

# SMART

Gain the competitive advantage with the flexibility you need to adapt to customer, supply chain, and market demands in real time.

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Life Is On

**Schneider**  
Electric

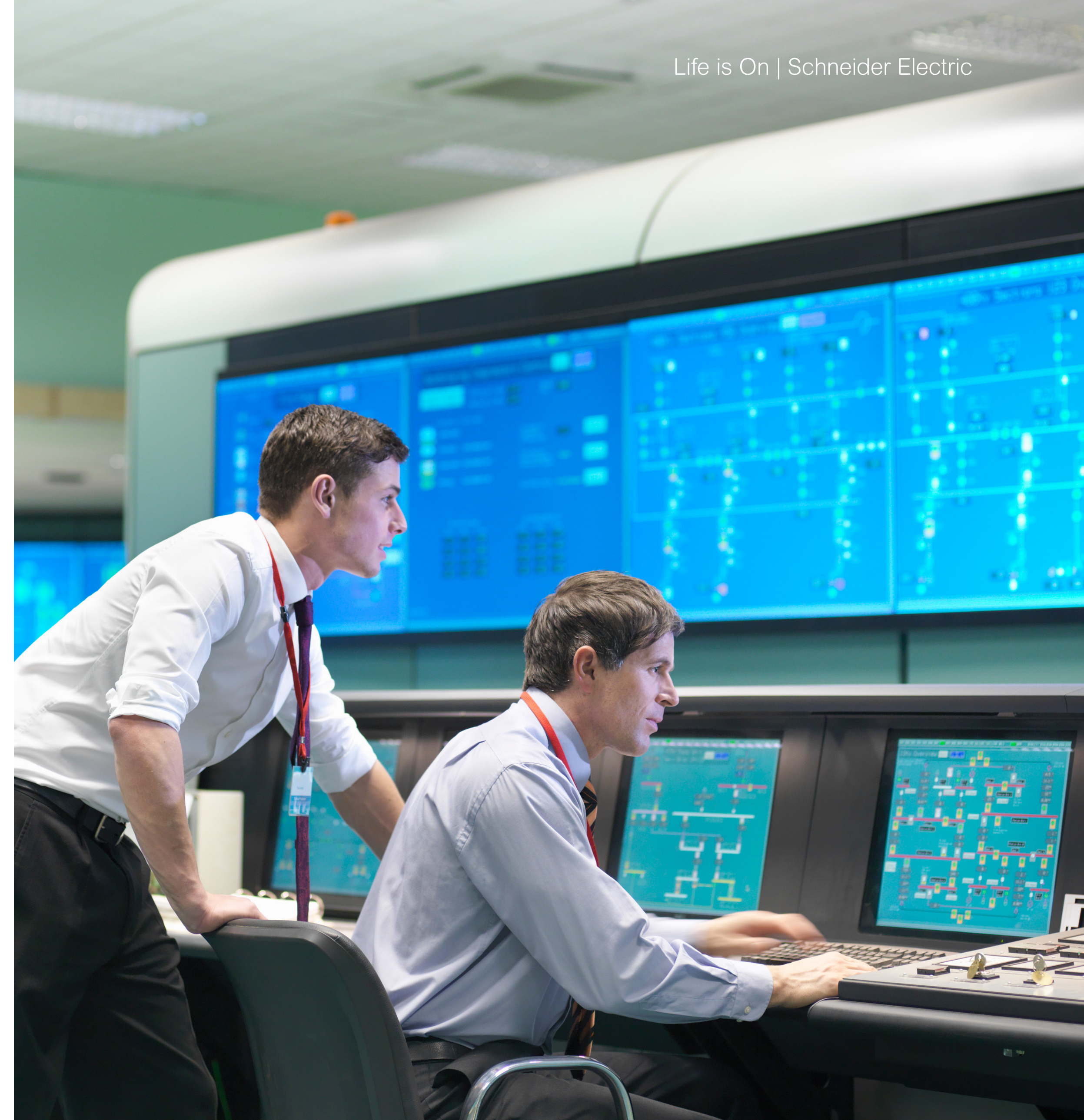


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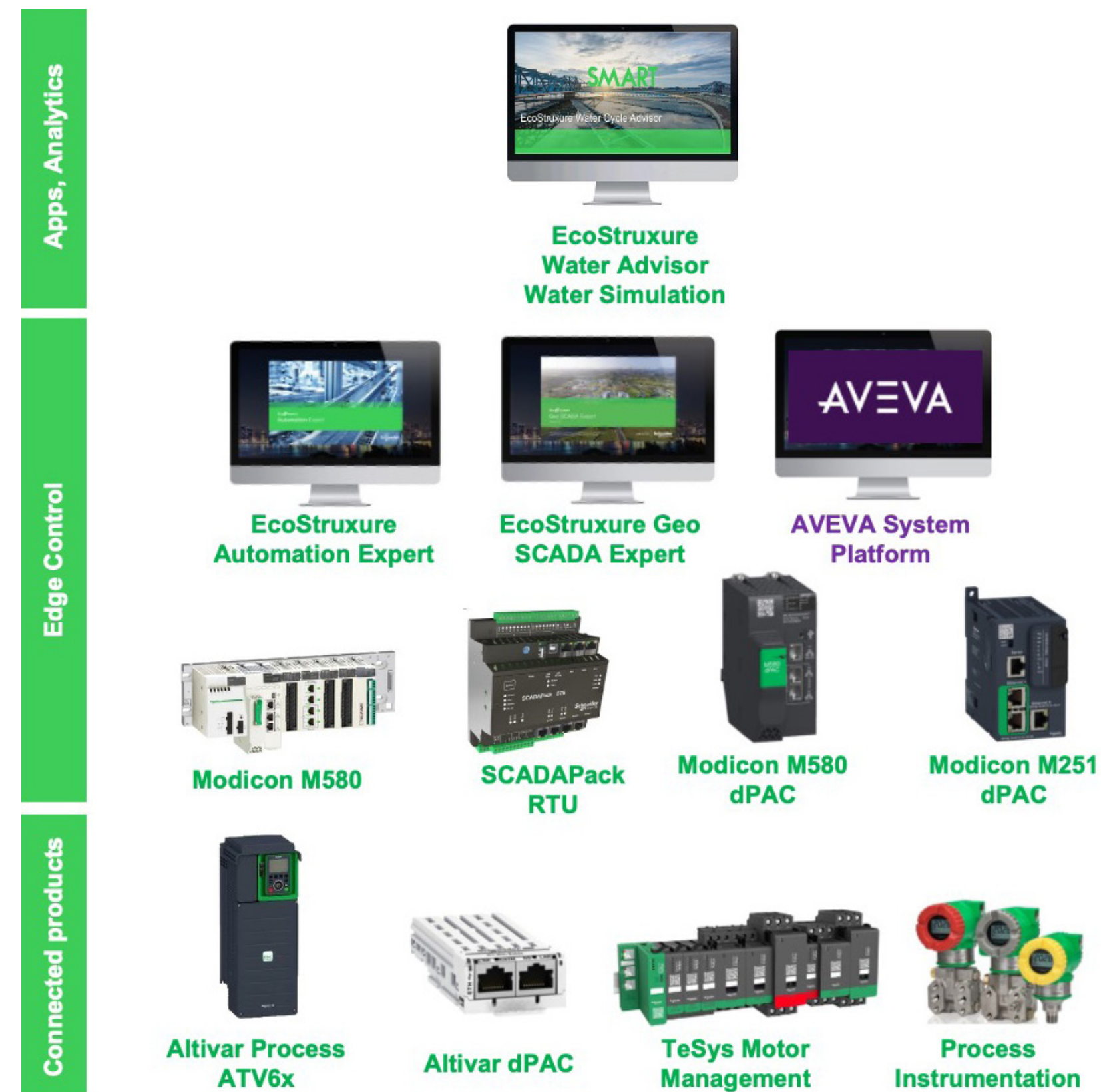
- Do you help to reduce your water losses and ensure water quality by improving water conservation?
- Do you need better insights to help you improve water resource management?
- Do you want to optimize the pressure in your entire network to reduce energy consumption used for pumping and the stress to pipes?
- Do you need leak detection and real-time information from the entire distribution network embedded into SCADA?





# Integrated water network management

## Solution architecture



Digital twin of the water distribution network embedded in remote SCADA. Operations managers and control room operators get the insights they need to reduce network management risk, cost, non-revenue-water, and energy use.

## Why it matters?

Optimize network operation in real-time

- Adjust to changing demands and reduce power consumption
- Proactively inform customers of supply issues
- Immediately identify any water supply pollution issues
- Control and optimize water quality

Up to 15% reduction of leakage (non-revenue water)

- Reduce time to detect water supply main leaks



# Real world project execution

## Field application example

### Acqua Novara (AVNCO)

**10%** reduction in water loss

**6 Mm<sup>3</sup>/Year** of water saved

**15%** reduction in water supply energy consumption

As more and more municipalities look to reduce costs and improve operations, they are finding that digitizing their water networks yields promising new ways to reduce costs and optimize operations.

Acqua Novara, for example, an Italian-based water utility, recently merged multiple municipal management organizations into one. Their water network supplies 450,000 people across 140 municipalities, and covers 3,600 square kilometers of area. Water network leaks and inefficient use of energy were resulting in high operating costs.

In order to address these issues and strengthen their network, they moved to a centralized management system and standardized their procedures. To support this process, they adopted EcoStruxure digitization technologies including smart sensors, variable speed drives (VSDs), analytics software for water loss management and water network optimization, integrated SCADA and telemetry, and Modicon PLCs. Following a smooth and rapid integration, they were able to benefit from a 10% reduction in water loss, 6 Mm<sup>3</sup>/year of water saved, and a 15% reduction in water supply energy consumption.

[Learn more](#)



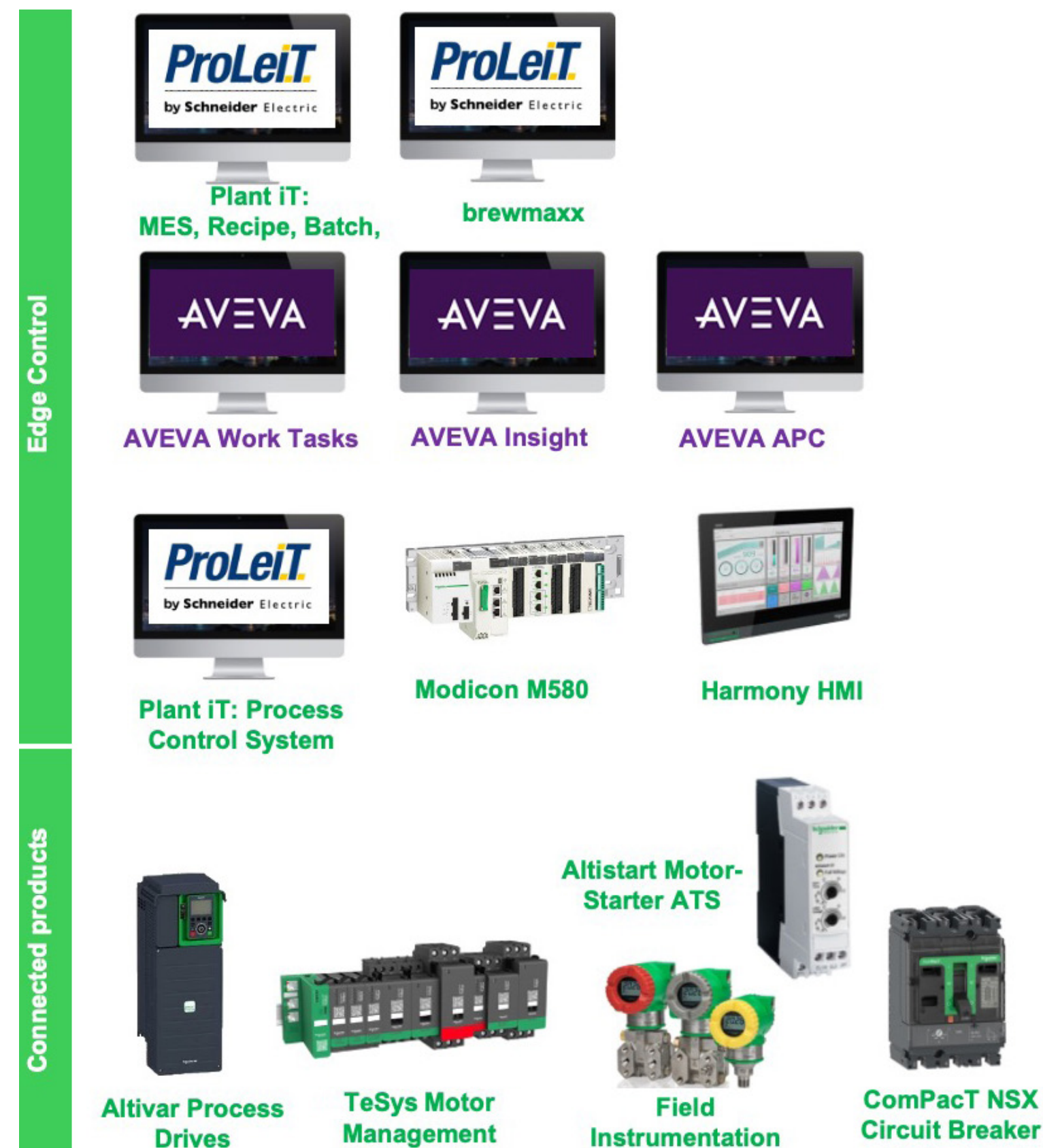
- Could you benefit from the improved quality, traceability, and asset productivity that comes from a single process control system for recipe, batch, route management and MES functions with a standardized user interface?
- Do you need a flexible, open control system that allows you to efficiently optimize processes?
- Do you need to reduce time to market and improve engineering efficiency with a control system that replaces programming with object-oriented parameterization?
- Do you need a system that allows you to make changes without stopping production?
- Do you need to replace non-value-added engineering with ISA S88 compliant bulk engineering, so your staff have more time to focus on innovation?





# Specialized brewing and liquid food solution

## Solution architecture



A state-of-the-art specialized process control system for CPG plants with recipe, batch and MES embedded for faster design/commissioning, increased operational efficiency, and reduced OPEX.

## Why it matters?

- Reduce engineering cost and commissioning time
- Helps to get the most from your investment in production equipment. Work with a team of experienced industry experts who can help you optimize process agility, efficiency, and sustainability
- Access our global network of partners – get the support you need wherever in the world you do business
- Dedicated library of industry programming objects drive standard, uniform, best in class engineering solutions



# Dairy supplier in Germany

## Agile manufacturing plant with production flexibility

Dairy supplier in Germany

Yield **800** million litres per year

**Flexibility** needed both now  
and into the future

**Strong**, successful partnership  
between customer, process OEM  
and Schneider Electric

The worldwide dairy industry is experiencing rapidly changing consumer demands that are driving changes in purchasing behaviour and the need for greater product variation.

The customer wanted to grow by expanding operations and adding a dairy plant to better serve new markets in Asia, the Middle East, and Africa.

Flexible filling technology was required, so a wide range of aseptic packaging could be offered to better serve the increasing variety of market needs.

Schneider Electric's extensive industry knowledge in CPG helped to understand the customer's needs and effectively support architecture and design. Specialized brewing and liquid foods solution is a complete single-source approach based on ProLeiT and AVEVA software. A close partnership with the process OEM was key to project success.

Using EcoStruxure Plant the customer successfully launched a new dairy plant with the capacity to process more than 800 million liters of milk per year. This agile manufacturing plant has the production flexibility to support the company's growth targets for years to come.

[Learn more](#)



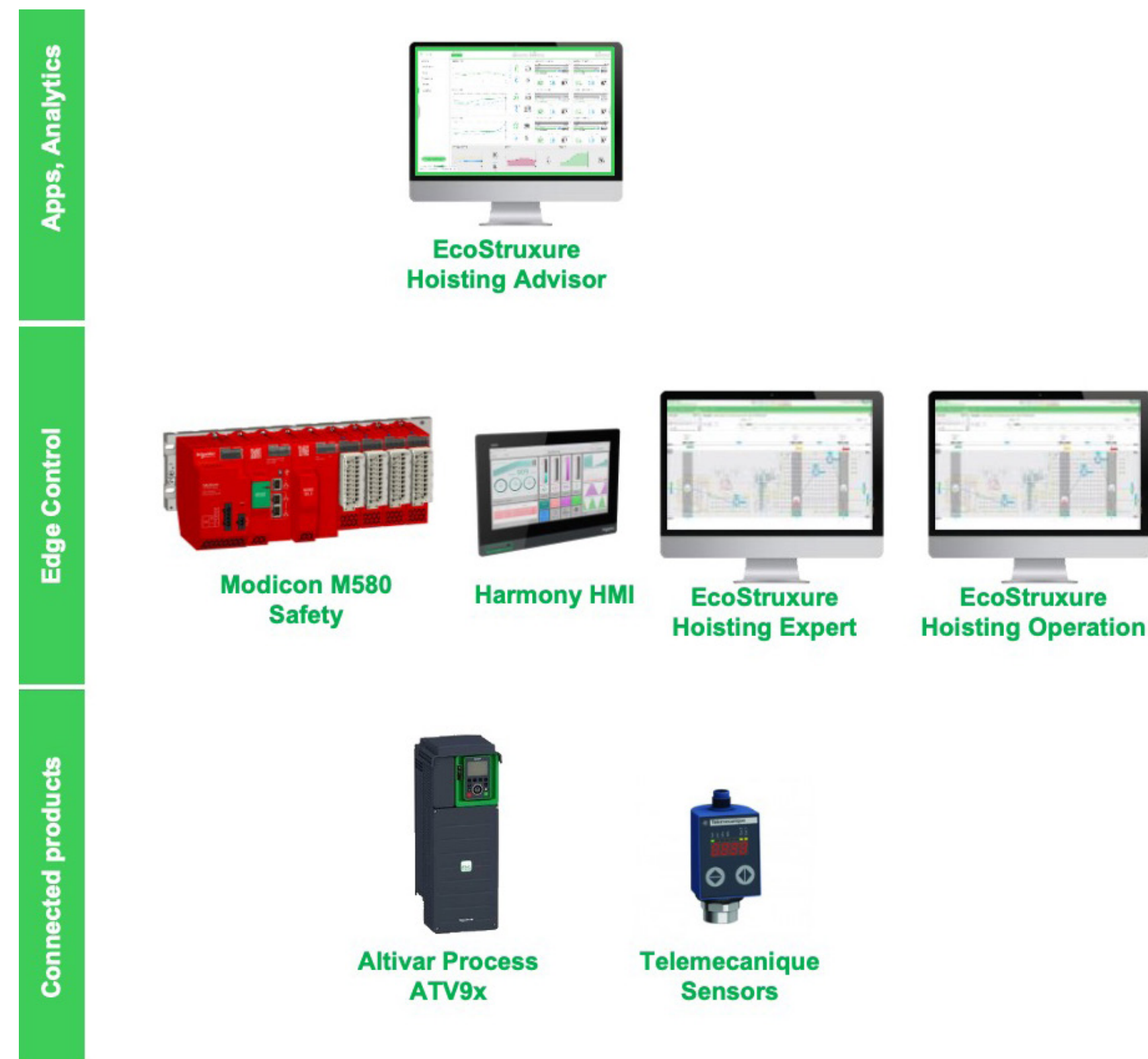
- Do you need crane control systems based on advanced algorithms and robust industrial technologies to help you improve safety, productivity, and efficiency?
- Do you need a solution that automatically coordinates warehouse management and crane operations?
- Do you need to improve throughput with optimized crane path trajectories?
- Do you need help to improve performance and safety with advanced anti-sway and auto positioning?
- Do you need to improve agility and efficiency by interfacing your ERP system with a Warehouse Management System (WMS) to manage inventory in yards (orders dispatch, etc.)?





# Integrated autonomous crane system

## Solution architecture



Solution for unmanned overhead cranes with warehouse management system for the iron and steel industry

## Why it matters?

Optimized scheduling and logistics through either manual or fully automatic operations

- Optimization of logistics and product traceability
- Integration with WMS systems

## Unmanned crane operation

- More manpower available for high value tasks
- Lower safety risk for workers



30% improvement in productivity

Reduction in manpower costs

"When the project is complete, it will become the first truly unmanned hot rolling workshop in China, providing experience for the smart transformation of China's steel industry."

Wenqing Yuan  
Hot Rolling Mill Plant Director, Baosteel.

## Baosteel Group

### Shanghai, China

The steel industry is challenged by excess capacity and lack of innovation. As Baosteel Group looked for ways to reduce costs and save energy, they realized they needed smart digital upgrades.

Rising labor costs and increasing safety standards meant a solution was required to increase the degree of automation of their process.

To achieve Baosteel Group's needs, a 1580 hot rolling smart workshop was created through Schneider Electric's expert engineering services. The build included a system that connected the entire workshop and optimized the hoisting and logistics system algorithm.

The suite of automated solutions included circuit breakers, drives, PLCs and Flux software management platform. The results were digital operation and a higher level of intelligence for the supply chain, analysis and decision making.

Baosteel Group reduced labor costs and increased safety. Productivity increased to 10,500 tons per day and mechanical losses declined.

[Learn more](#)

[Watch video](#)



- Do you need to maximize flexibility and OEE with seamless integration of robots and control solutions for machine and robotics?
- Do you need to offer more SKUs and different types of packaging by increasing the flexibility of your packaging machines?
- Do you want simpler more effective operations and maintenance a with machines which are connected to each other, plant MES, and maintenance systems?
- Do you need to reduce time to market and downtime with OPC UA for remote access and plant integration?





# Comprehensive package automation system for CPG

## Solution architecture



A range of cost-effective to high-performance packaging automation systems for CPG plants; plants which offer integrated state-of-the-art motion, robotics, application specific libraries, and a digital twin for high-performance flexible packaging lines, resulting in shorter time to market.

### Why it matters?

The inherent flexibility of robotic packaging lines helps significantly reduce time to market.

Helps improve OEE and agility with packaging lines which are better able to adapt to new or unexpected market demands.



30-40% cost savings

50% faster changeover time

Embedded cybersecurity

Building high-performance & environment-friendly machine systems for packaging, palletizing, and chocolate moulding for leading multinational customers in the food industry

# Livetechn S.r.l

## High-performance digital solution

The food industry is experiencing rapid growth, and OEMs plan to build higher performance, more environmentally friendly machine systems.

Livetechn S.r.l provides packaging, palletizing, and chocolate molding for leading multinational customers in the food industry.

Livetechn was looking to reduce changeover time, minimize machine footprint and optimize energy consumption. They also wanted a faster time to market for mechatronic module-mechanics.

For their compact, energy-efficient E-series monoblock cartoning machines, Livetechn chose an EcoStruxure Machine solution. The solution included the next-generation Lexium MC12 multi carrier system, which provides a new level of simplicity for integration and operation.

EcoStruxure resulted in a cost savings of 30-40% and 50% faster changeover times. Livetechn is now able to offer stronger worldwide service and support. The faster modular machines have a smaller footprint and embedded cybersecurity.

[Learn more](#)

[Watch now](#)



Do you need help to improve operational performance and sustainability with real time insights.

Do you need the right business analytics and intelligence to drive improvements in:

- Safety?
- OEE and line/machine performance?
- Production flow and throughput?
- Quality?
- Asset uptime with root cause analysis of downtime events?

Do you want a solution which is scalable and can easily be deployed plant or enterprise wide?





# Control tower

## Solution architecture



This flexible, scalable IOT platform supports manufacturing or process business intelligence by aggregating all operational and business process data flow.

## Why it matters?

- Leverage business analytics as a new source of increased competitive advantage
- Clear insights from industrial big data to decide which improvements to prioritize first to make the greatest difference
- Faster deployment, lower software costs, enterprise wide scalability



# Schneider Electric worldwide factories

## Standardized Control Tower for Manufacturing for Schneider Electric Plants

Deployed EcoStruxure solutions for manufacturing in **200** of our sites

Reduced energy costs **10-30%**

Reduced maintenance costs by **30-50%**

As a manufacturing solutions provider, Schneider Electric uses, tests, and implements the same solutions we recommend to customers. To improve our competitiveness at all our plants around the world and meet escalating demand, we strive to increase production capacity.

To do so, it's critical that we increase plant uptime, optimize plant efficiency, and empower our workforce of over 128,000.

We have a wide range of different manufacturing processes where complexity must be translated to simplicity. Processes need to be simple enough for anyone to manage.

The solution must support processes with different levels of automation from all-manual assembly lines to a fully automated process.

A manufacturing control tower has been developed as the scalable IOT-based manufacturing efficiency system for Schneider Electric plants.

This has led to multi-site operating insights, issue and root cause analysis based on multiple inputs and KPIs, and a better understanding of process situations for better decision making and customer satisfaction.

[Learn more](#)



Life Is On



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