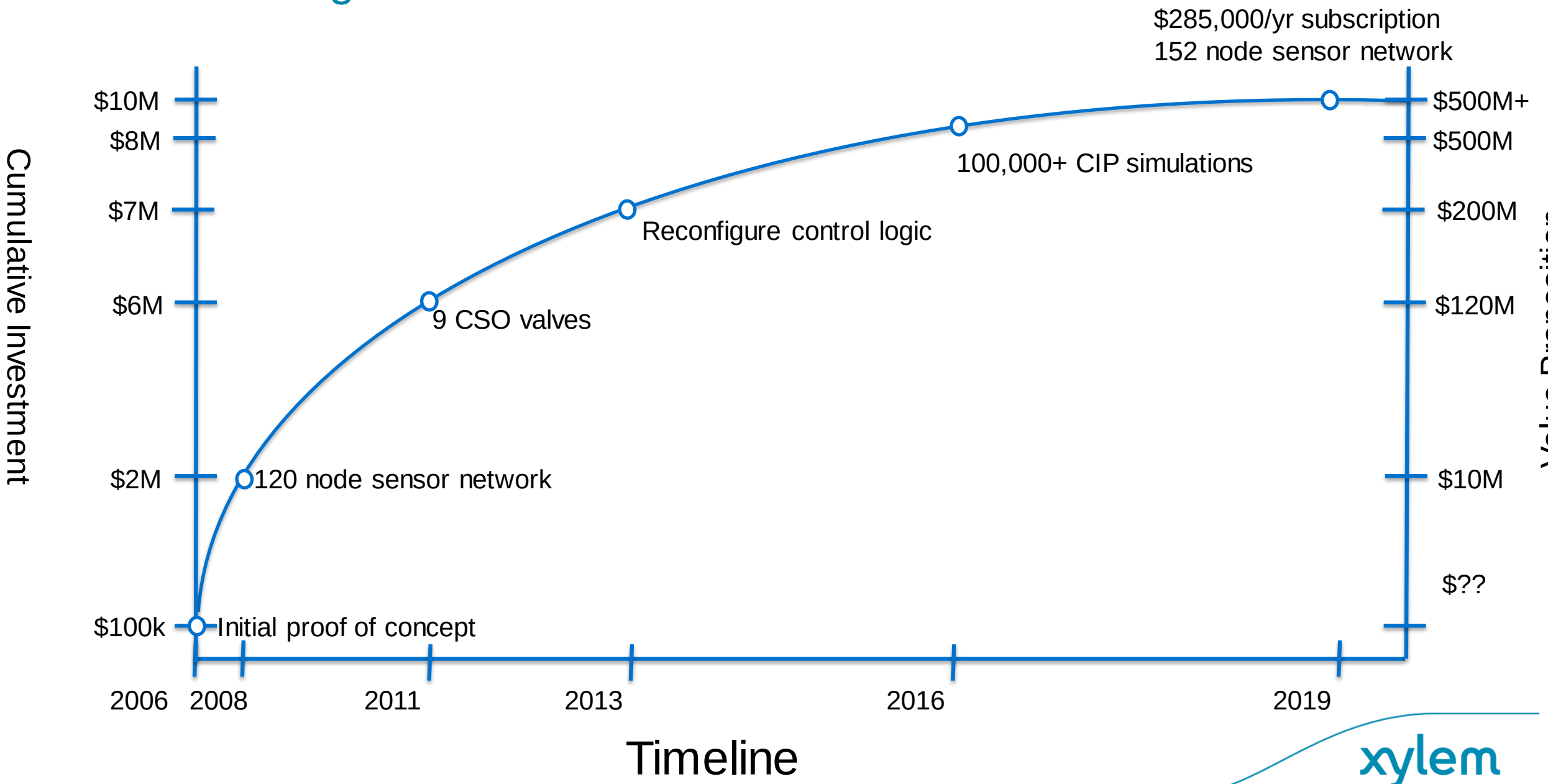
Turn on the Lights!



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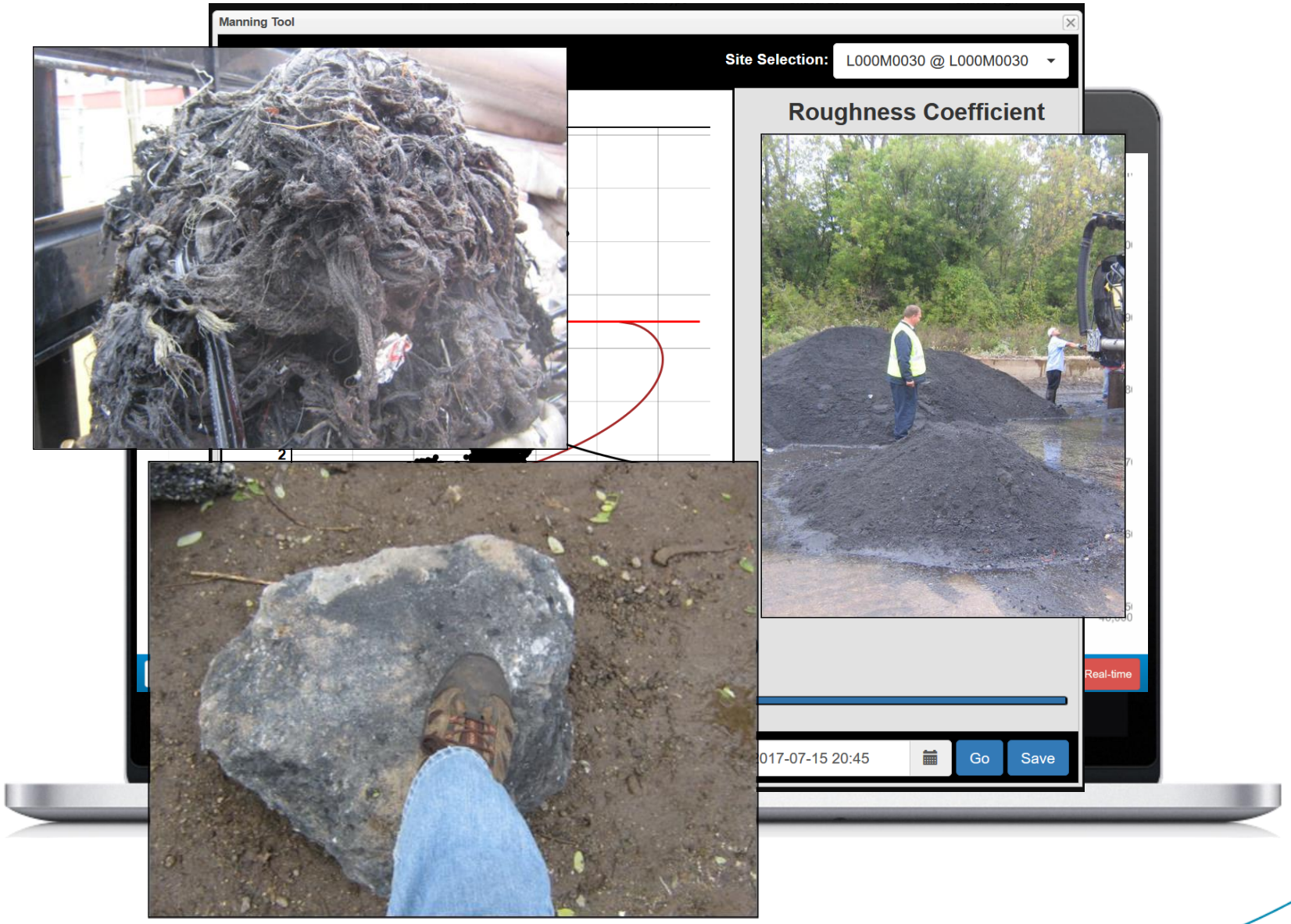
Turn on the Lights!



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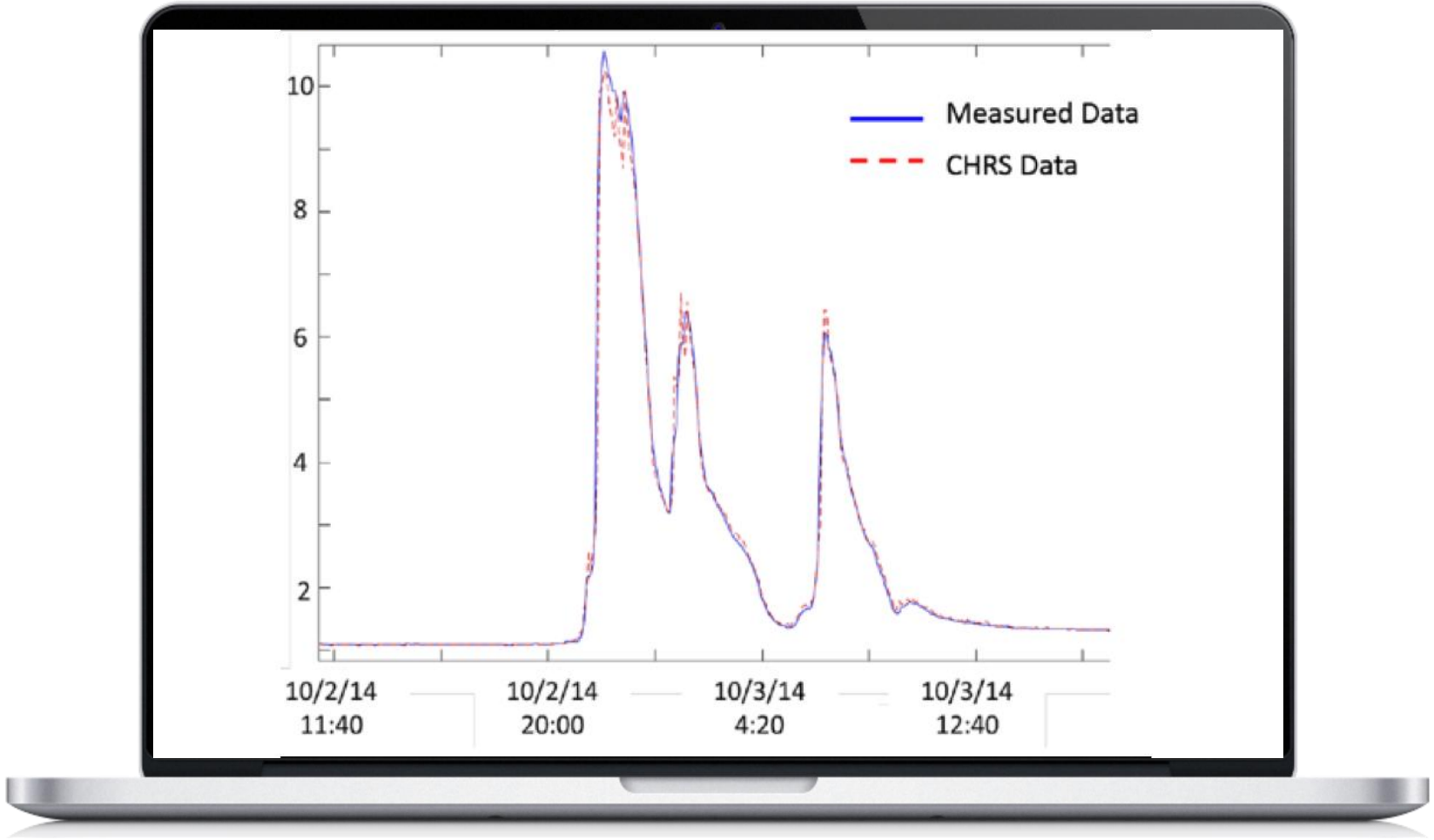
Live Digital Twin



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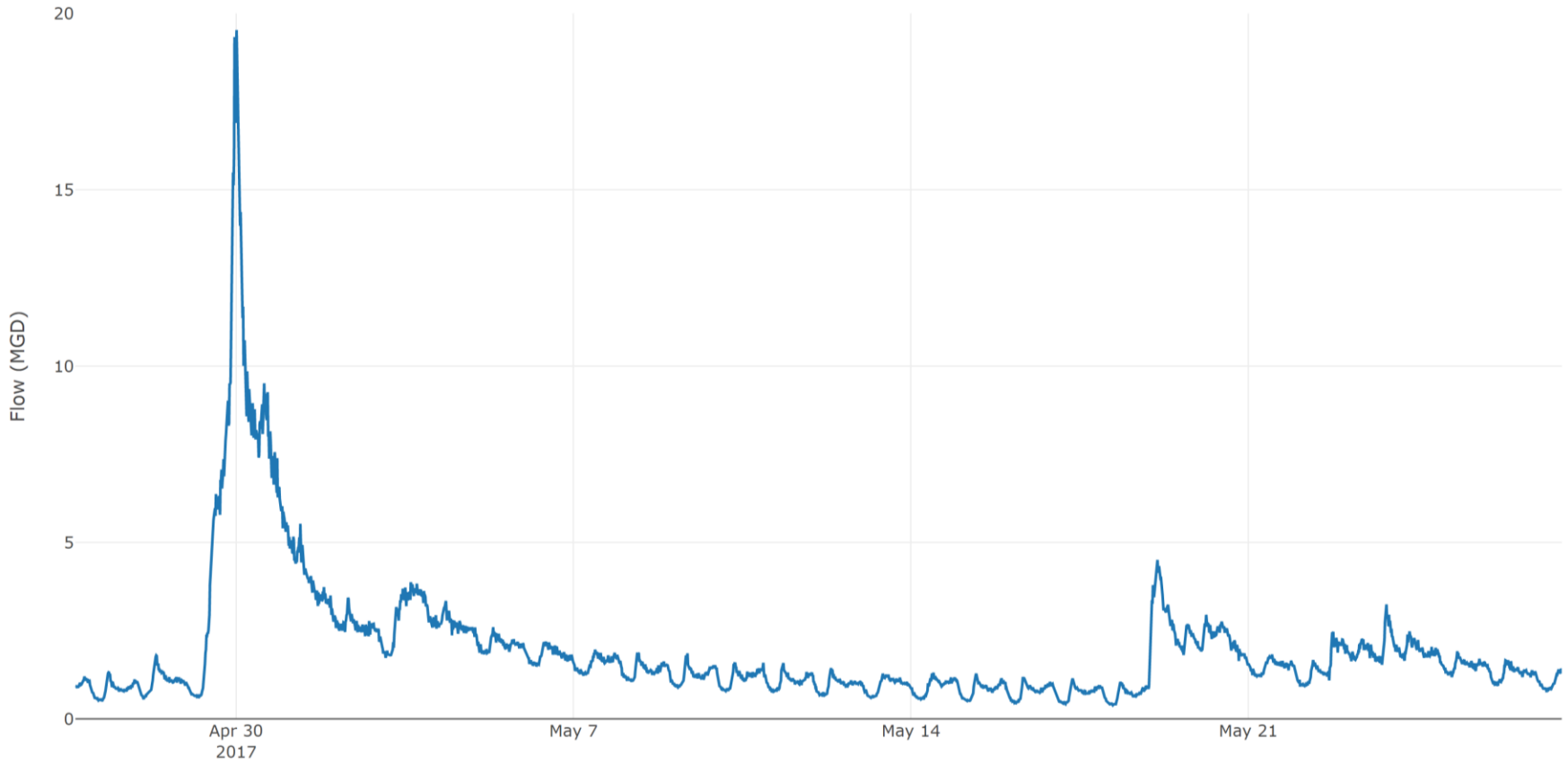
Kansas City, Missouri

Measured Flow



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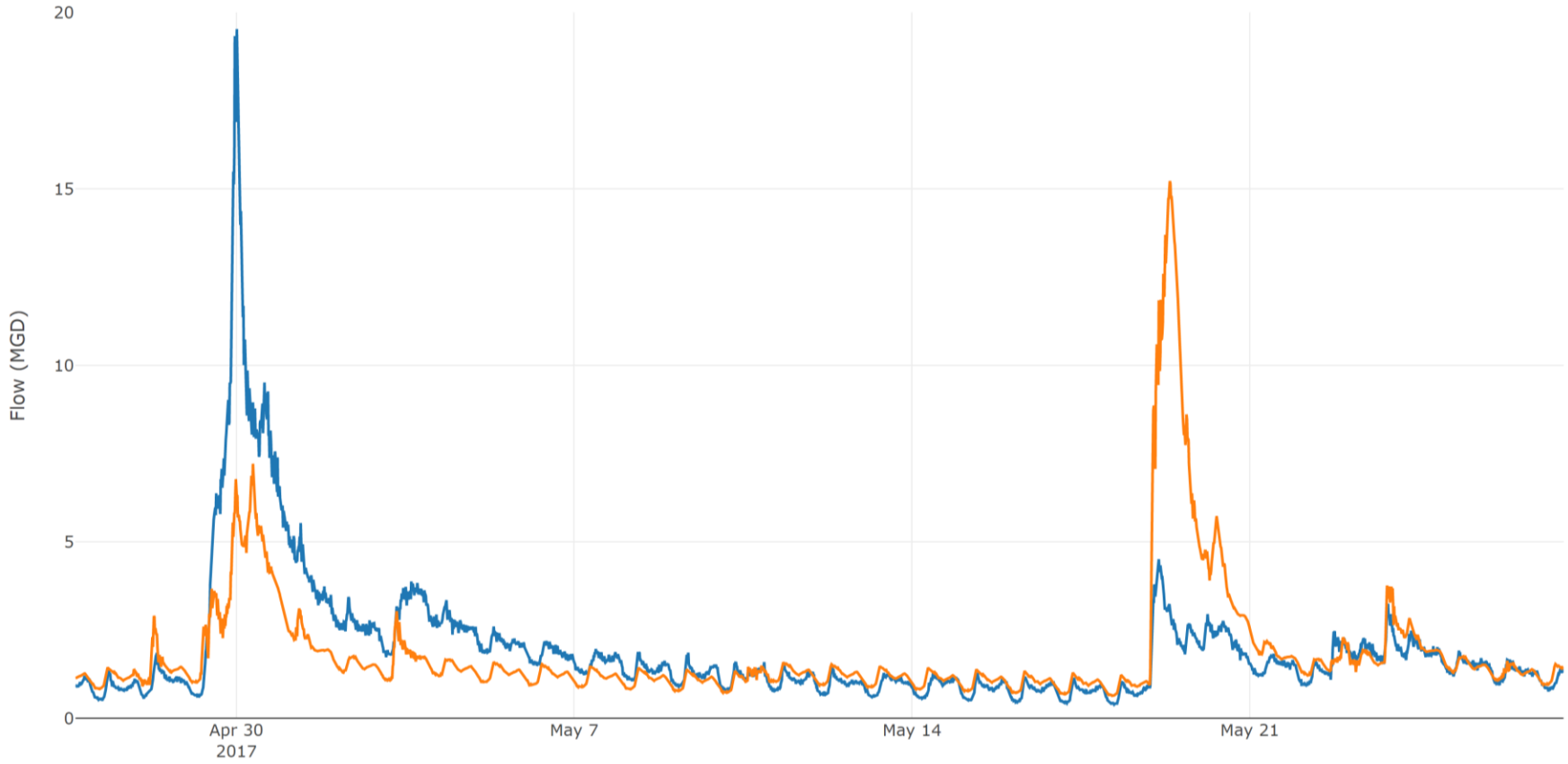
Kansas City, Missouri

CHRS: 5 weeks training (10 events)



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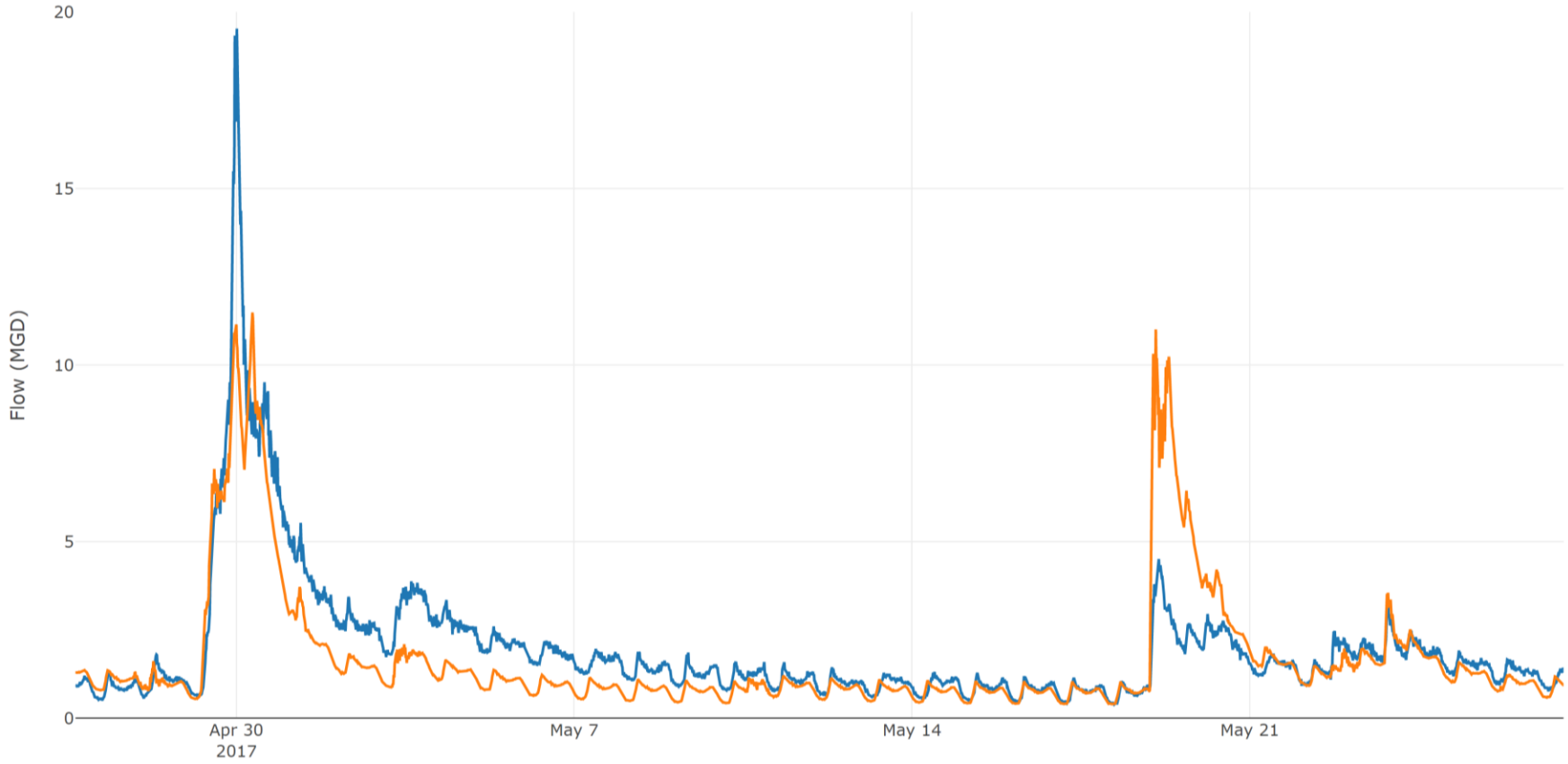
CHRS: 7 weeks training (12 events)



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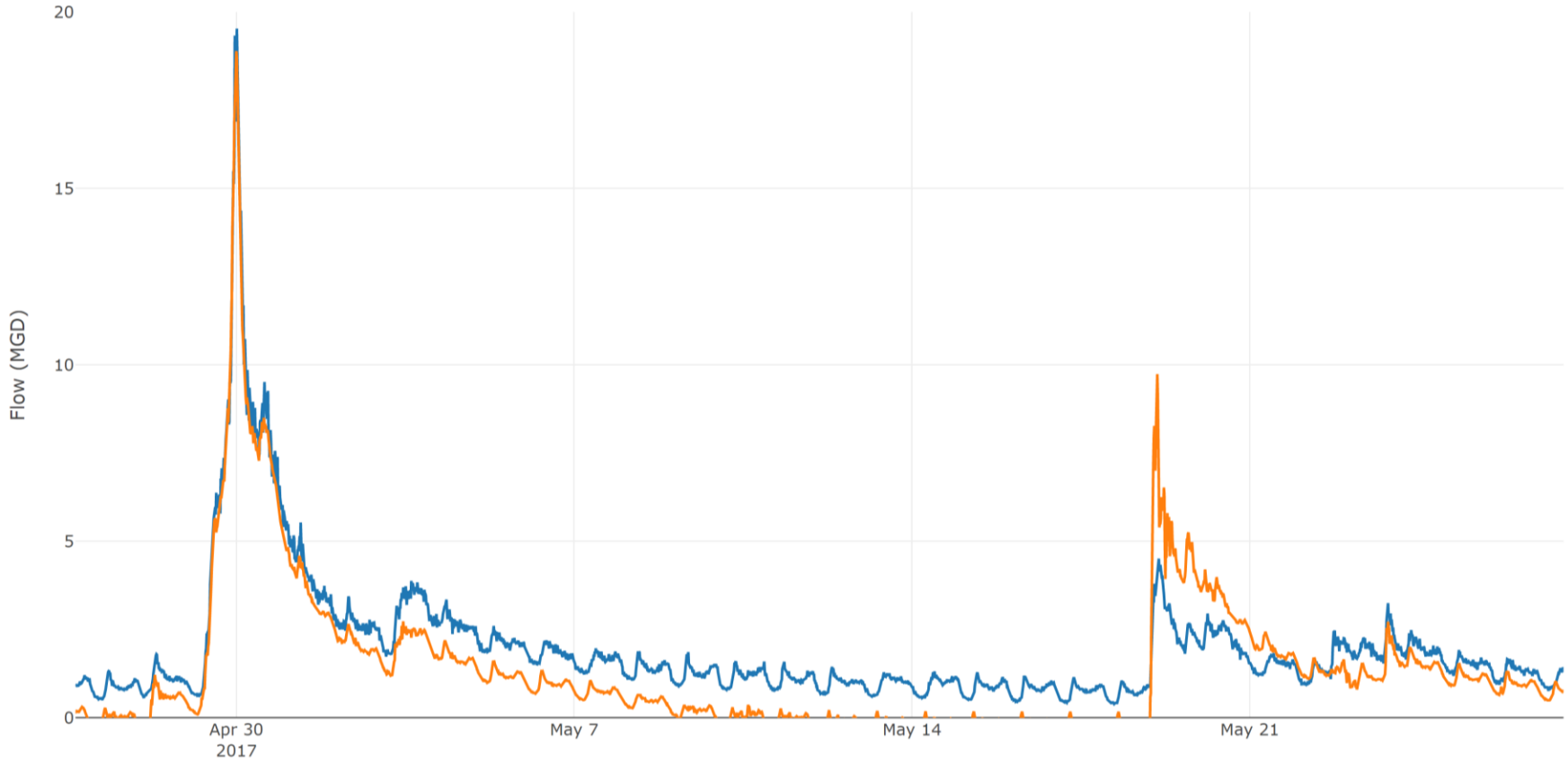
CHRS: 10 weeks training (19 events)



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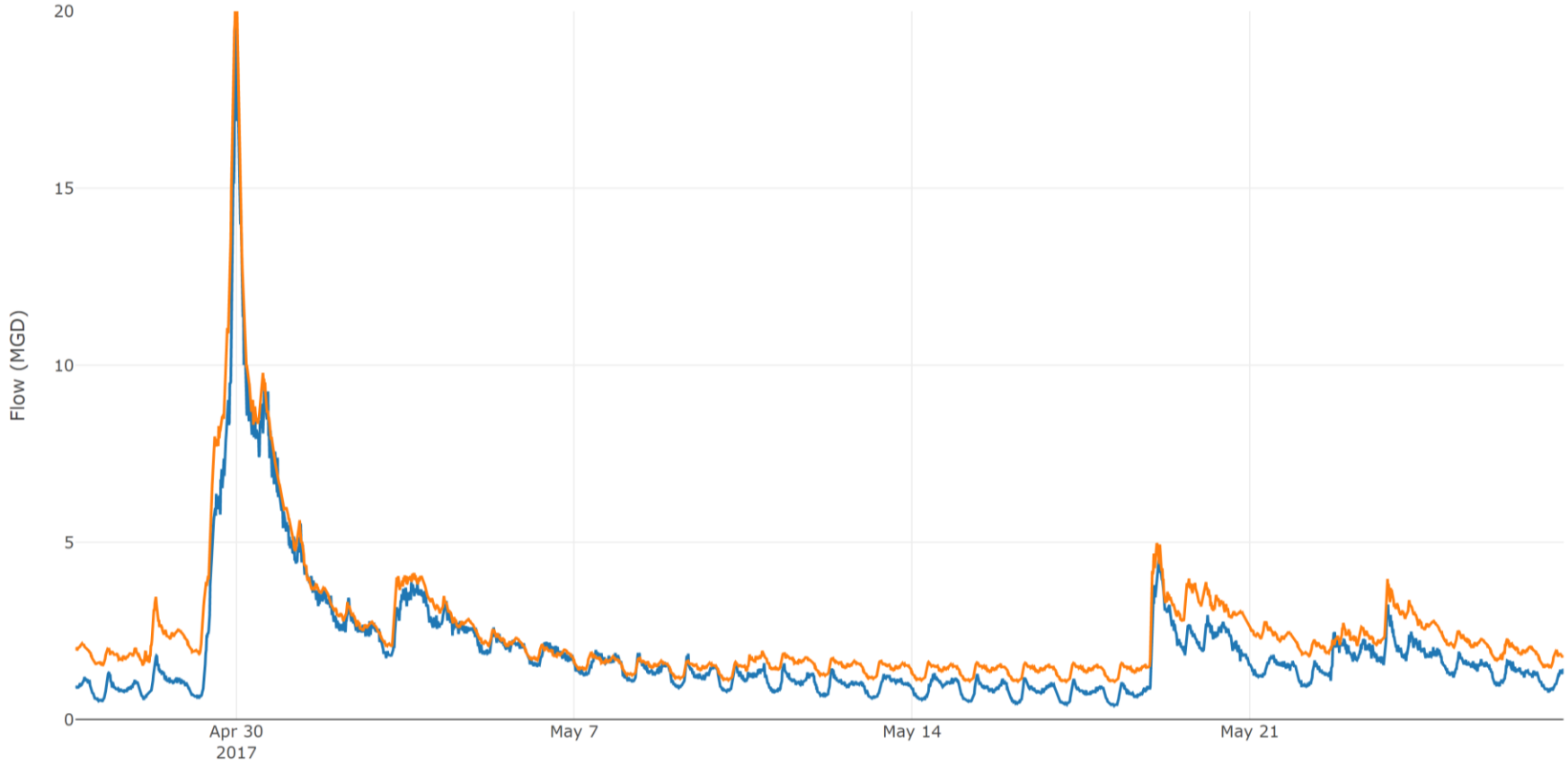
CHRS: 14 weeks training (28 events)



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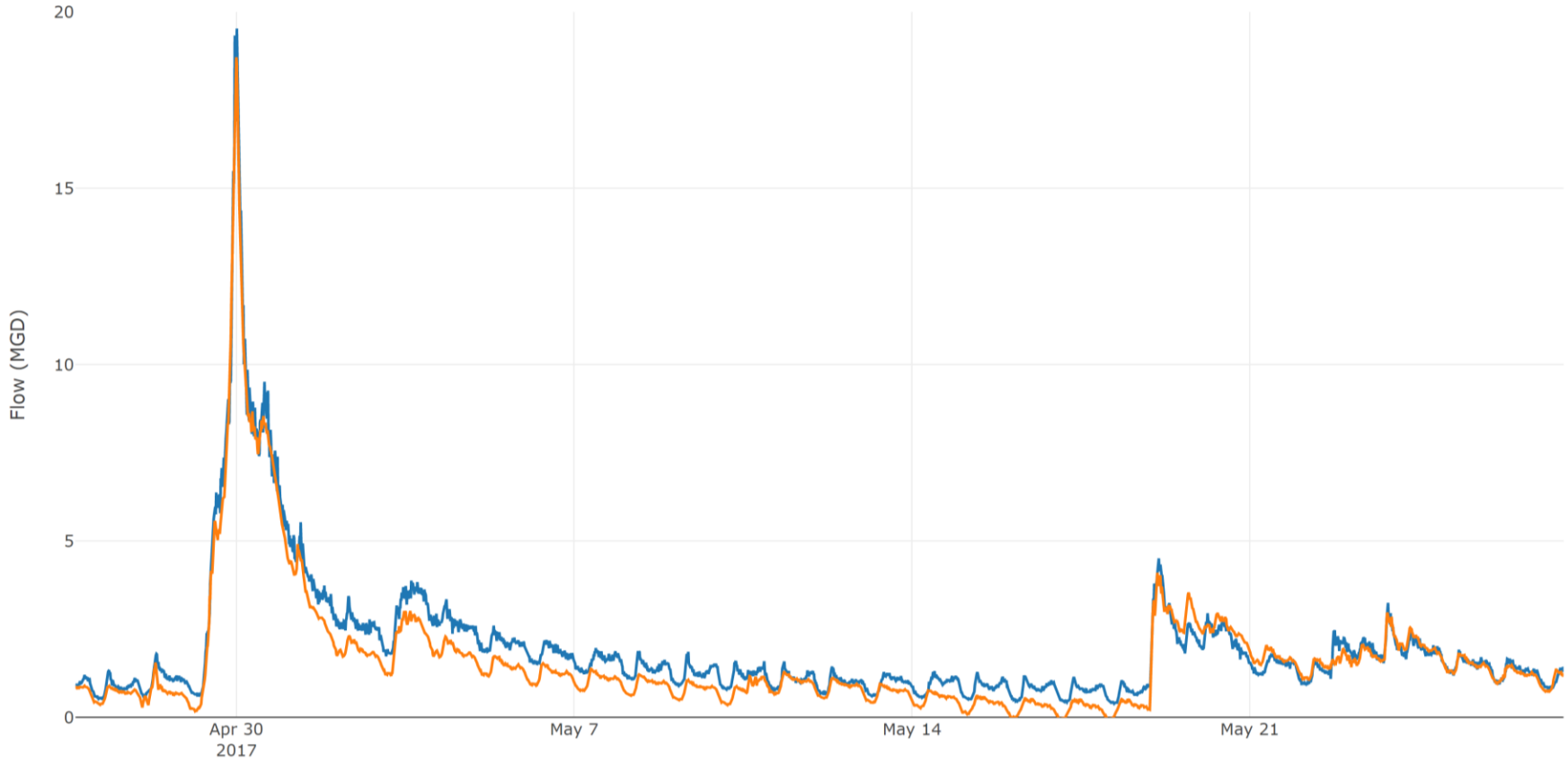
Kansas City, Missouri

CHRS: 15 weeks training (31 events)



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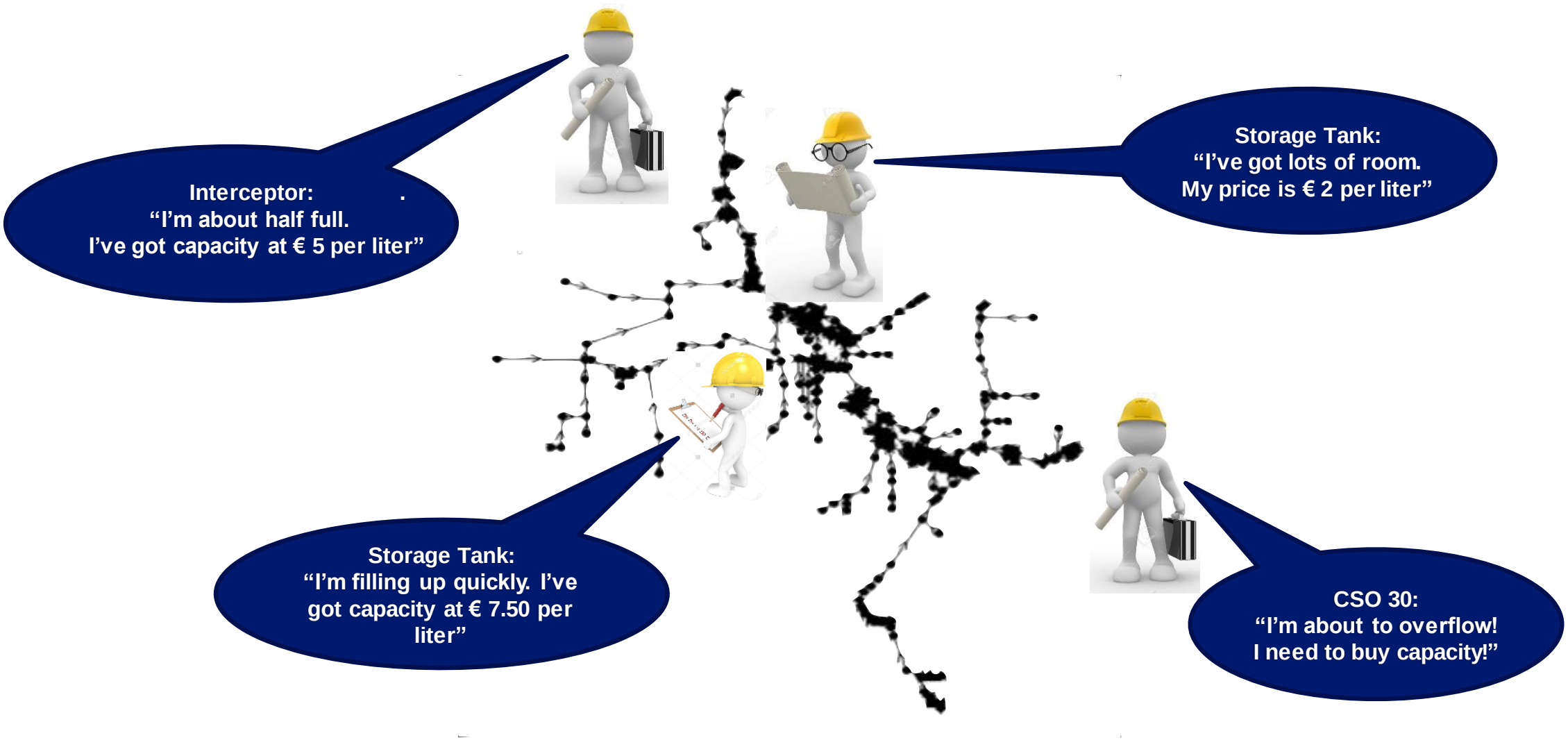
Operate the Urban Wastewater System



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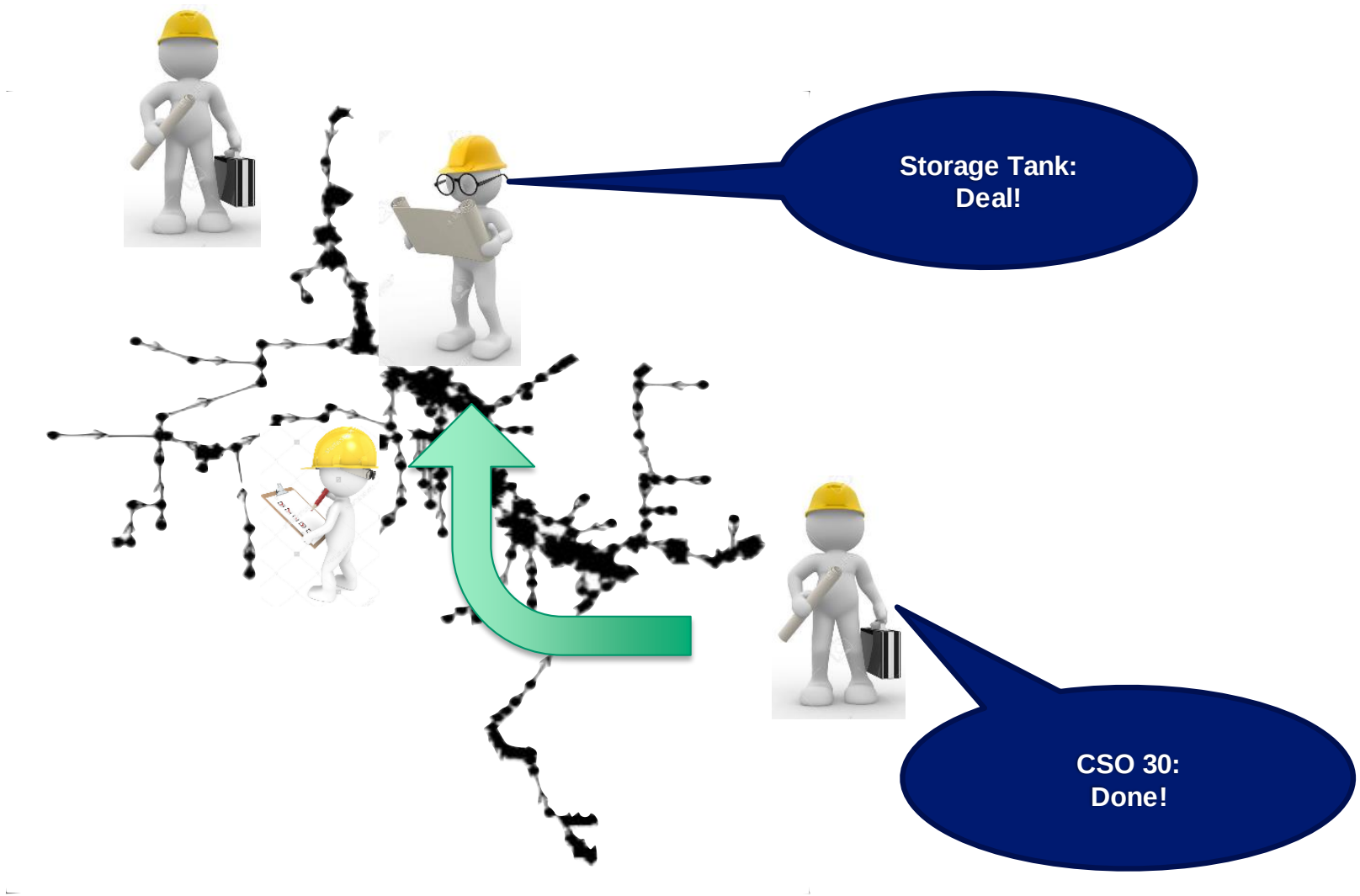
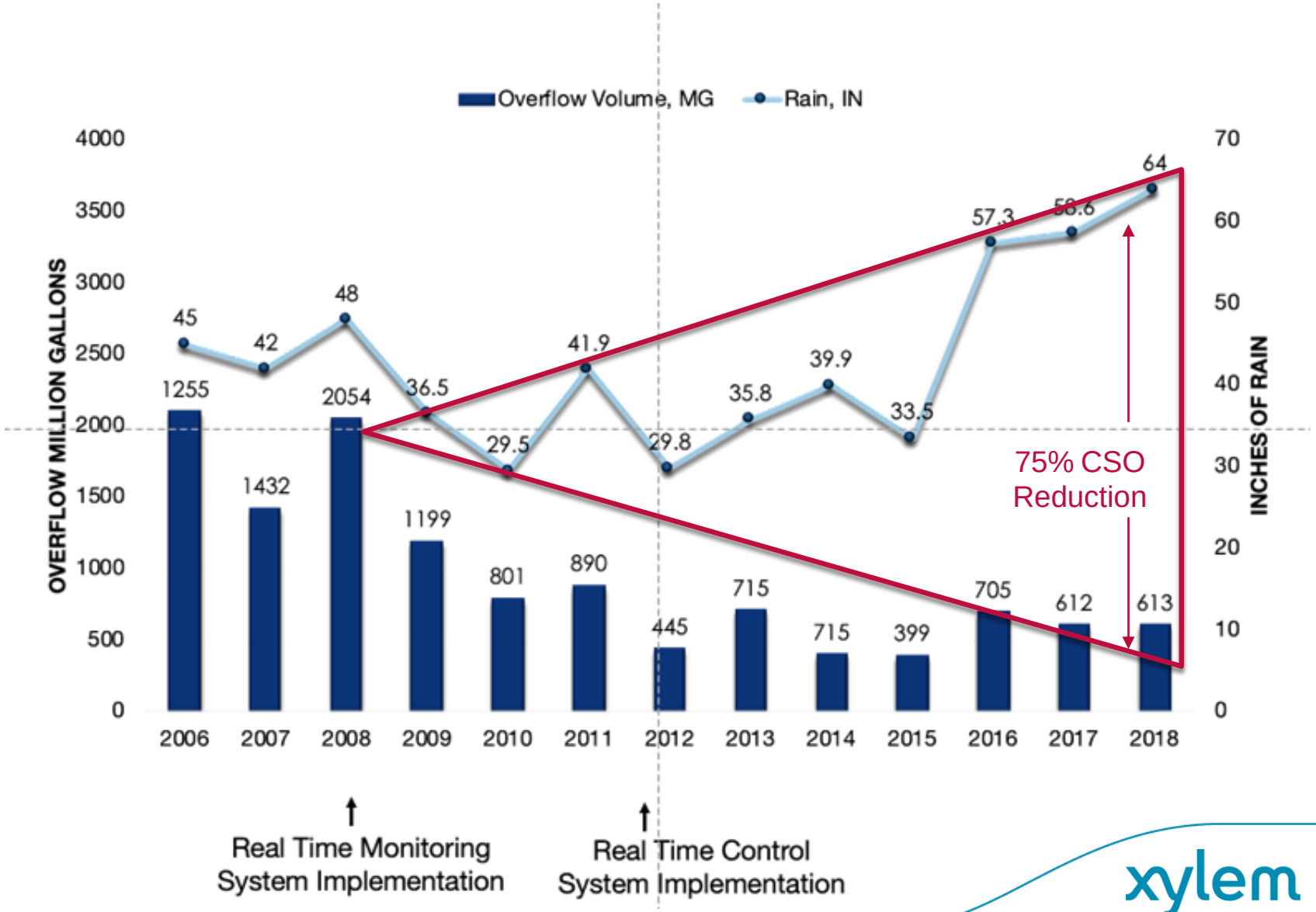
Operate the Urban Wastewater System



Power of Decision Intelligence

Outcomes:

- Eliminated dry weather overflows
- Reduced CSO 75%
- Reduced E. coli contribution by 55%
- New plan saves $500 million



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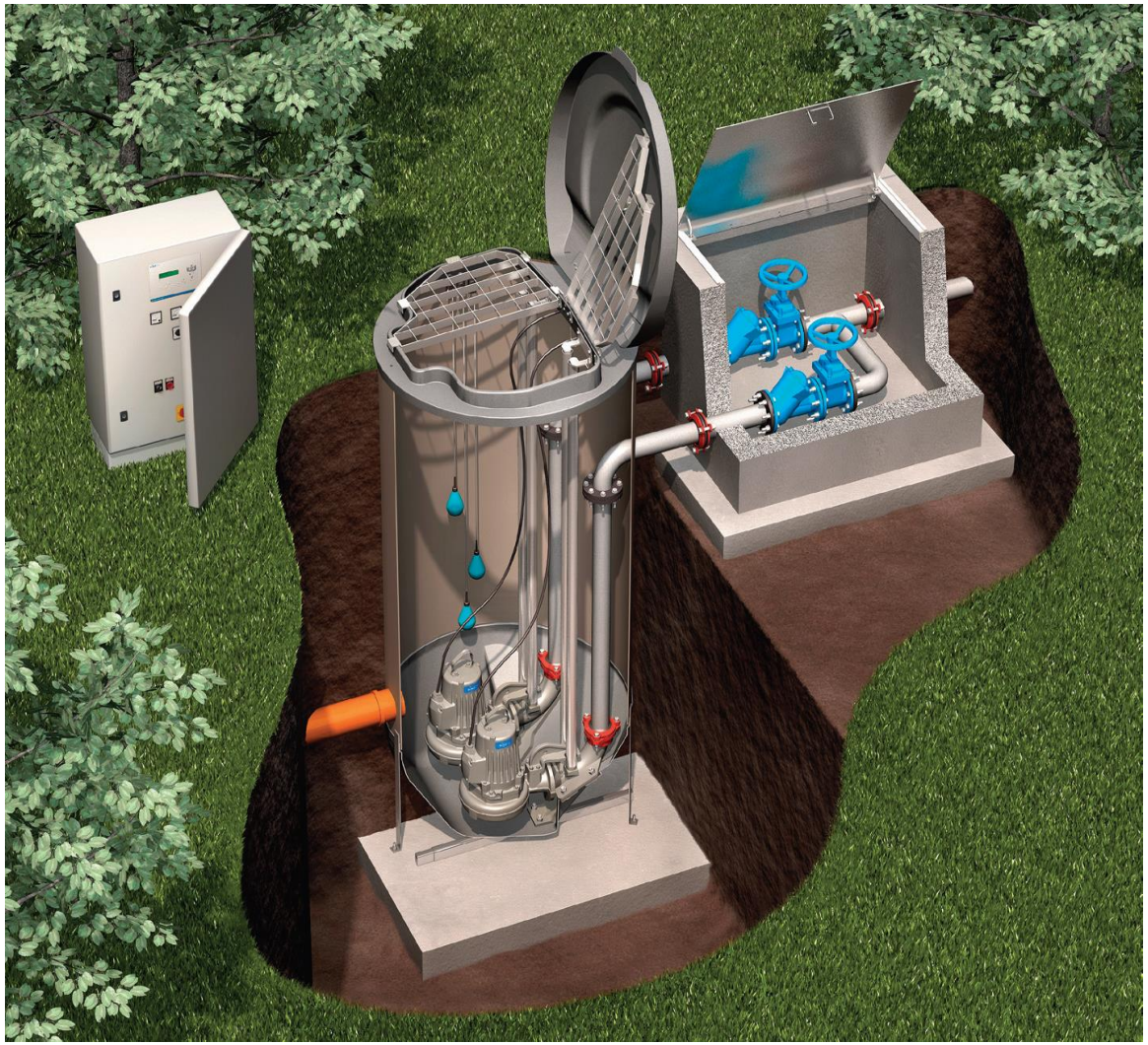
Our Solutions

Flygt Concertor

Operate the Urban Wastewater System



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Individual Waste Water Pumping Station Asset Resilience



Pump anti-clog functionality as standard



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Individual Waste Water Pumping Station Asset Resilience



Clean Sump and Rising Main Technology



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Individual Waste Water Pumping Station Asset Resilience

Before







After







Clean Sump and Rising Main Technology



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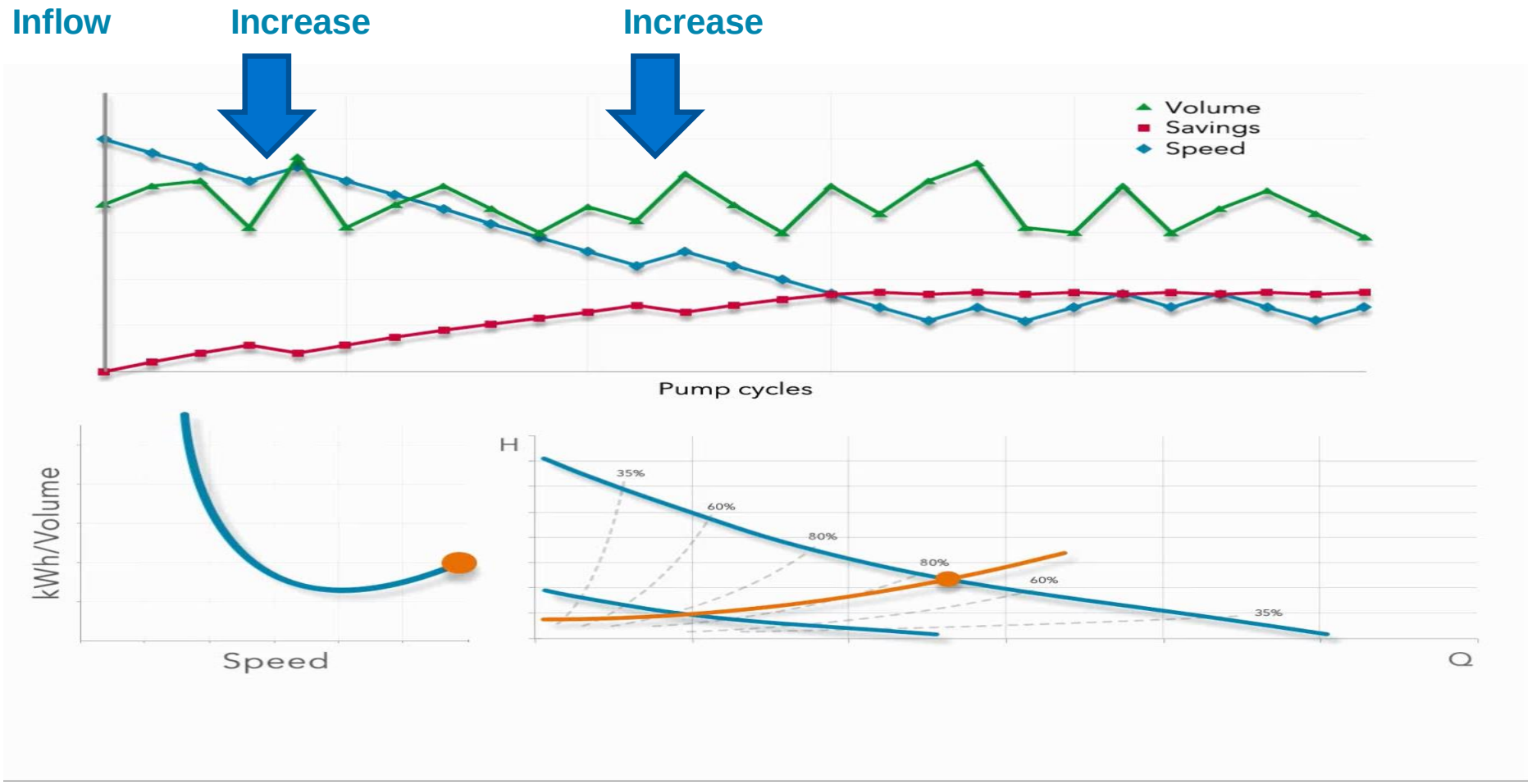
Adapts to inflow whilst automatically adjusting to best total efficiency





Concertor N 6020.010 – Advanced with XPC Gateway

Smart Real Time Data



- Serial Number
- Current running Power
- Total Energy Consumption kWh
- Hours Run today/yesterday/TD
- Number of start cycles
- Core Temperature
- Speed of Rotor
- Hydraulic clogged
- Liquid in motor chamber
- Level sensor failed
- Calculated flow
- Over flow – Hours/Seconds
- Water Level
- Pipe cleaning active
- Number of anti-clog cycles
- Time for Service

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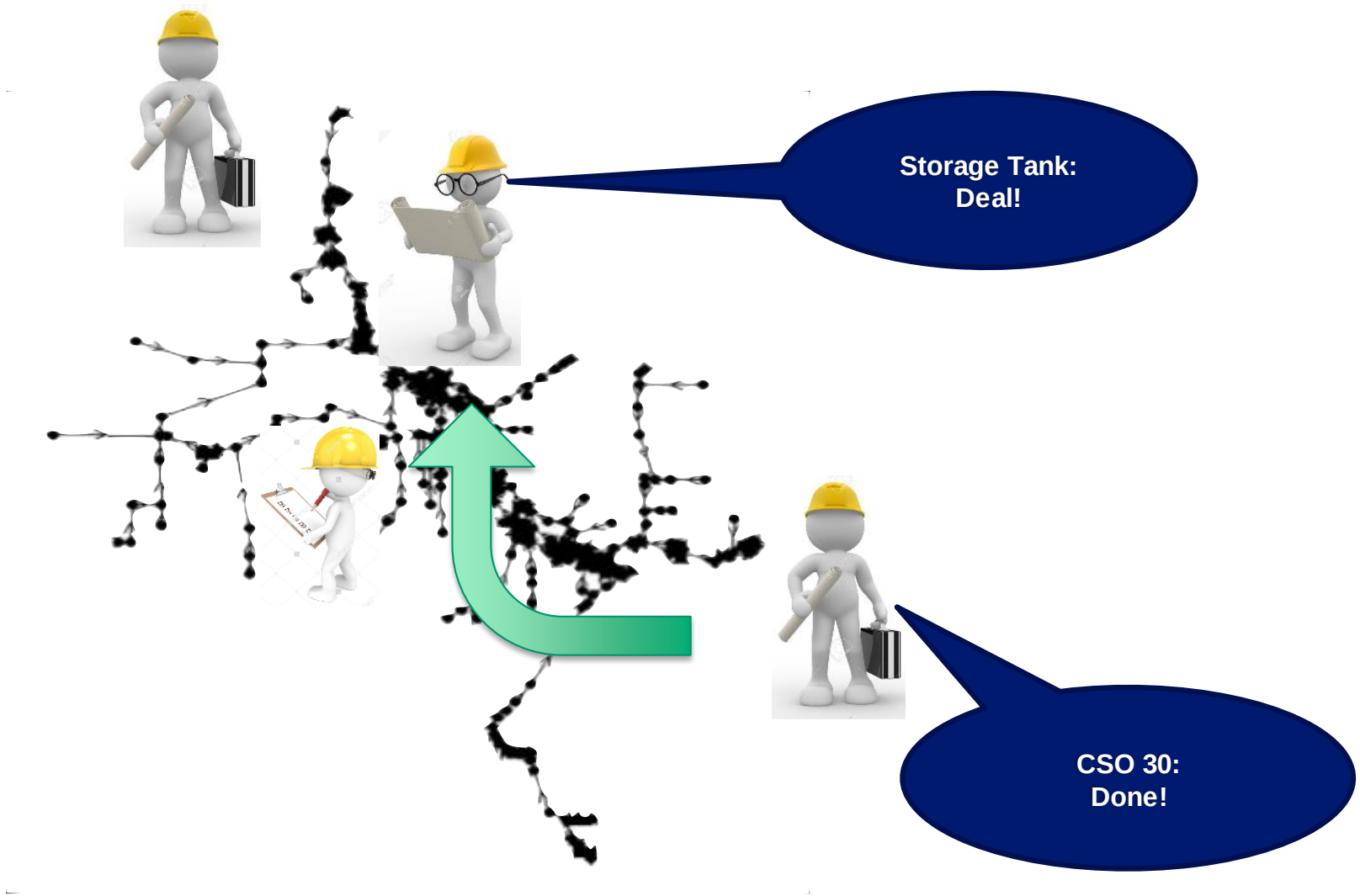
Operate the Urban Wastewater System



How We Can Help



Ideation Workshops



Consultation/ Business Case Development



Stakeholder Communications



Limited Effort Initial Deployments

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