OPEN

State of the art design techniques and digital tools help to streamline engineering and optimize industrial facilities to run efficiently for their entire lifecycle.

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Life Is On | Schneider Electric

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- Do you need a WWW object library with industry specific functions and features (e.g., aeration and dual-media-filter, basic CMMS)?

- Do you need reusable automation objects which embed edge control, visualization, alarming, documentation, and asset management?

- Do you need access to PLC modernization and migration services?

- Do you need integrated energy management features, supported by natively integrated connected products which provide information on energy consumption at the device level?

- Do you want to connect to assets remotely using mobile devices?

Integrated automation system for water and wastewater

Solution architecture

Apps, Analytics

EcoStruxure Water Advisor

AVEVA Industrial Software Suite

Advantage Service Plan

Cybersecurity Services

Edge Control

Harmony P6

AVEVA System Platform +

EcoStruxure Process Expert + WWW Libraries

Modicon M580

Connected products

Altivar Process Drives

A state-of-the-art process automation system for water and wastewater treatment and desalination plants based on transparent Ethernet architectures and a segment library which drives faster design/ commissioning, increased operational efficiency, and reduced OPEX.

Why it matters?

- Reduce engineering cost and commissioning time with general-purpose and WWW-segment-libraries

- Preserve the investments you've made in automation infrastructure, minimize risks and secure automation systems against cyber attacks.

- Increase operational efficiency with an intuitive user-interface, designed to support the next generation of workers

- Optimize maintenance efforts with integrated features which support operators and maintenance staff.

- Reduce energy consumption by focusing on efficient pumping and aeration.

Punta Gradelle, Italy
Veolia Wastwater Treatment plant

Customer challenge

- Implementing a particularly sophisticated control system inside a tunnel
- Flexibility to manage variations in the quantity of treated water (seasonality) from 2,500 up to 8,500 m3/h
- Reduce CAPEX/OPEX costs
- Guaranteeing service continuity, reliability and safety
- Compliance with regulatory requirements

Solution

- Full EcoStruxure Plant / Power system: Medium Voltage Medium Voltage, low Voltage, power meters, speed drives, EcoStruxure Process Expert (PES)

Customer benefits

- Increase of operational efficiency > 10% by integrating process & energy data, reducing response time system redundancy and interoperability
- Estimated energy cost saving of 8%
- Downtime reduction, improved traceability and reporting in compliance with regulations
- Better system monitoring

Learn more

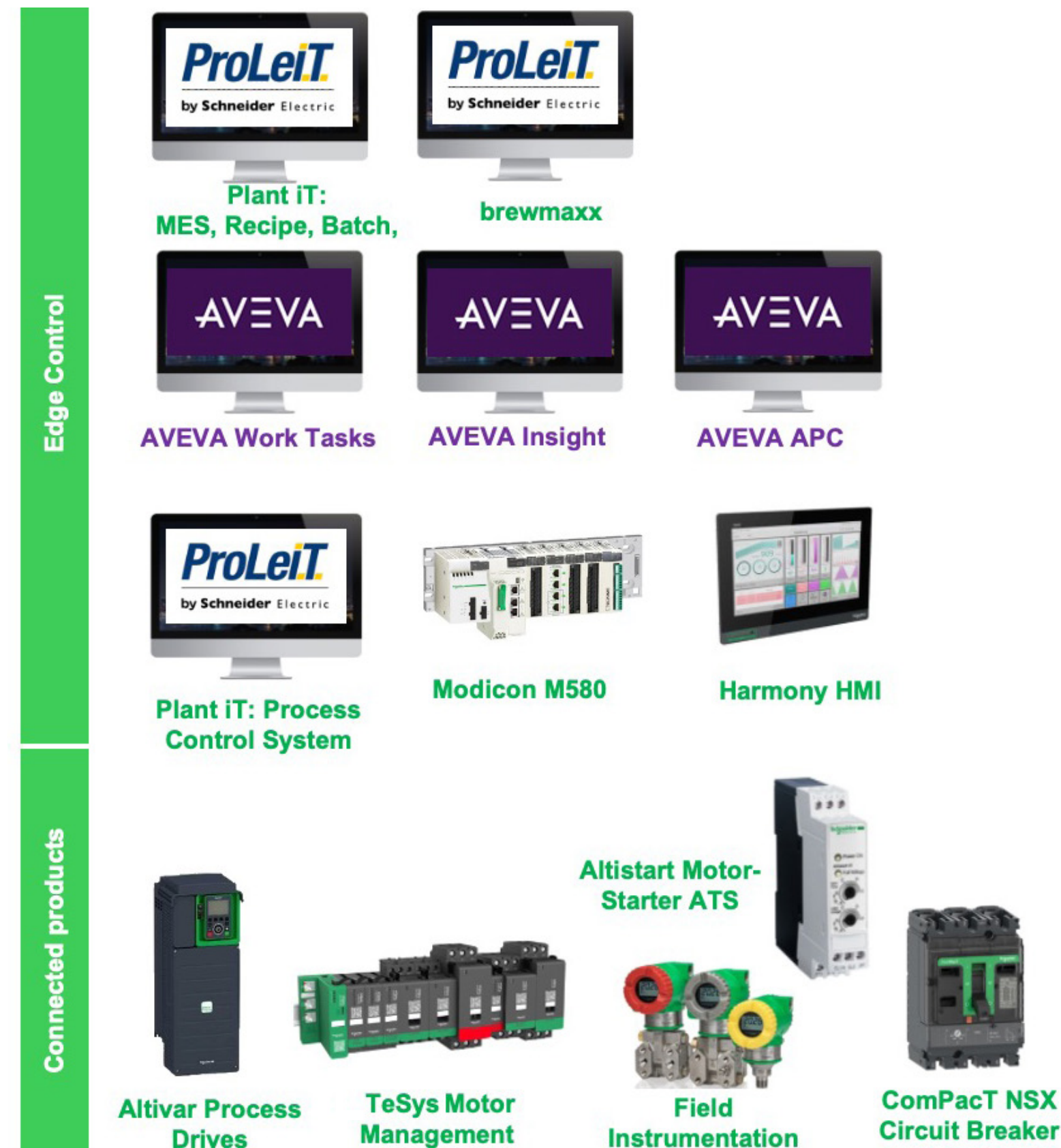View all EcoStruxure Plant solution resources

- Could you benefit from the improved quality, traceability, and asset productivity which 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 which allows you to efficiently optimize processes.

- Do you need to reduce time to market and improve engineering efficiency with a control system which replaces programming with object-oriented parameterization?

- Do you need a system that 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

Edge Control

Plant iT:
MES, Recipe, Batch,

brewmaxx

AVEVA Work Tasks

AVEVA Insight

AVEVA APC

Plant iT: Process
Control System

Modicon M580

Harmony HMI

Connected products

Altivar Process
Drives

TeSys Motor
Management

Altistart Motor-
Starter ATS

Field
Instrumentation

ComPacT NSX
Circuit Breaker

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

Why it matters?

- Reduce engineering cost and commissioning time
- Get the most from your investment in production equipment. Work with a team of experienced industry experts who know the best ways to 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

Yield **800** million litres per year

Flexibility needed both now and into the future

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

Dairy supplier in Germany
Agile manufacturing plant with production flexibility

The worldwide dairy industry is experiencing rapidly changing consumer demands that are driving changes in purchasing behavior 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.
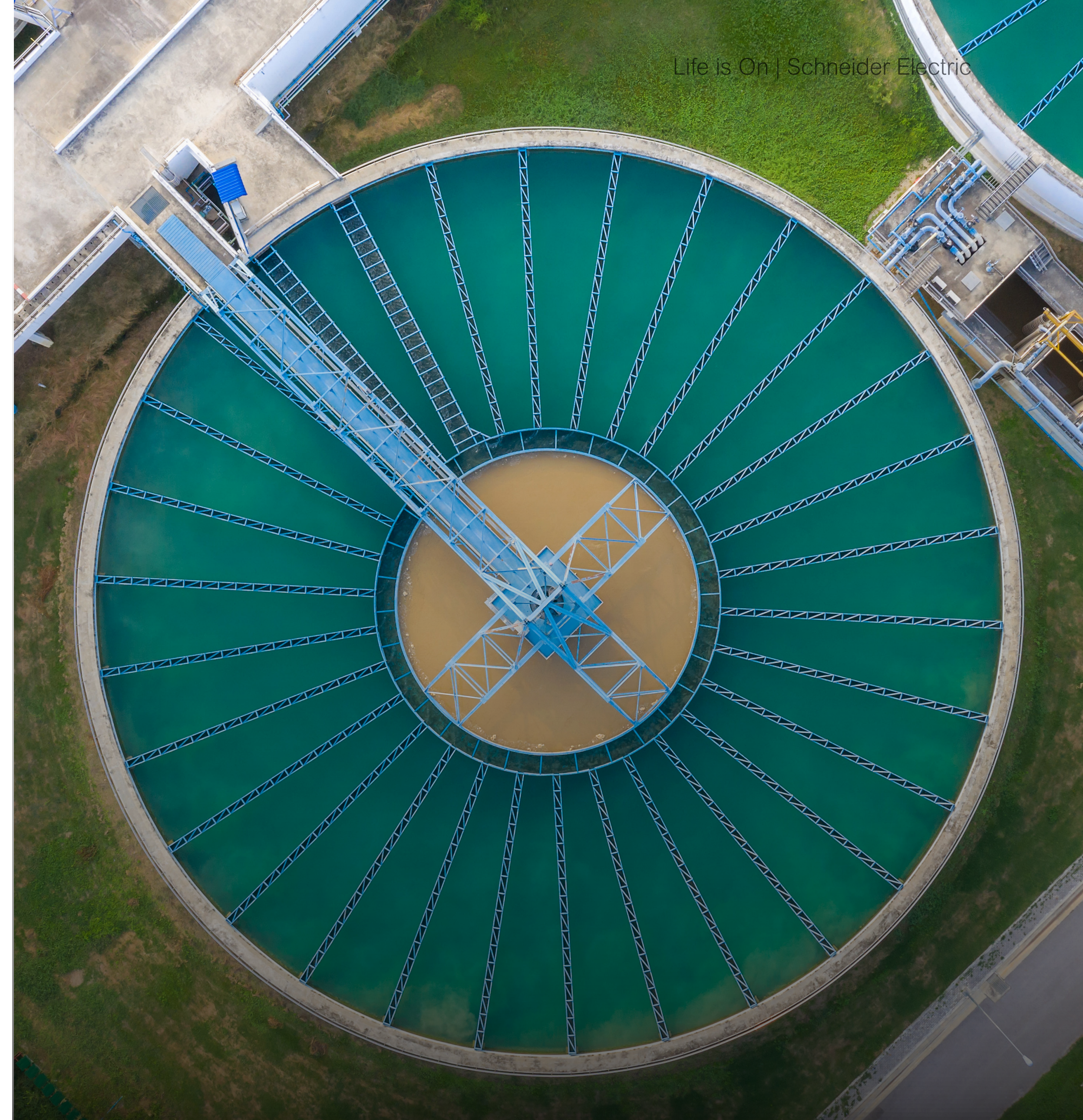
Flexible filling technology was required so a wide range of aseptic packaging could be offered to better serve the increasing variety of market needs.

Schneider Electric's extensive industry knowledge in CPG helped us to understand the customer's needs and effectively support architecture and design. This 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.

By deploying 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.
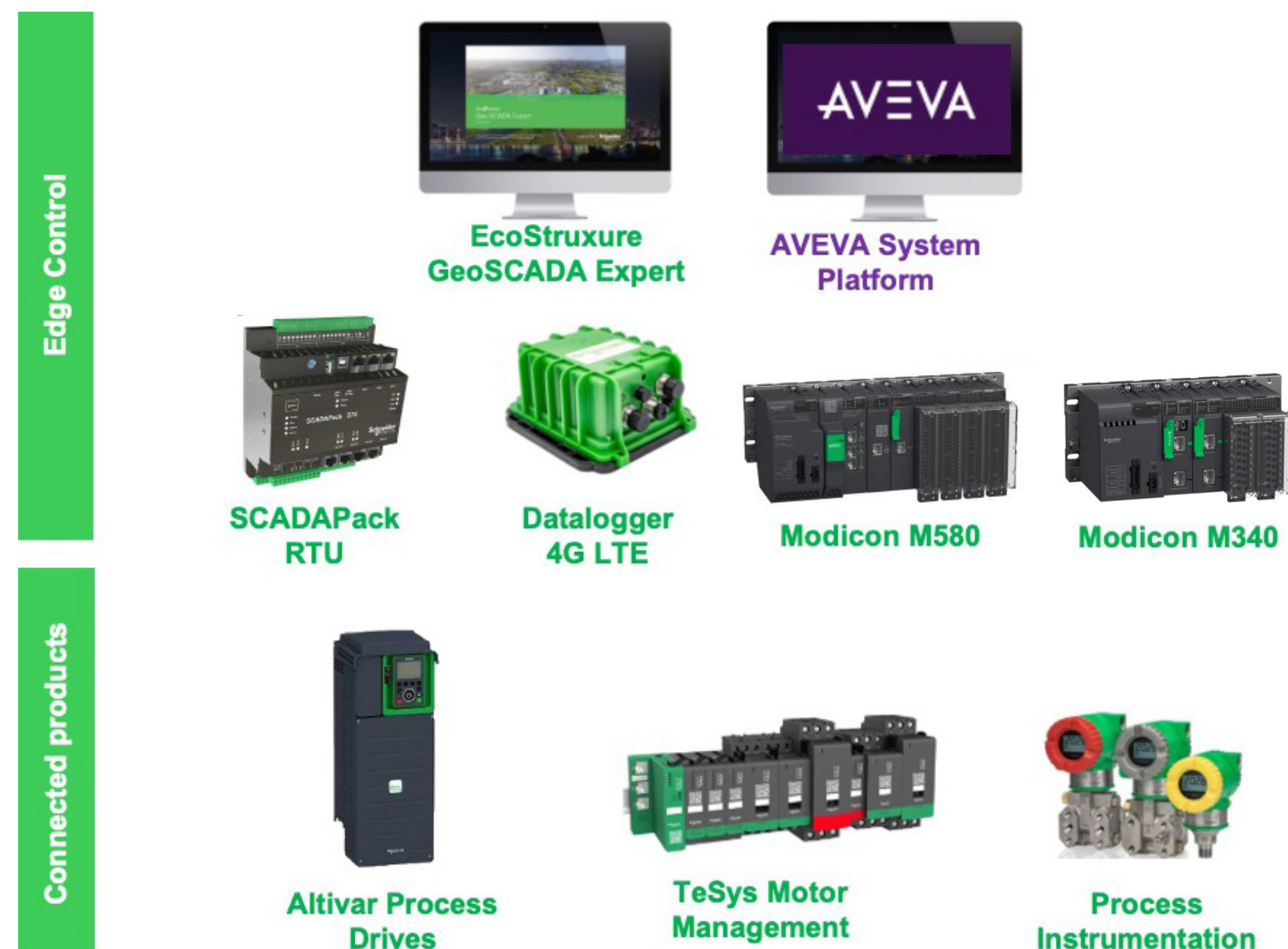
Learn more

- Do you want to reuse predefined, pretested control objects up to complete pumping-applications?

- Are you looking for a scalable solution capable of managing up to 1 million data-points spread across a huge area?

- Do you want to rely on various built-in redundancy options of your remote SCADA-system?

- Do you need natively integrated cybersecurity features that support a defence in depth approach?

Integrated SCADA and telemetry system

Solution architecture

Edge Control

- EcoStruxure GeoSCADA Expert
- AVEVA System Platform
- SCADAPack RTU
- Datalogger 4G LTE
- Modicon M580
- Modicon M340

Connected products

- Altivar Process Drives
- TeSys Motor Management
- Process Instrumentation

A unified integrated telemetry system for water and wastewater networks and management of water resources: Engineer, operate, and maintain your entire remote water infrastructure in the most secure, efficient, and sustainable way.

Why it matters?

- Reduced site visits and service calls
- A single version of the truth at your fingertips to support fast accurate decision making.
- Connect with Smart Water apps to reduce non-revenue-water and manage leaks.
- Reduce commissioning costs and minimize system maintenance efforts during the entire life-cycle
- Build and maintain a cyber secure remote infrastructure
- Optimize operation and maintenance efforts
- Operate reliably under extreme conditions

Yarra Valley Water
Power SCADA alarm capability and mobile data access

Yarra Valley Water identified the need to develop a more open and maintainable system with wide industry acceptance for increased future-proofing and to remove the dependence on a single vendor for support. Bringing the support in-house was a key objective. The new system also had to provide a high level of security, with a secure architecture and current generation security concepts.

Yarra Valley Water, the largest of Melbourne's three water corporations, installed a new SCADA system that allows them to better monitor distributed assets, perform predictive and reactive maintenance, and respond to incidents, such as environmental spills, more rapidly.

The results: Life is On with... 80% reduction in external support costs; number of faults reduced by **66%**

Results

- 66% reduction in faults reported
- 80% reduction in external support costs
- Simplified troubleshooting with support for condition-based preventative maintenance
- Automatic creation of work orders

- Real-time collection of performance and operational information
- Streamlined process of dispatching work crews and increasing efficiency

Learn more

Provider of water and sewerage services to **1.7 million** people and **50,000** businesses over **4,000 km²**

"We used to average 150 SCADA incidents per month. Within 4 months this had reduced to less than 50."
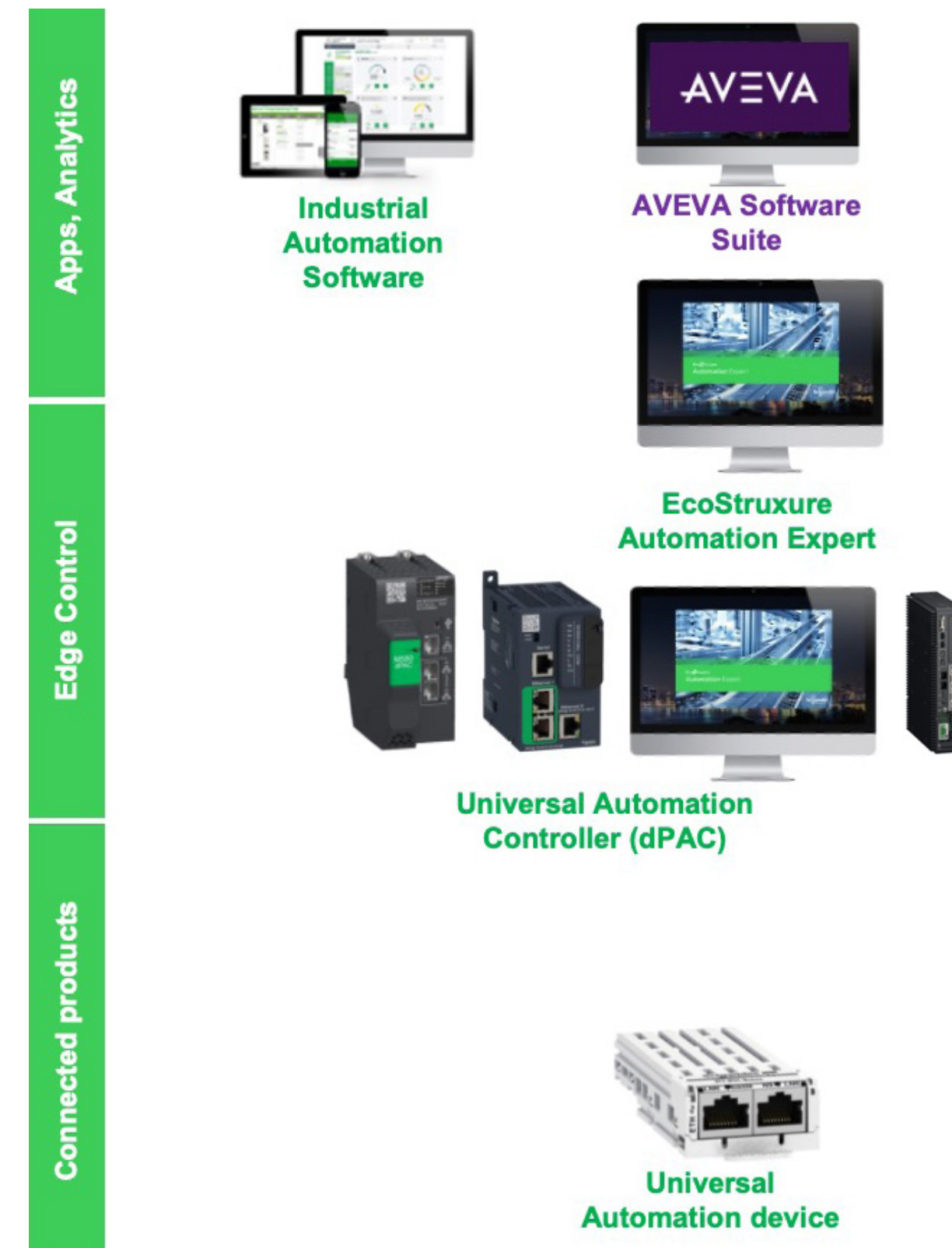
Roger Brown,
Yarra Valley Water

- Do you need inclusive, open standards and architectures to unify engineering across different vendors and technologies?

- Do you need digital continuity and integration of data?

- Do you need application programs which run on any hardware?

- Do you need access to industry libraries (water specific process bricks)?

- Do you want a multilayer architecture which can run applications wherever they are needed from field device to cloud?

Software defined automation for WWW
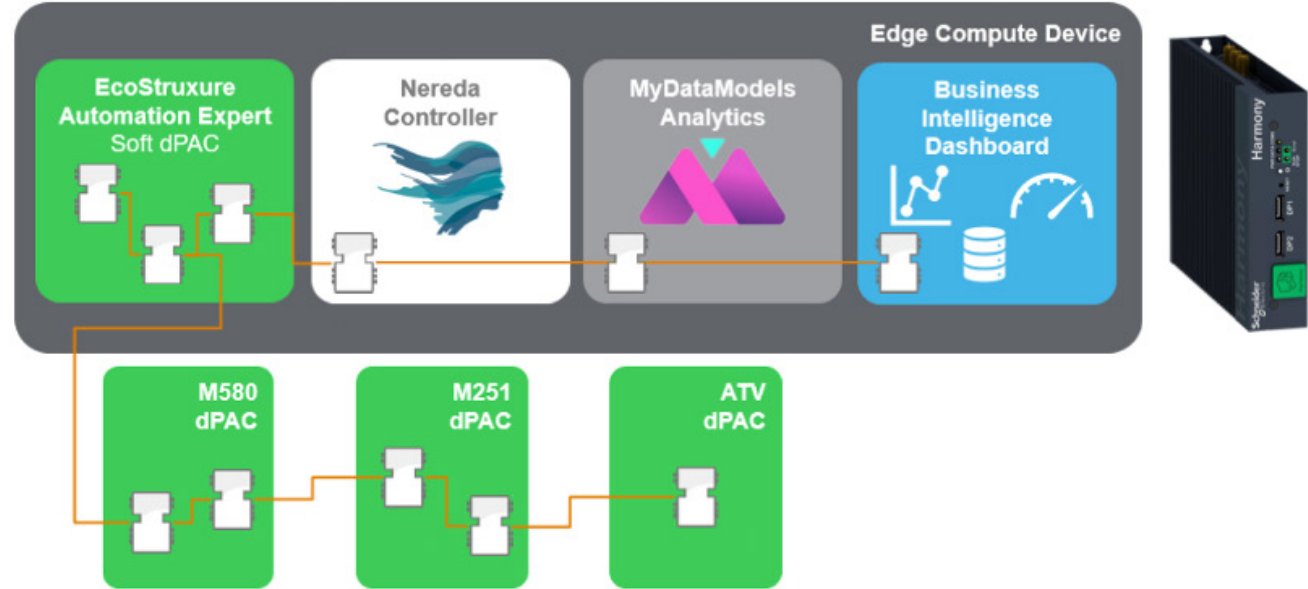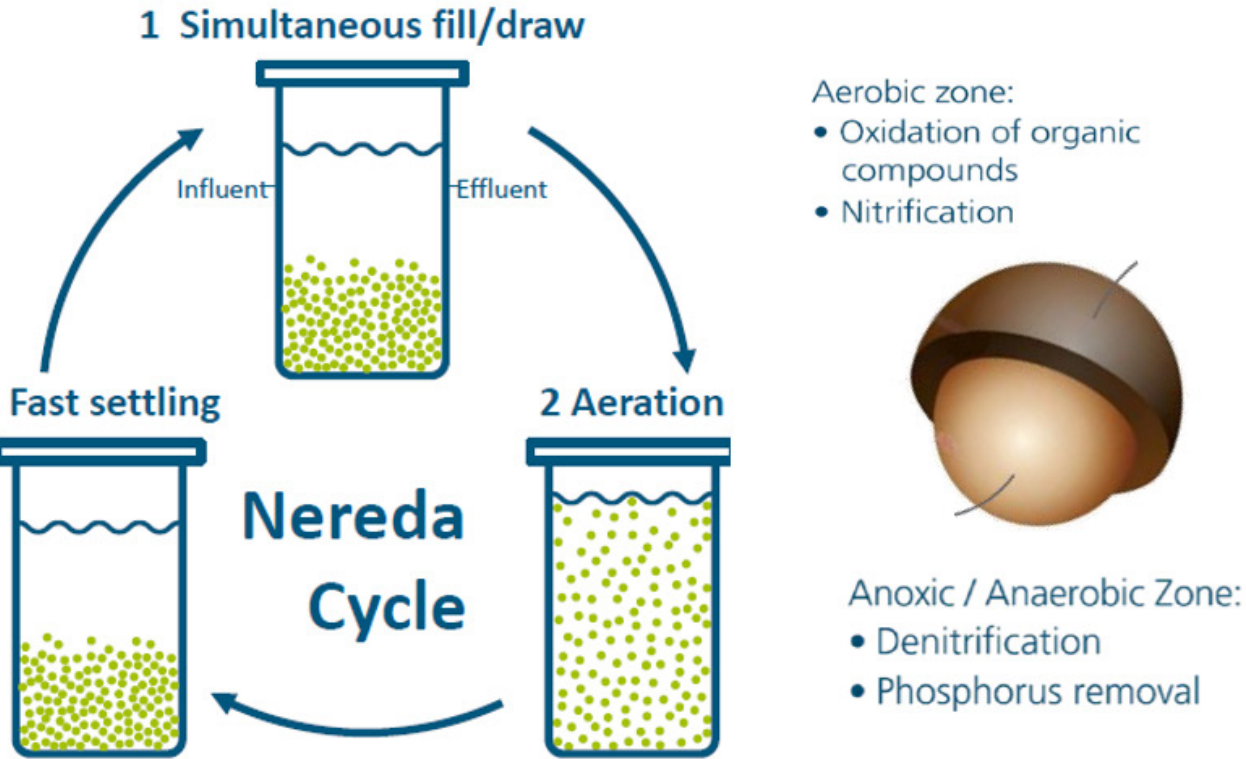
Solution architecture

A software centric automation platform to address all plant and network applications in water. Natively connects to the entire water project design software suite from design to operation and maintenance, incorporates smart-devices from 3rd party suppliers.

Why it matters?

• Reduce dependency on hardware suppliers

• Reduce time to operation

• Reduce architecture footprint

• Provides the level of resilience required for critical infrastructure

• Access to a wide range of software applications

• Enables new business models (e.g. pay-per-use models for Software as a Service)

• Increase agility

• Hardware independent, future proof automation platform

Nereda technology for Wastewater Plants

Customer Challenge

- Limited construction area for wastewater treatment plants or extensions of plants
- High energy costs of aeration processes
- High carbon emissions
- High capital expenditures
- Lacking compliance with more stringent regulations

The Solution

Nereda Process by Royal HaskoningDHV enables an unprecedented small footprint of wastewater treatment plants while reducing the power consumption and sludge production of the aeration process. Schneider Electric has been selected to develop a new automation platform for Nereda Plants based on EcoStruxure Automation Expert, integrating the Nereda Process Control in one single platform, improving significantly all the project phases: Design, Construction, Operation and Maintenance.

Results

- Reduce footprint of wastewater treatment plants by up to 75%
- Lower aeration energy demand (20%) and lower sludge production (10%)
- 10% savings on optimized but robust automation-architectures
- 50% improvements on engineering deployment
- 30% optimization on commissioning
- Increase operation efficiency
- Scalable and future-ready platform (AI/ML)
- Less downtime with easier and faster troubleshooting
- HW agnostic solution to optimize spares management

Learn more

- Do you need to maximize flexibility and OEE by seamlessly integrating robots with control systems for machine and robotics?

- Do you need to offer more SKUs and different types of packaging with increased packaging machine flexibility?

- Do you want simpler more effective operations and maintenance by connecting machines to each other as well as 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

Solution architecture

Edge Control

EcoStruxure Secure Connect

AVEVA Insight

AVEVA System Platform

Modicon M251

Modicon M262

PacDrive 3

EcoStruxure Machine Expert

EcoStruxure Machine Expert Twin

Connected products

Robotics

Lexium MC12 Multi Carrier

Servomotors

A range of cost effective to high performance packaging automation systems for CPG plants. Integrated state-of-the-art motion, robotics, application specific libraries, and digital twin for high-performance flexible packaging lines and short time to market.

Why it matters?

- Inherent flexibility of robotic packaging lines helps significantly reduce time to market
- Improved 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 system for packaging, palletizing, and chocolate moulding for leading multinational customer in the food industry

Livetech 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.

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

Livetech 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, Livetech 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. Livetech 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

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To learn more about how smart design techniques and digital tools help to streamline engineering and optimize industrial facilities to run efficiently for their entire lifecycle visit

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