Centros de Control Unificados

Parte 1: La Telemetría como base del Control Unificado

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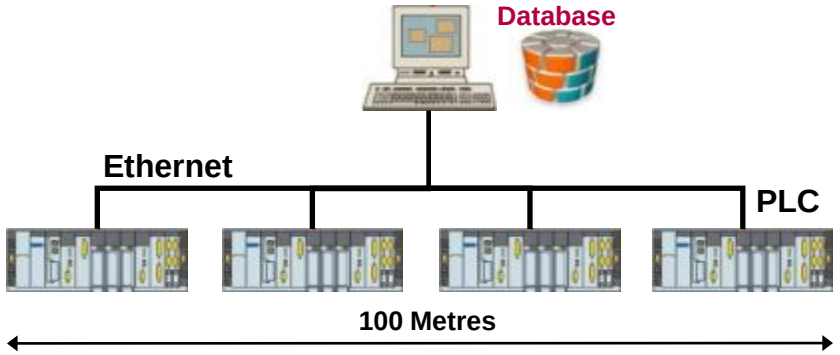
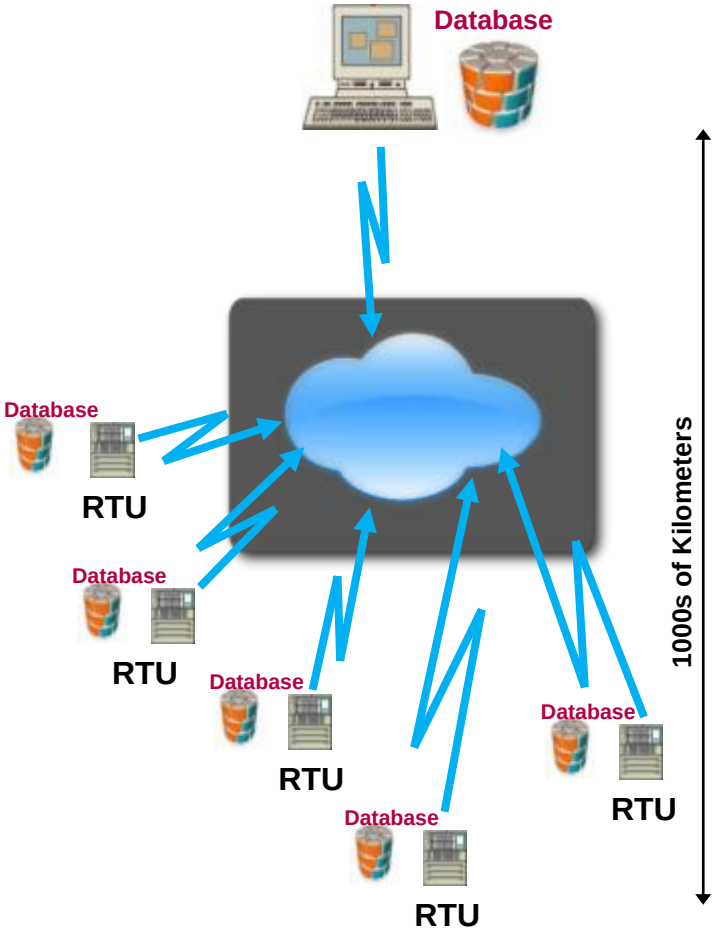
SCADA vs Telemetry / Remote SCADA

Typical plant SCADA application
manufacturing, process control



Typical Telemetry application
Water & waste water networks, O&G pipelines, distributed utility assets, distributed generation



Central database	*VS*	Central & local database
Permanent communication	*VS*	Non permanent communication
Less than 100 PLC's	*VS*	1000's of RTU's
Hundreds of meters	*VS*	Thousands Of Kilometres
Master configuration set	*VS*	Configuration dynamic and expandable
Single or dual master	*VS*	Dual/triple and hierarchical master

What Makes Telemetry Different?

Equipment designed for the realities of Networks

Wide Temperature Ranges

- (-40°C…+70 °C) standard
- Wider ranges available

Unreliable or Slow Communication Networks

- Very slow connection speeds
- Intermittent connections

Harsh Environments

- Conformal coated
- Corrosive Atmospheres
- Hazardous Area Classifications

Low Power

- Designed for extended powerless operations
- Solar applications

Wide Area Deployment

- Remote and hard to reach asset locations

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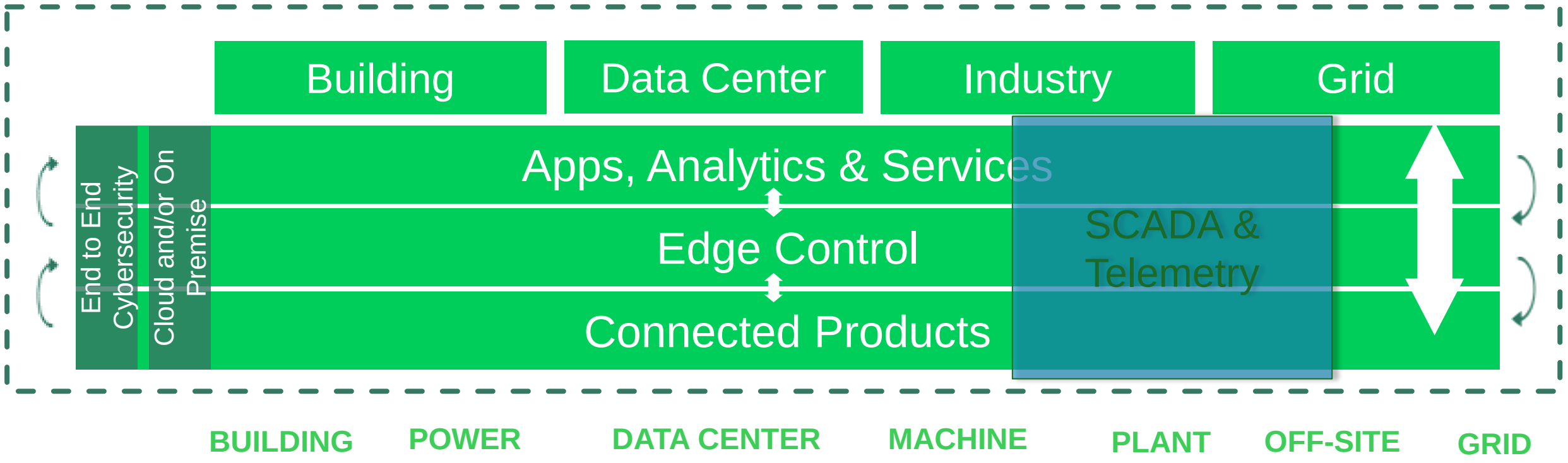
SCADA and Telemetry Portfolio within EcoStruxure

EcoStruxure
Innovation At Every Level



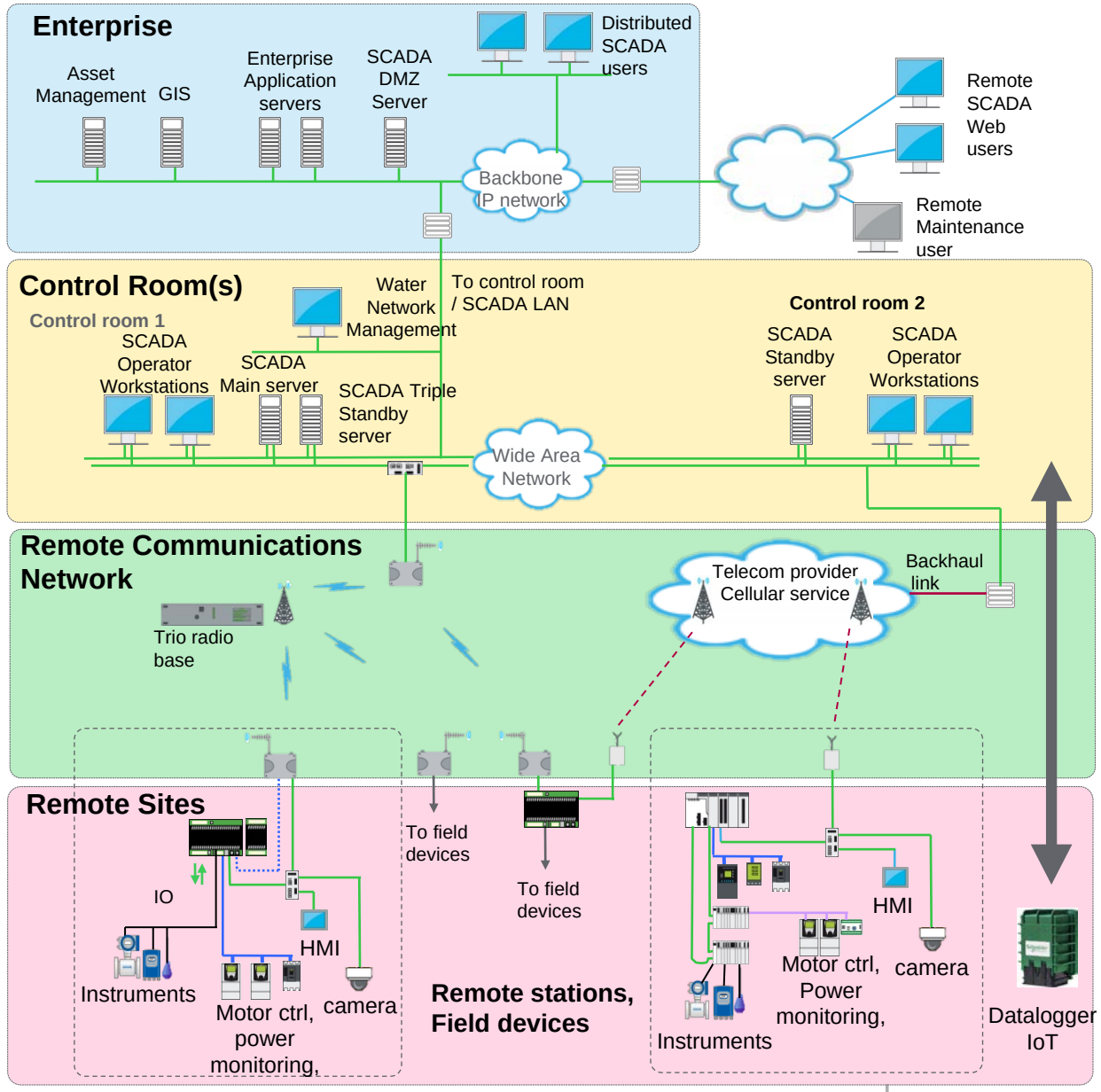
What do SCADA & Telemetry Solutions Look Like?

Making your data available to business systems and applications

Allowing advanced control and visibility of your entire system

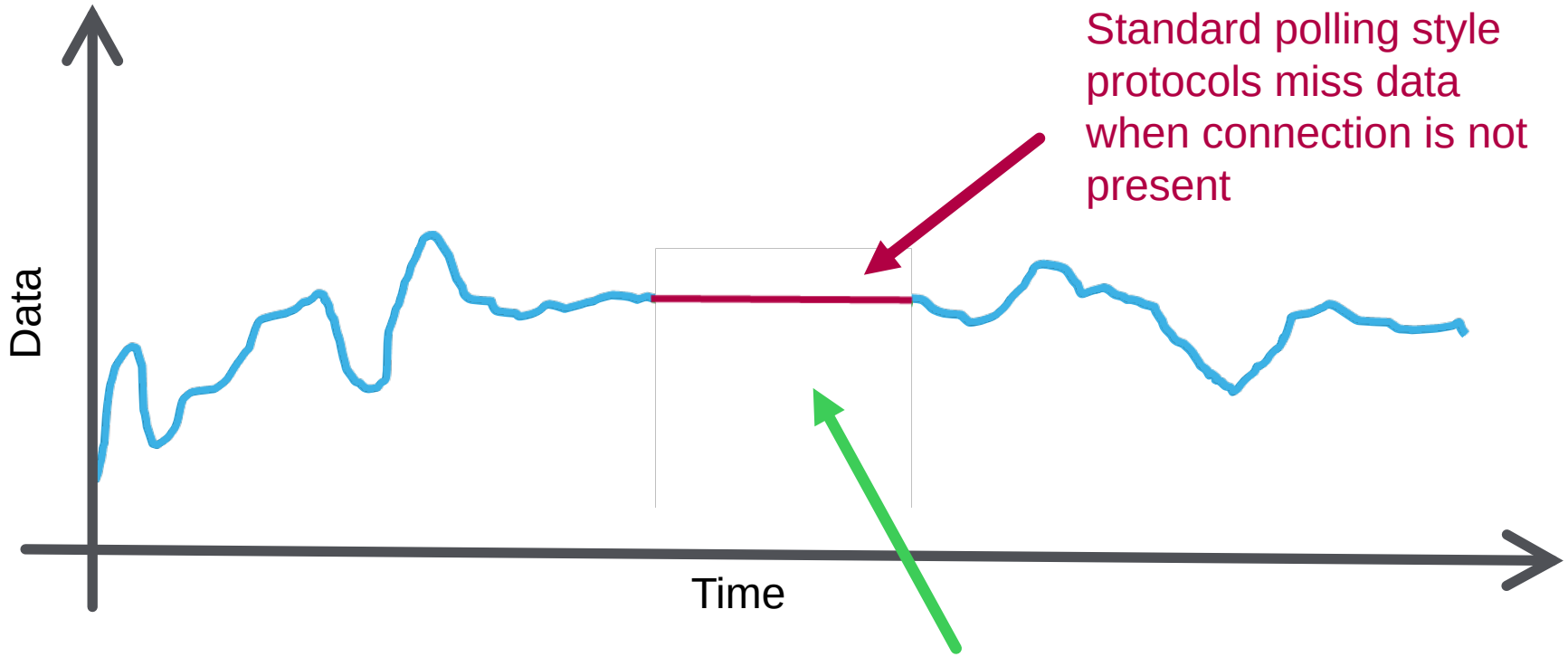
Connecting your remote stations regardless of locations

Controlling and optimizing remote station performance



Telemetry Protocols

Protocols designed for the realities of Networks



- Open Standard
- Buffering of events
- Time-stamping of events
- Unsolicited Messaging
- Data Concentrator
- Multiple active SCADA Masters
- Secure Authentication
- Peer-to-peer communication
- Communication Awareness

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How?

Edge

- SCADAPack RTU
- Modicon ePAC
- Soft dPAC
- Datalogger IoT

Schneider Electric ClearSCADA

Citect SCADA

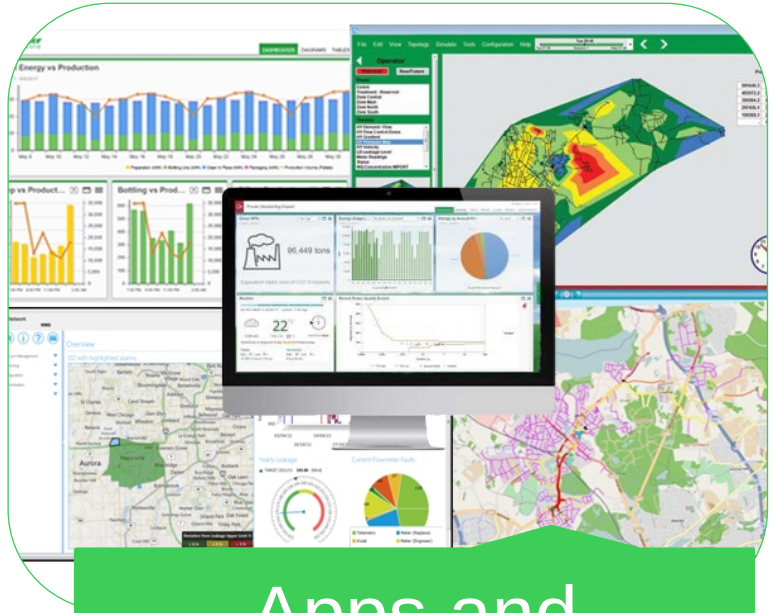
Wonderware InTouch

Wonderware System Platform

OASyS DNA

SCADA Hosts

- GeoScada Expert (ClearScada)
- Aveva System Platform (Wonderware)
- Enterprise Scada (Oasys) - Legacy

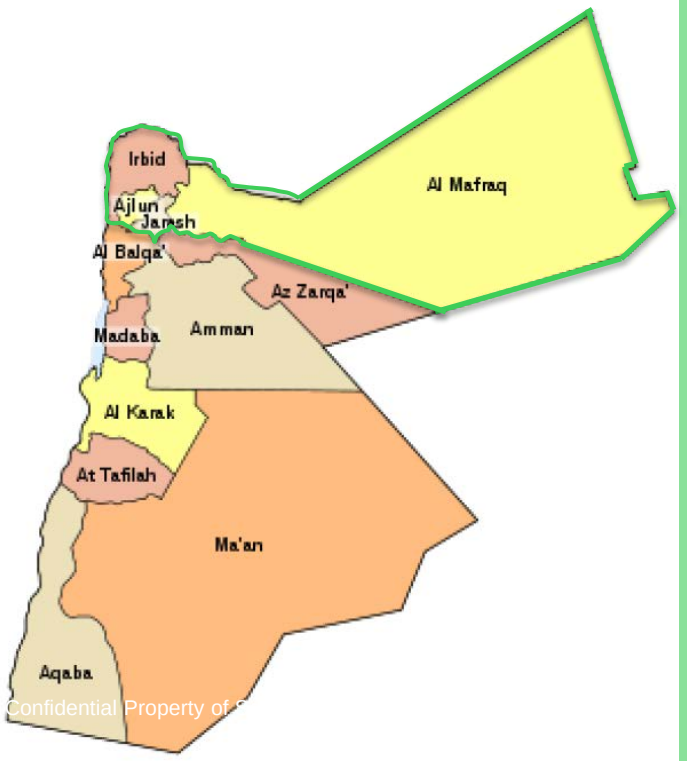


Apps and Analytics

- Water Advisors: Loss and Simulation
- UOC
- AVEVA PI

SCADA Northern Governorates, JO

Water supply to a water- stressed region



Customer Challenge

- Supply increasing water demand driven by population and economical growth and protect very limited water resources
- Modernization of aging infrastructure and service improvement

The Solution

- LV Power Distribution: switchboards
- Motor control: MCC, Altistart soft starters
- Secure Power: UPS
- Communication: TRIO radios
- Automation & Control: Modicon M340 PAC, SCADA OASyS DNA
- Services: commissioning, maintenance

Customer Benefits

- Operation improvement
- Water loss reduction
- Cost optimization
- Water conservation

The Results: Life is On with...

> 200 facilities monitored and controlled by a distributed SCADA system, with 2 secondary centers, 4 control centers and 1 central station

"This is one of the outstanding achievements of the water sector and a national pride of Jordan for all the people of the four northern governorates"

H.E. Dr. Hazim El – Naser,
Minister of Water and Irrigation of Jordan

Telemetry and **regional SCADA** system for water transmission and distribution networks serving **1.7M** people

EcoStruxure™ Innovation At Every Level

For Water & Wastewater

Apps, analytics, and services

Service expertise

Edge control

M340

OASyS DNA

Connected products

TRIO Radios, LV switchboards
MCC, Altistart soft starters, UPS

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Anglian Water, UK

Telemetry and Water Loss Management

Customer Challenge

- Maintain position as leading innovator in leakage control and water resource protection
- Detect leaks quicker and improve response times
- Reduce the cost of outsourced leak detection
- Regulatory compliance
- Reduce the cost of ownership

Solution

- EcoStruxure Water Advisor – Loss Management (formerly Water Management Suite)
- EcoStruwur GEO Scada Expert
- SCADAPack RTU
- Third Party Offers

Customer Benefits

- Improved decision-making
- Improved water loss management
- More efficient and effective operations
- 500,000 connected telemetry data points

Anglian Water is the largest water and water recycling company by territory in England, serving **4,5 million population** in the East of England

EcoStruxure™ Innovation At Every Level

For Water & Wastewater

Apps, analytics, and services

Water Advisor

Edge control

SCADAPack RTU

GeoScada Expert

Connected products

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Water Control Center of Acciona (CECOA)

Technology platform, capturing and treating data to:

- Optimize the management of water treatment plants, wastewater treatment plants and desalination plants
- Increase efficiency

Applying disruptive technologies (big data, IoT, machine learning, and artificial intelligence):

- Improve the management of treatment plants around the world
- Using **AVEVA Insight and AVEVA System Platform** to gather, aggregate, monitor and analyze all operational data of all plants of Acciona around the world

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