



Aquasuite[®]

a product of Royal HaskoningDHV

Introduction



Wouter de Hamer

Director Business Development Water APAC

wouter.de.hamer@rhdhv.com



AquaSuite Global Support Team

www.aquasuite.ai

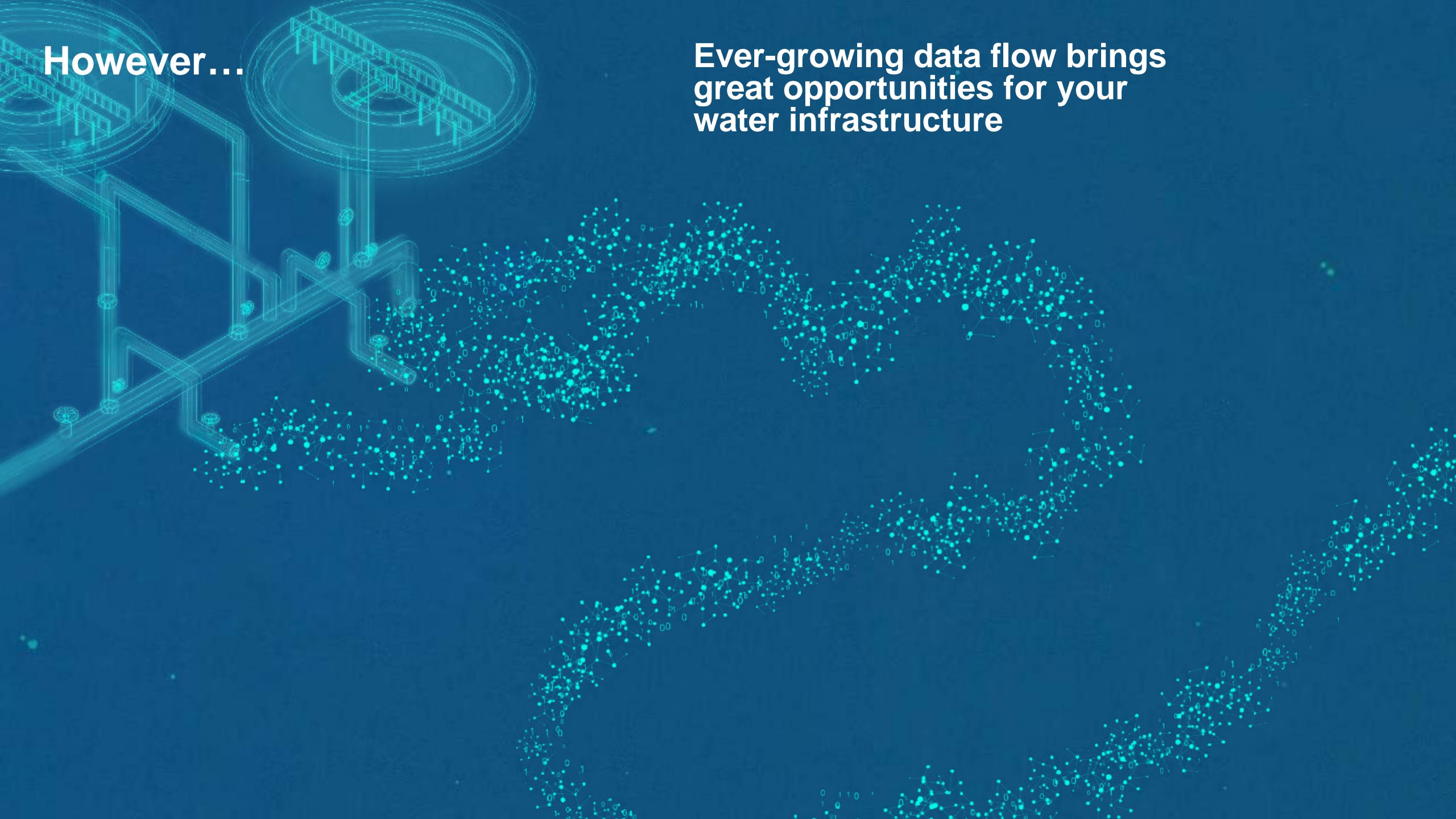


Drinking and wastewater infrastructure are becoming increasingly complex

and vulnerable to changing conditions

However...

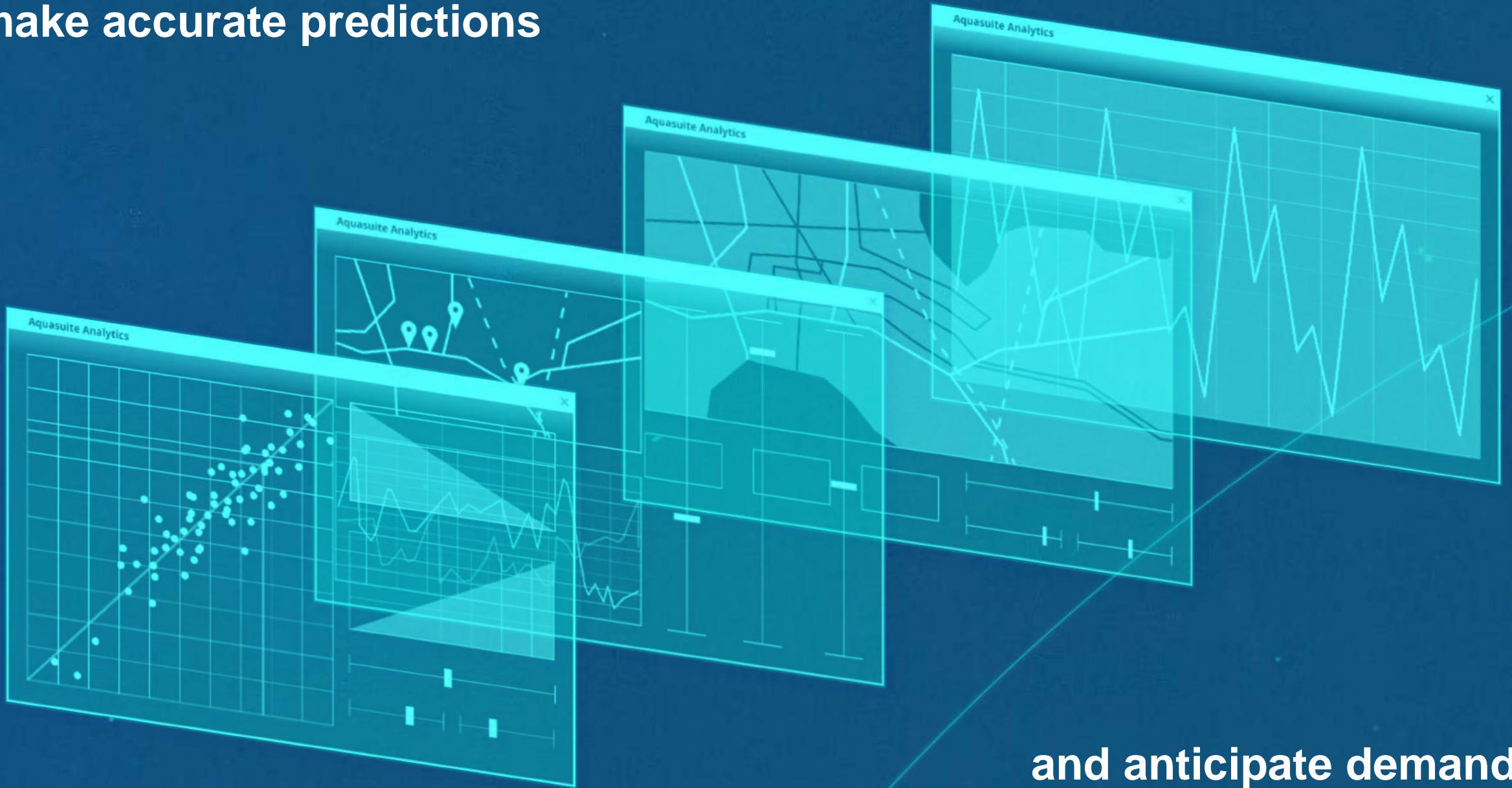
**Ever-growing data flow brings
great opportunities for your
water infrastructure**



**Adopting technology can help
you preserve valuable knowledge**



make accurate predictions



**and anticipate demand
for changing conditions**



So, what if you could continuously foresee critical situations and make desired outcomes happen?

Aquasuite, an AI-powered analyst and autopilot



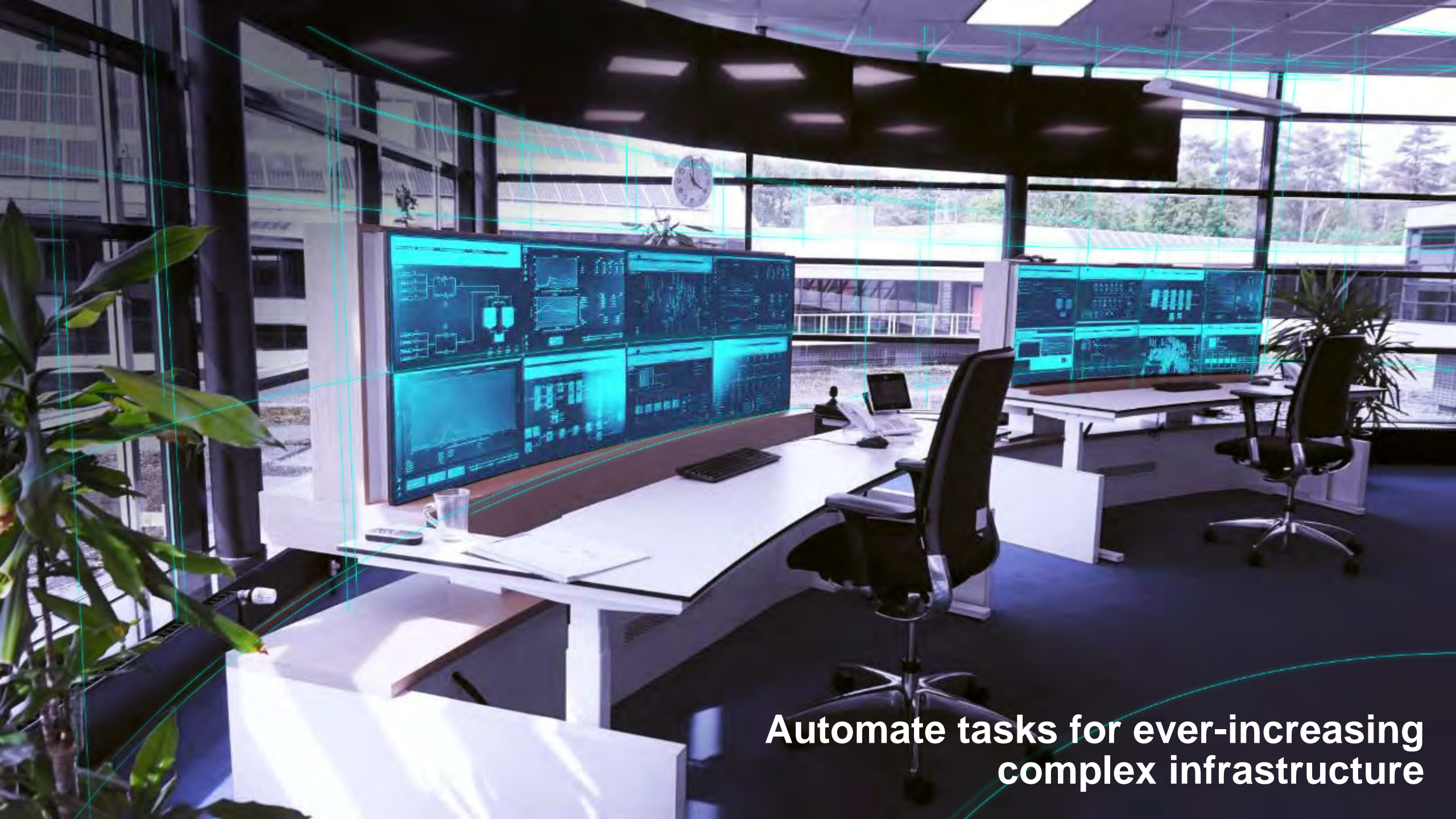
**Built by developers that
understand water processes
+ software development**



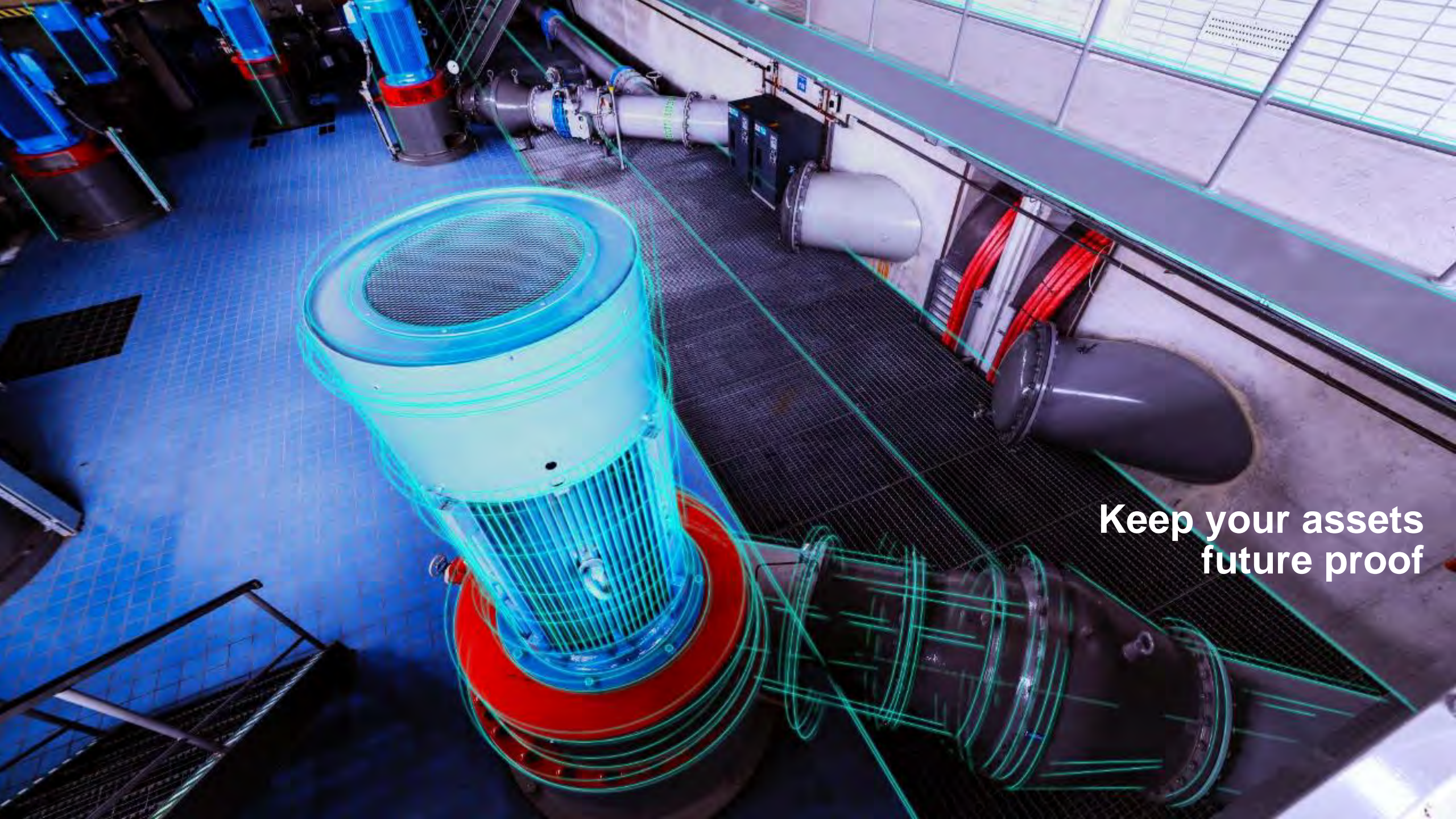
Aquasuite helps you to

**Improve operations within networks,
assets and systems**





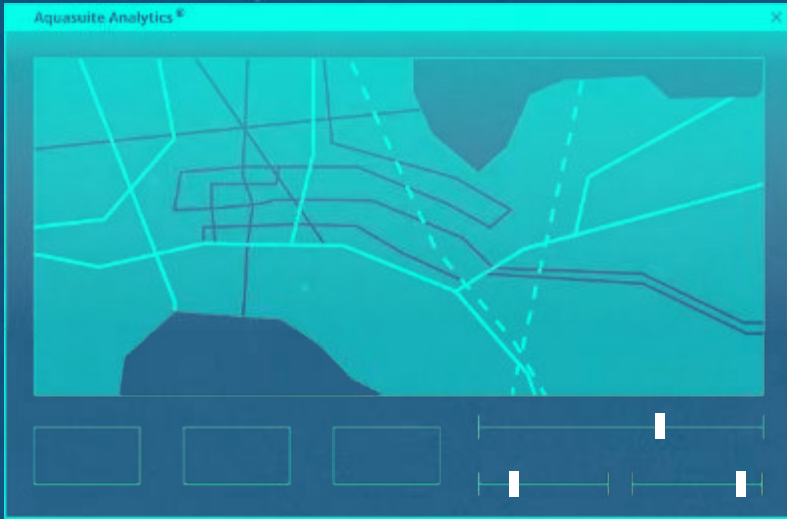
**Automate tasks for ever-increasing
complex infrastructure**



**Keep your assets
future proof**

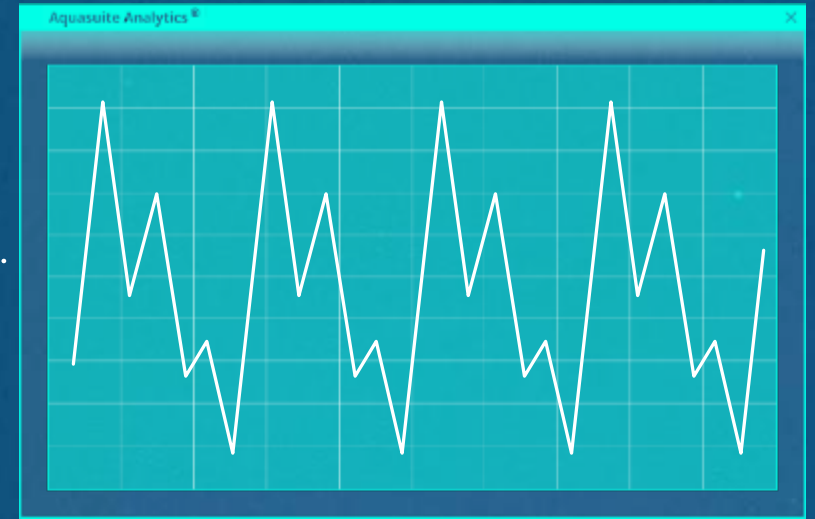
Gain actionable insight on your water infrastructure, while the virtual operator of AquaSuite takes control in optimising performance





Analyse

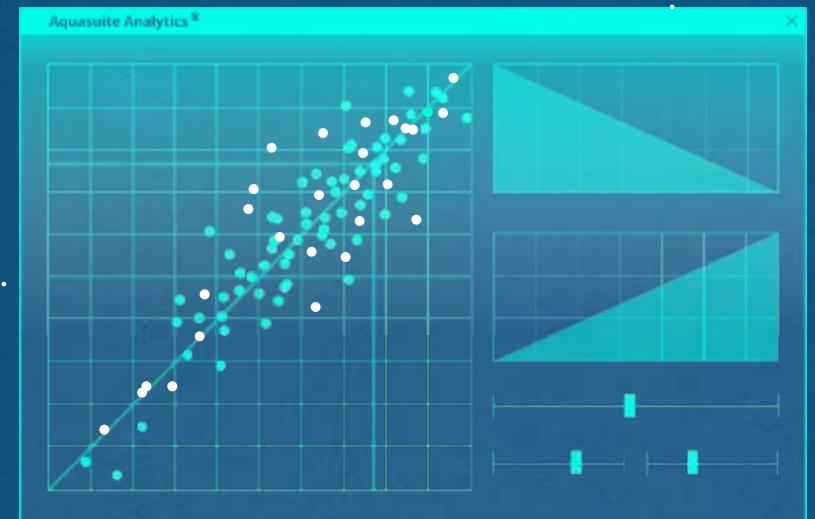
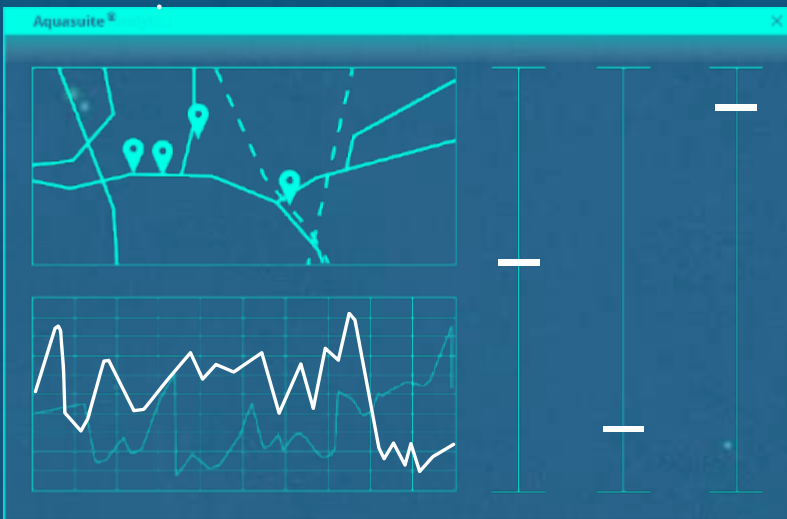
Control



Predict

Learn

Aquasuite's Smart Optimised Control

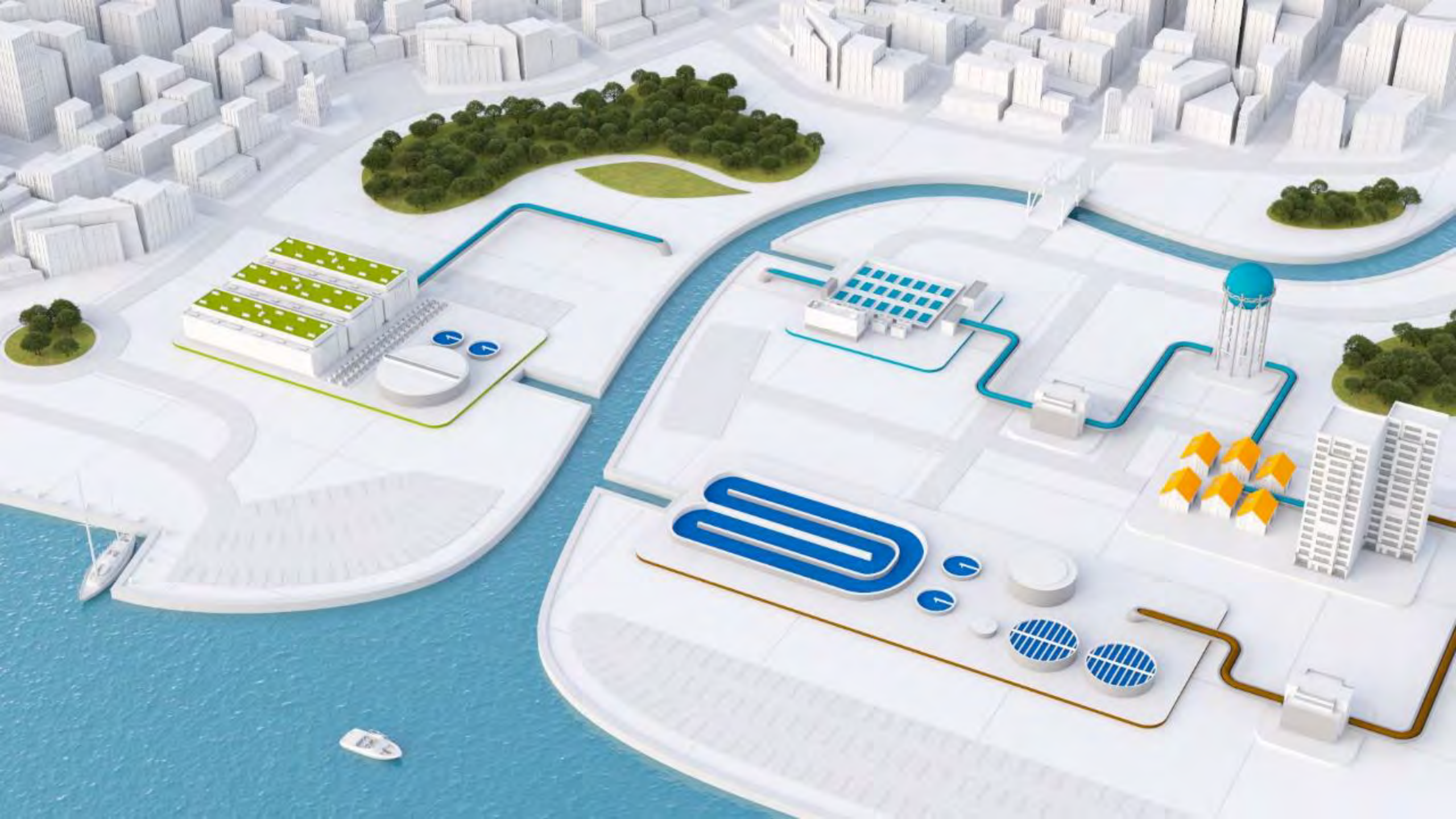


In the sweet spot of automation, control & data analytics



Adapted from GWI (Global Water Intelligence)

Title: A selection of key smart water and digital solutions providers GWI



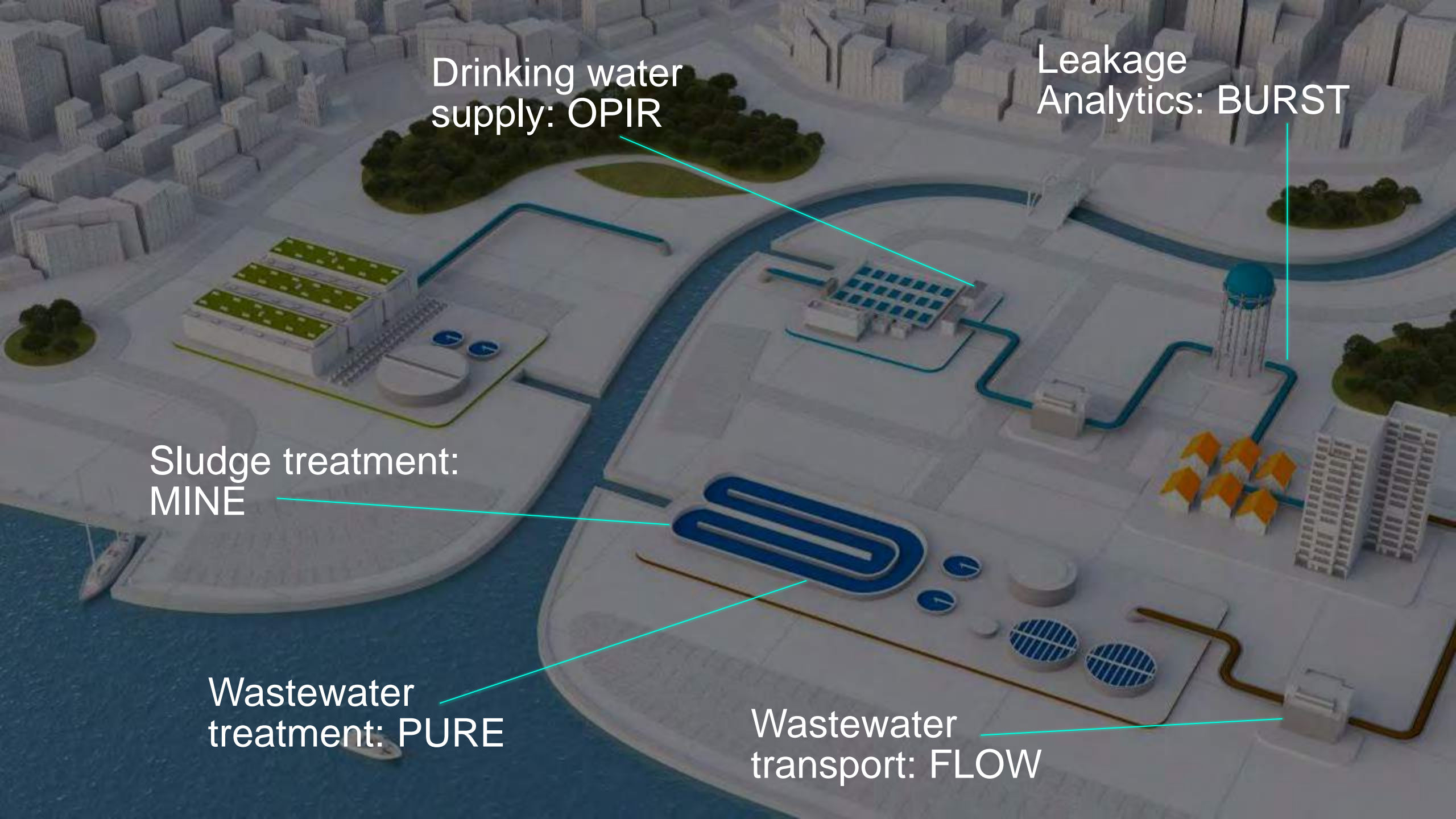
Drinking water
supply: OPIR

Leakage
Analytics: BURST

Sludge treatment:
MINE

Wastewater
treatment: PURE

Wastewater
transport: FLOW



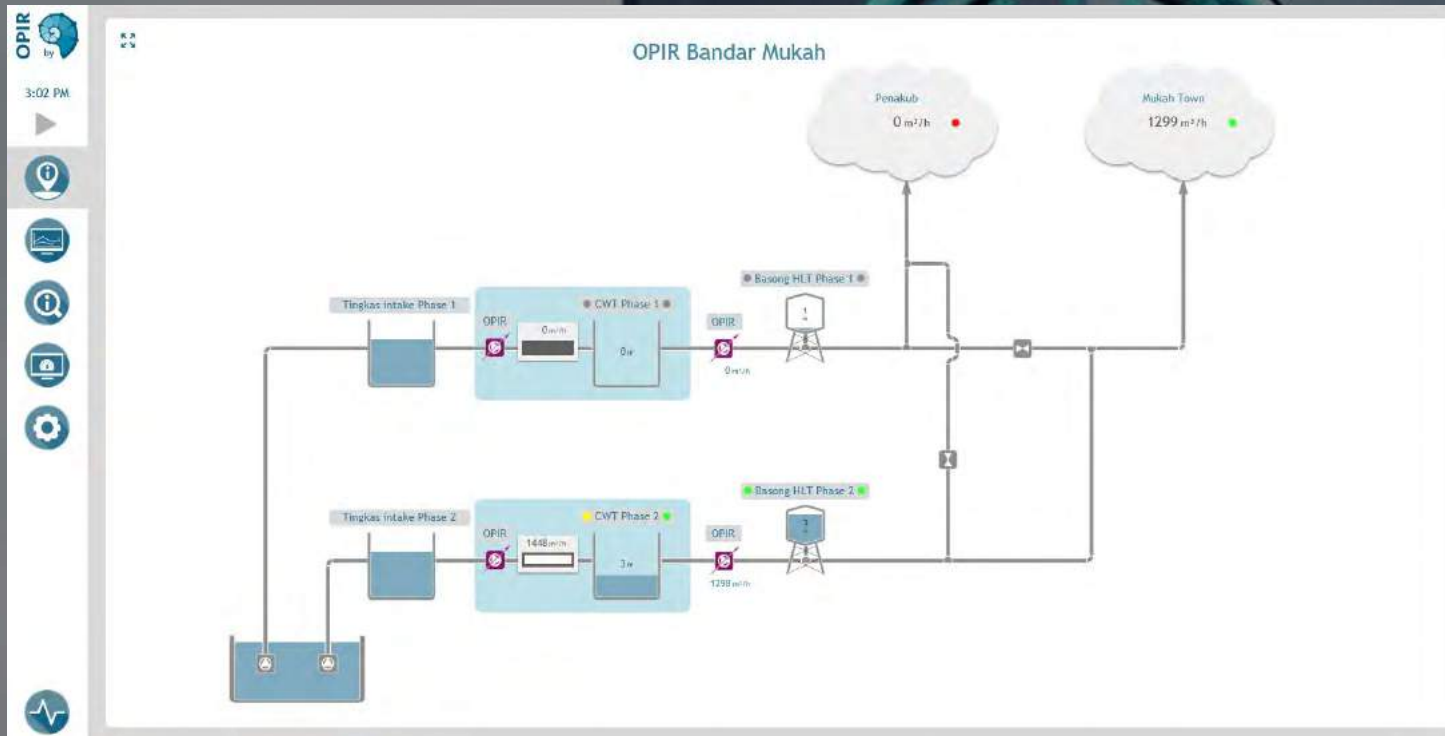


Aquasuite OPIR

Ensures resilient water supply at a consistent pressure for everyone

Bandar Mukah – Sarawak
Rural Water Supply Agency

Virtual operator control & optimisation



Machine learning to optimise production, ensuring:

- Enough water for all
- Best possible water quality
- Efficient pumping

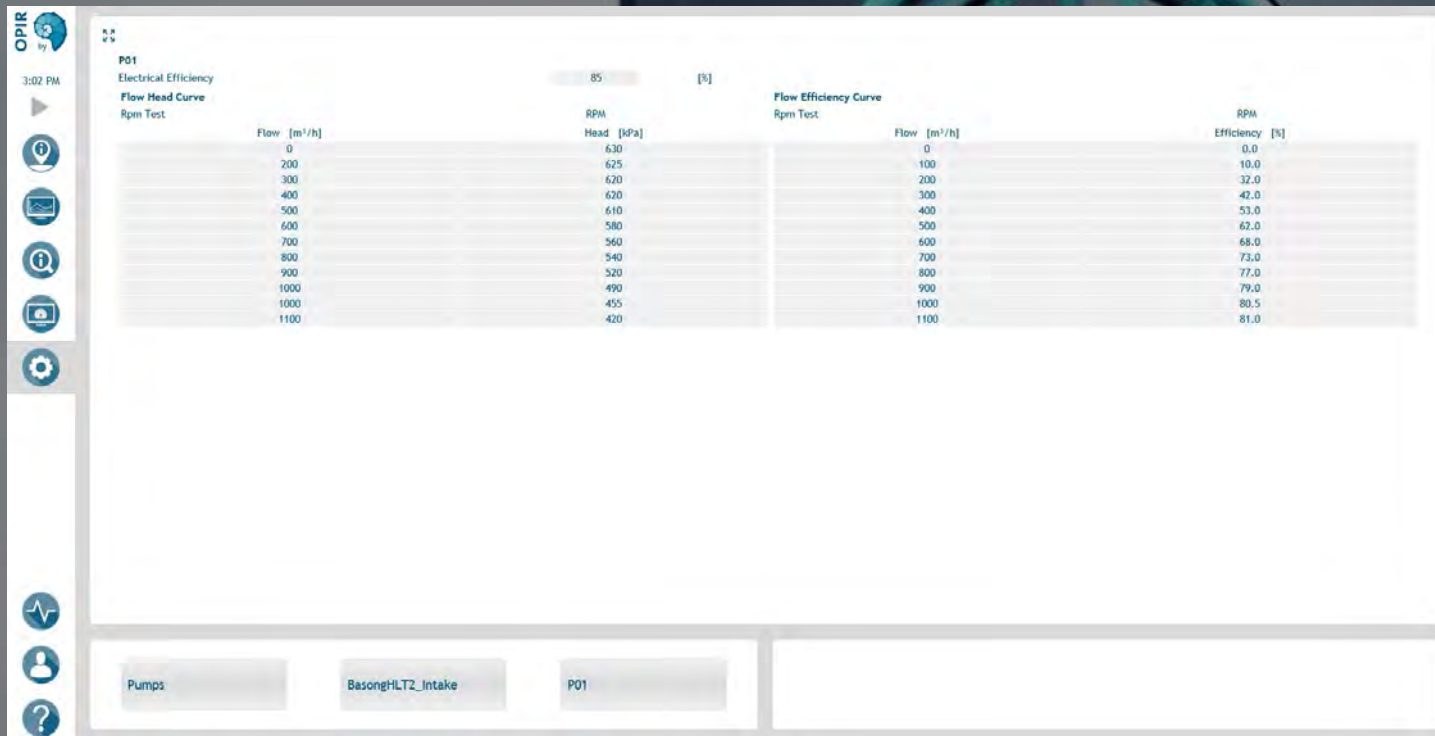
Virtual operator control & optimisation



Machine learning to optimise distribution and reservoir level control, ensuring:

- Sufficient storage
- Compliant water age
- Efficient pumping

Virtual operator control & optimisation



Machine learning to optimise pump control, ensuring:

- Flow setpoint to head conversion
- Efficient pumping

What does this mean for the water utility companies?

- More resilient network
- Lower OPEX costs
- Reduced leakage

A close-up photograph of a blue metal pipe with a flange and bolts. The pipe is surrounded by a complex network of glowing green and blue digital lines and arcs, suggesting a data-driven or AI-based system. Three warning signs, consisting of a triangle with an exclamation mark, are overlaid on the image: one in the upper center, one in the upper right, and one in the lower center. The background is a blurred, textured surface, possibly a wall or ground.

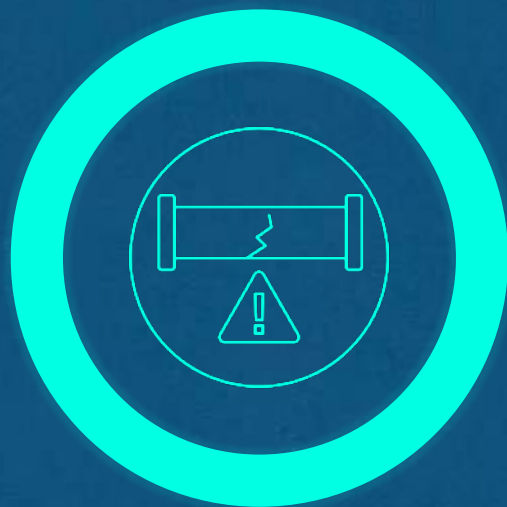
AquaSuite BURST AI Analytics for leakage & NRW

Detects leaks and bursts using highly accurate AI prediction within zones

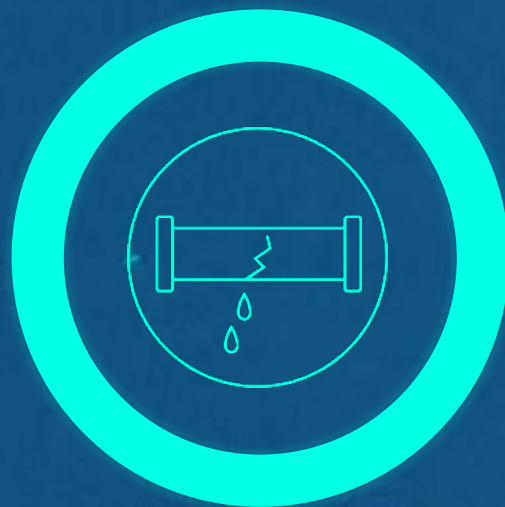
AI for water loss reduction



Predict pipe failure



Detect leaks

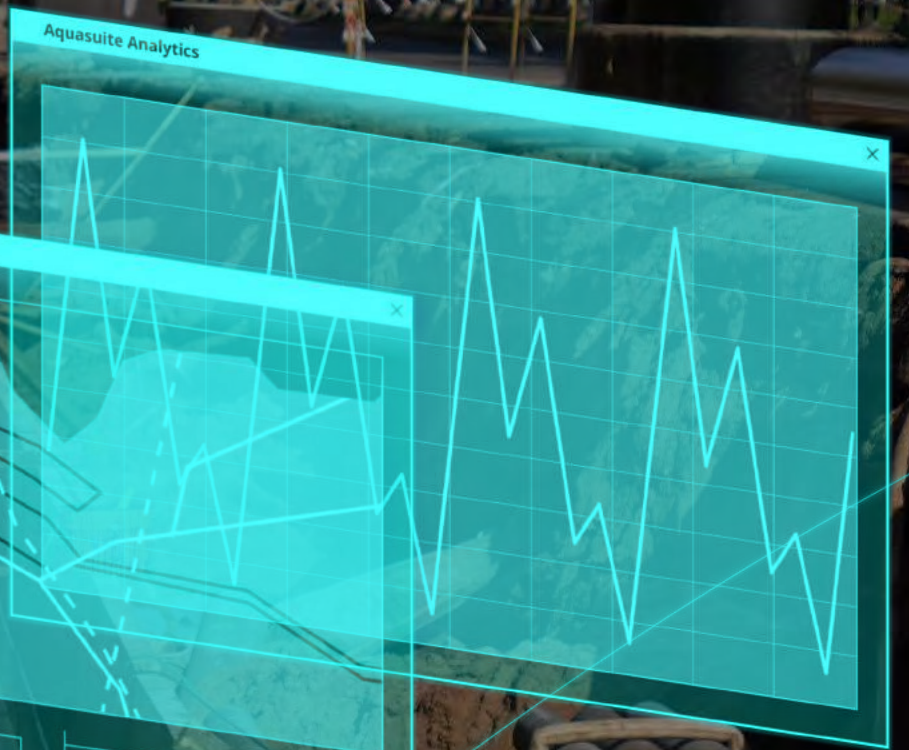
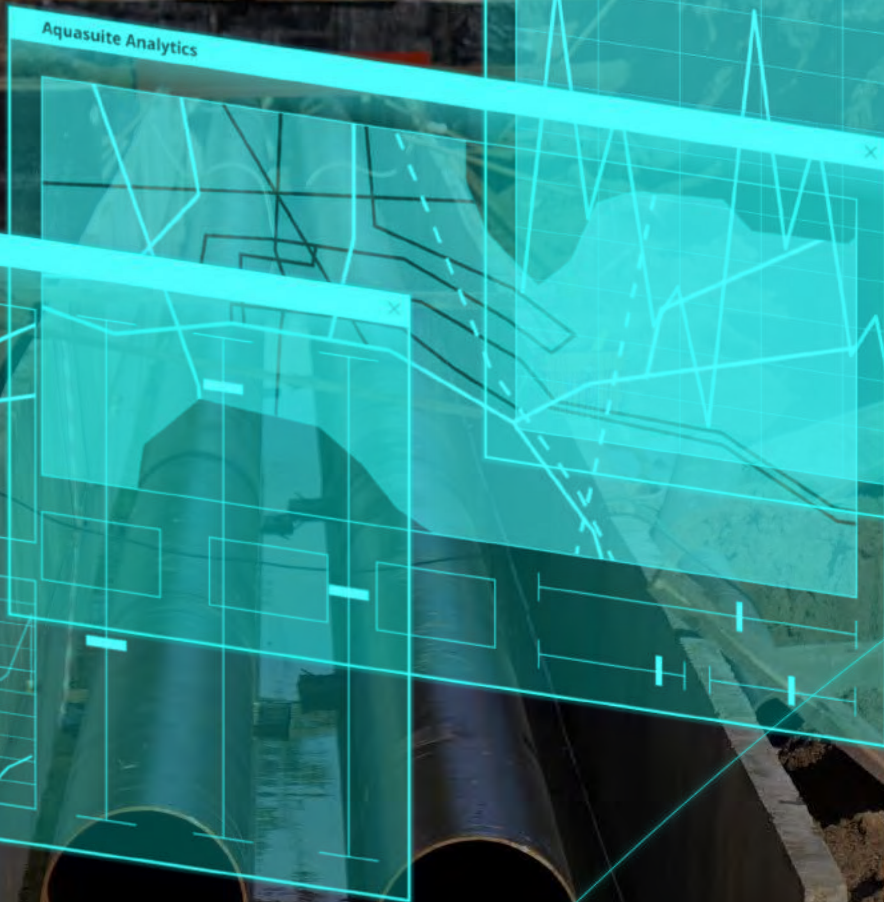
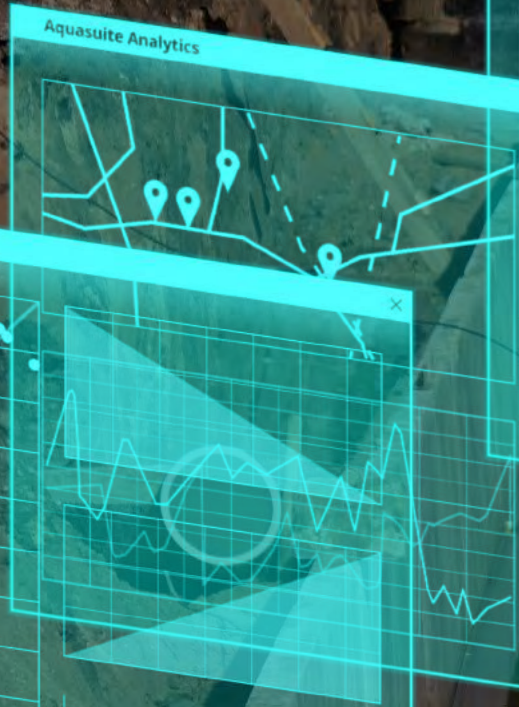
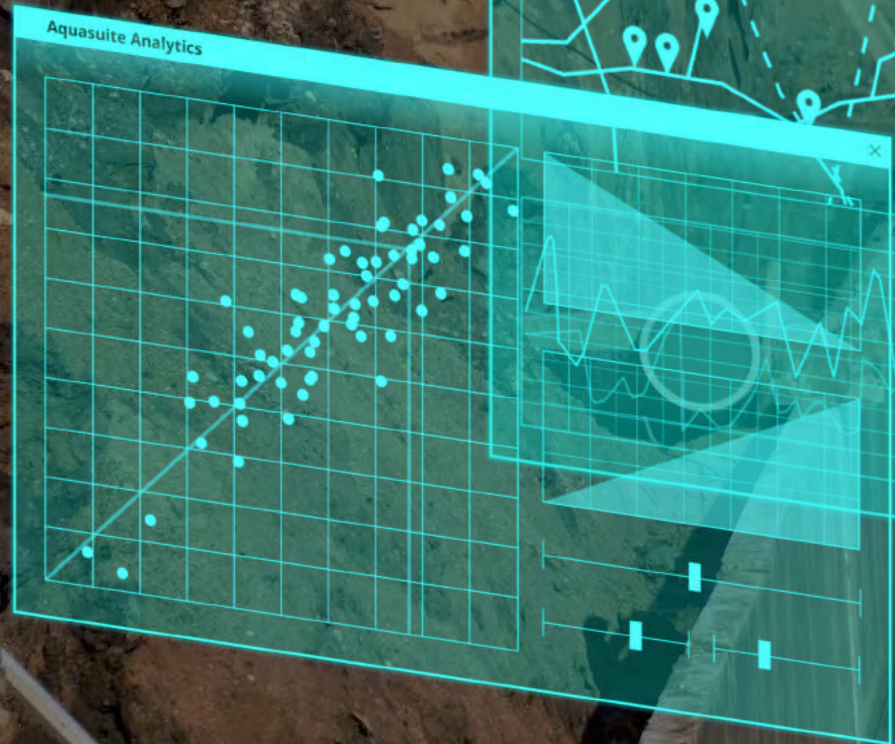


Find leaks



Minimise water loss

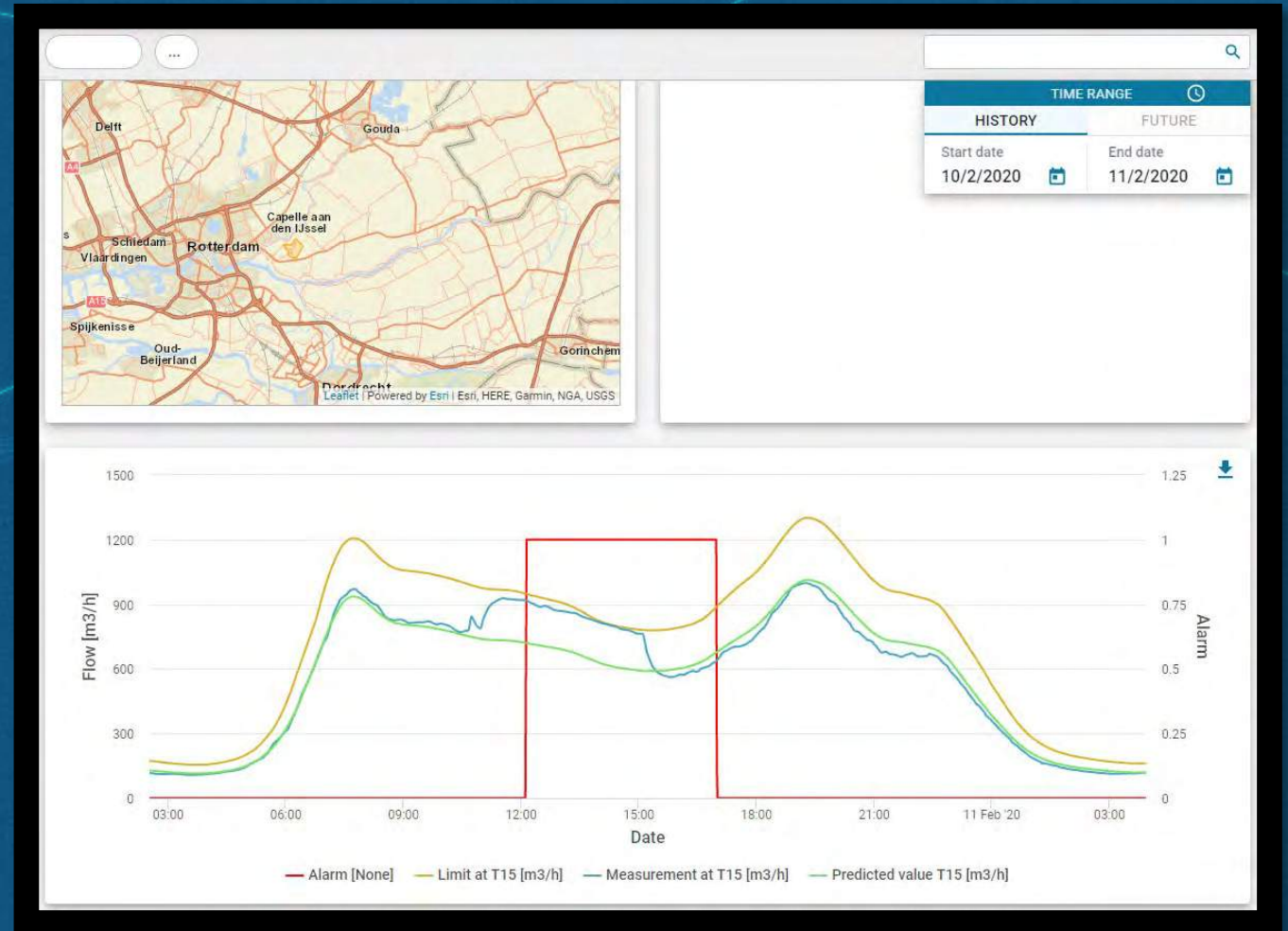
Pillar 1- Prioritise pipe replacement



Replace pipes *before* catastrophic failure

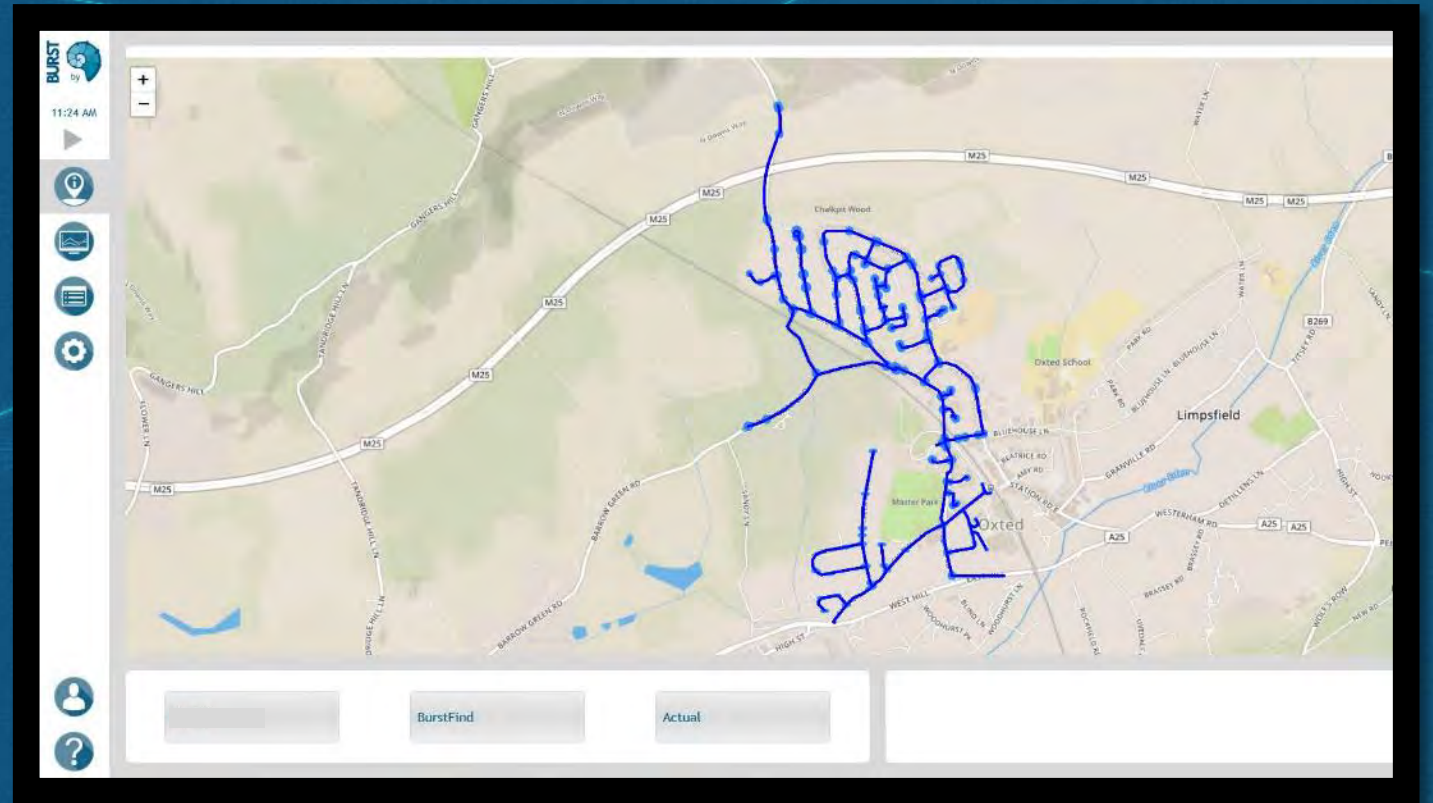
Pillar 2 – Using AI to detect leaks in real-time

- Real time data tested against modelled prediction
- Exceptions used to identify leaks, bursts, illegal connections and asset failures



Pillar 3 - Localising leaks in real time

- ML used to model leak then compare simulated with measured effect at pressure sensor locations
- Leak location is the location where the modelled and measured effect are most alike



Pillar 3 - Localising leaks in real time



- Noise sensors are rapidly being deployed across water supply networks
- AI can learn the ‘signature’ of a leak sound and improve leak detection & localisation time

What does this mean for water utility companies?

- Faster detection and localization of leaks
- Minimize water losses




BURST applied for Water supply Project,
Pune, India – Larson & Toubro

What customers in drinking water are saying

“Thanks to Aquasuite we were able to prevent from tapping into a new source, which saved us 1 million euros.”

Doeke Schippers, Production Manager
Drinking water company Vitens



A wide-angle photograph of the Singapore skyline at dusk. The Marina Bay Sands hotel is prominent on the left, with its three towers and skybridge. In the center, the Esplanade - Theatres on the Bay is illuminated. The city's skyscrapers are lit up, and their lights reflect on the water in the foreground. The sky is a mix of blue and orange from the setting sun. Two white diagonal lines cross the image from the bottom left to the top right.

”PUB recognises that technology and innovation are cornerstones in our mission of supplying high quality water and reusing used water endlessly. This pilot trial demonstrates how digital solutions like Aquasuite can seamlessly digitise and automate our water operations.”

Dr Kelvin Koh, General Manager, the Ulu Pandan Water Reclamation Plant,
Singapore’s National Water Agency PUB

Why clients trust Aquasuite

- Reliable, proven and secure software since 1996
- Peace of mind thanks to its smart autopilot and accurate predictions
- Building AI that works: combining domain knowledge with AI software

Thank you

