Agile Manufacturing

EcoStruxure™ boosts manufacturing flexibility & efficiency
in the Food & Beverage, Household and Personal Care industries

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Agile Manufacturing

Transforming operations to improve flexibility and profitability

HMI and Data Integration
IoT ready system platform for better collaboration and reduced TCO

Process Control System
Process control system including MES functions designed to serve F&B and CPG applications

Process Automation
Innovative Ethernet based control platform for more performance, transparency and flexibility

Industrial Information Management
Transformation of your data into actionable knowledge and wisdom

Manufacturing Operation Management
Single plant and Multi-site IT platform for best-in-class operation, performance and quality

Smart Machines & Robotic
Packaging automation offer and know-how for outstanding line performance

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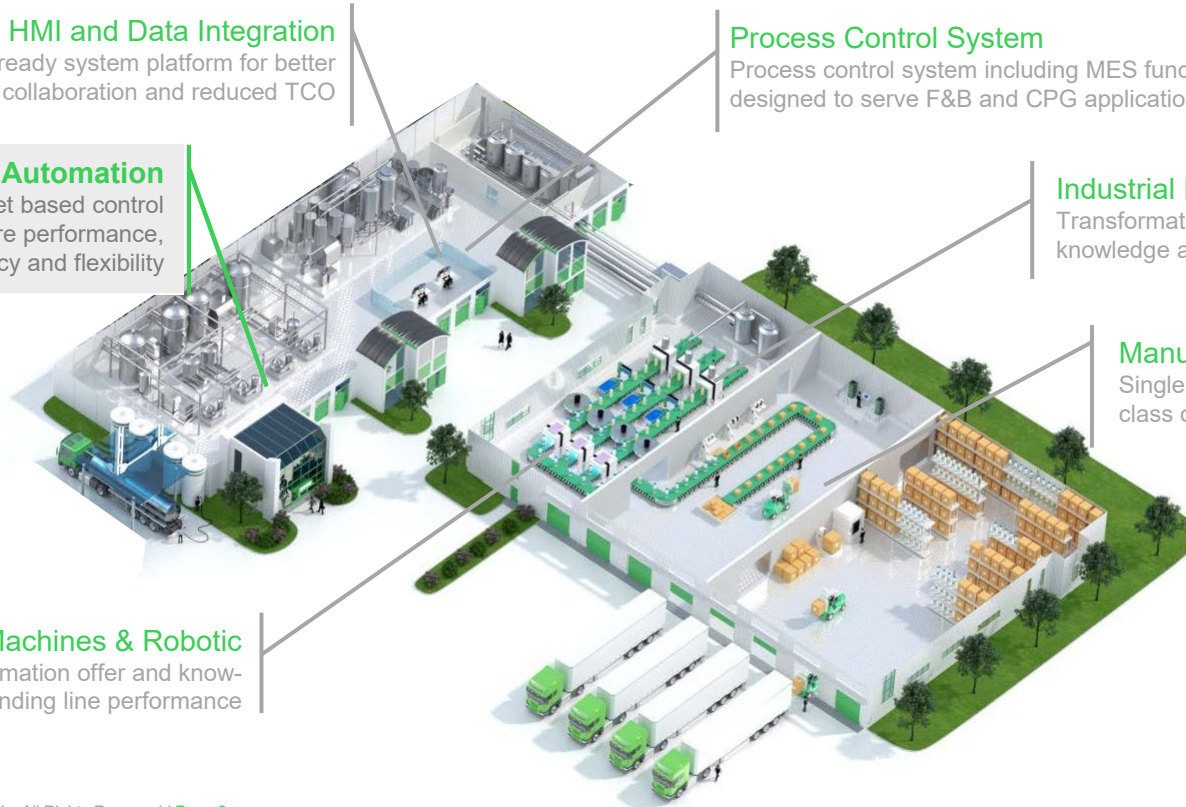
Process Automation: Modicon ePAC and connected products

Open, scalable and tested architectures to meet your process control needs with proven components
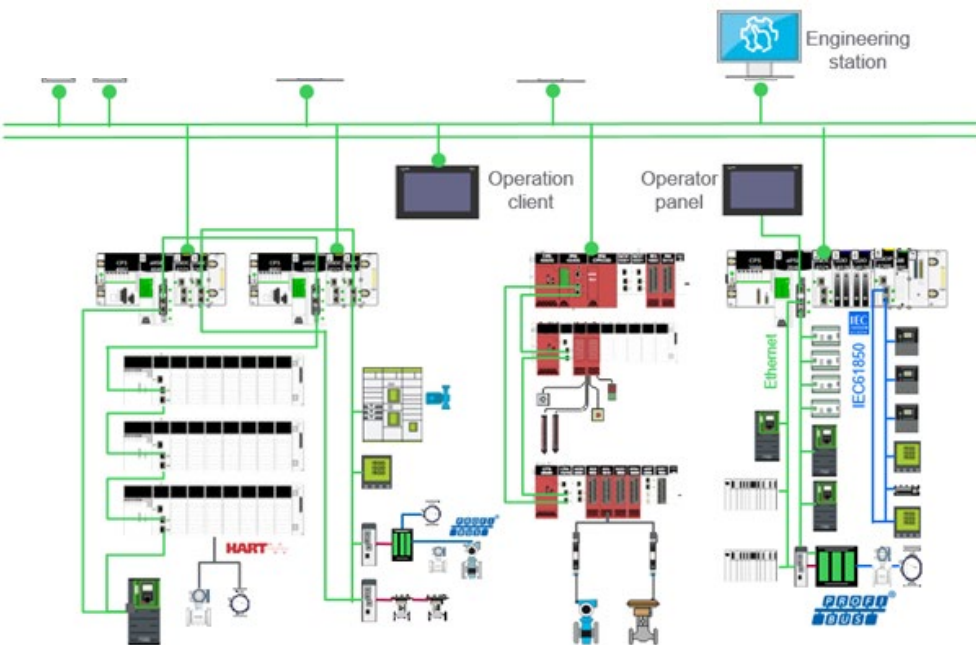
Based on standard communications

- Ethernet IP, Modbus TCP, Profibus, Hart, ASi
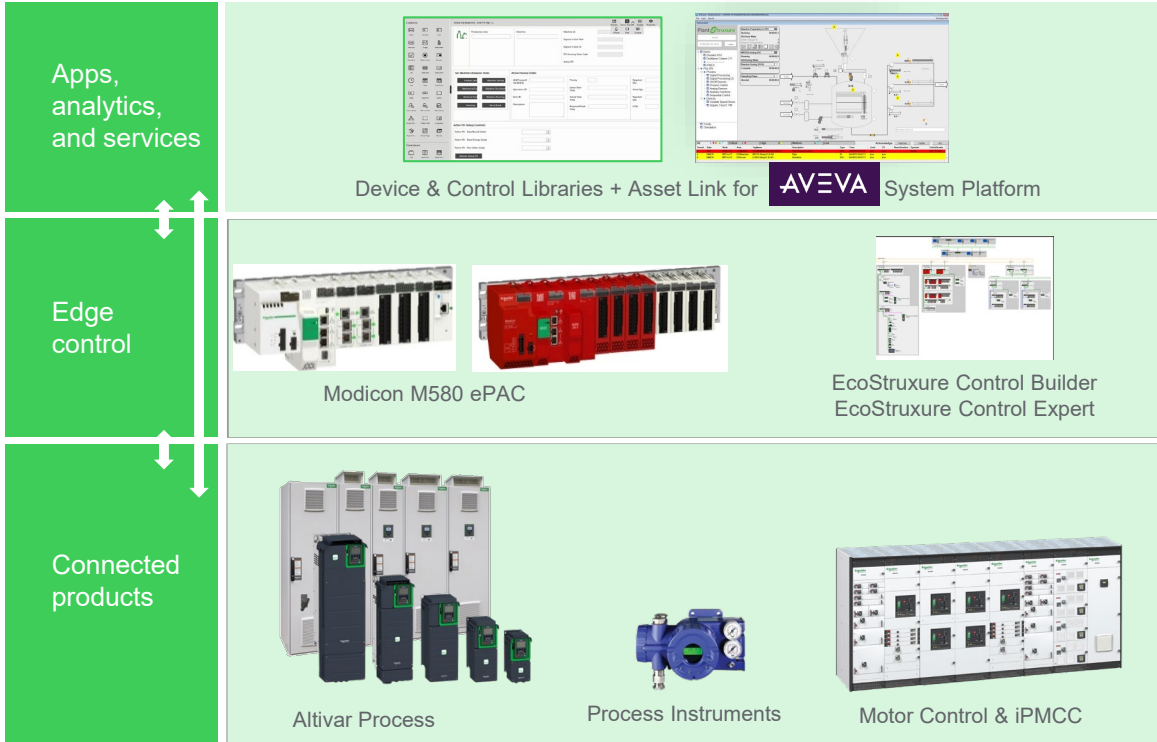
Integrating field proven components

- Modicon Controllers (M580, M340)

- Automation Devices Motion and Drives (Starters, Altivar, TeSys,…)

- Power Management Devices (Protective Relays, Power Monitoring, Circuit Breakers,…)

Providing transparency from plant floor to top floor

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Process Automation: Modicon ePAC

Control your process with more performance, transparency and flexibility

The solution

Apps, analytics, and services	Device & Control Libraries + Asset Link for AVEVA System Platform
Edge control	Modicon M580 ePAC — EcoStruxure Control Builder / EcoStruxure Control Expert
Connected products	Altivar Process — Process Instruments — Motor Control & iPMCC

Business Value

Transparency
Ready to use object libraries for System platform integration, optimized communications and native system diagnostics down to the device level

Performance
5 time faster cycle time, increased memory size, high availability, integrated safety, embedded cybersecurity

Flexibility & simplicity
On-line modifications, embedded communication switches, easy device integration on 100% standard Ethernet network, open field bus support
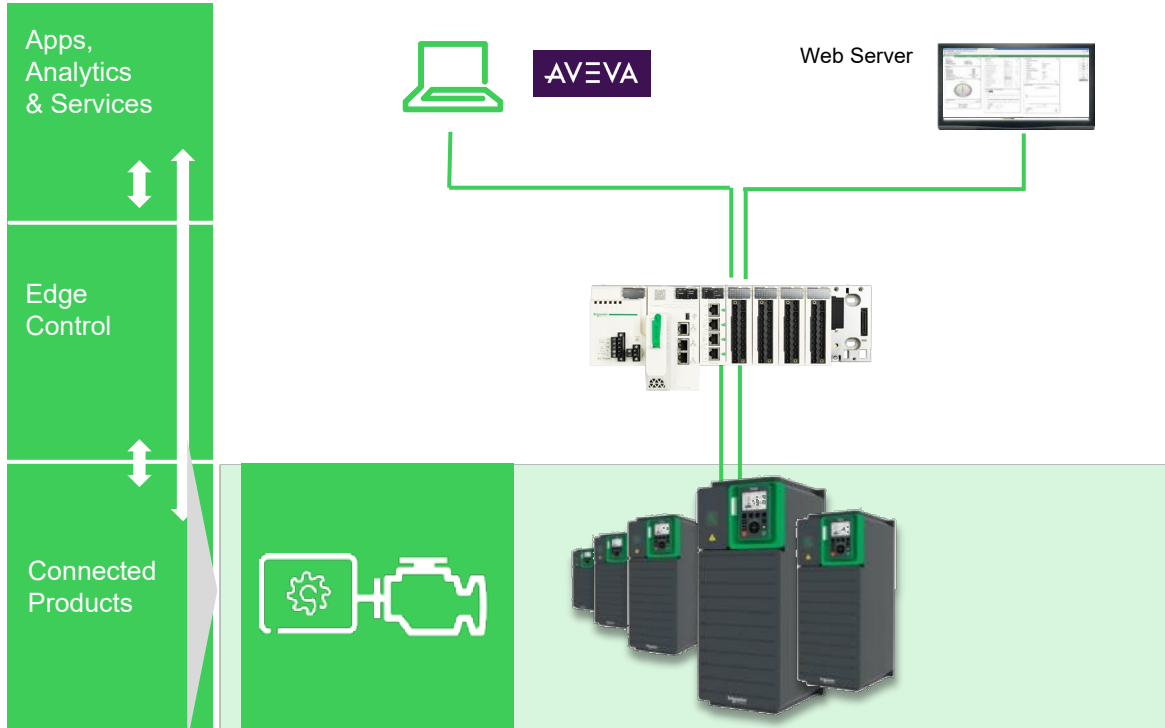
[Learn more]

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Process Automation: Altivar Process

A drive acting as a sensor to provide contextual data to systems and operators

The solution

Apps, Analytics & Services

Edge Control

Connected Products

AVEVA

Web Server

Business Value

Optimize asset utilization
Advanced motor control technology and unique decentralized application expertise (pump optimization, anti-cavitation,…)

Reduce downtime & maintain performance
Assets protection and predictive maintenance with drift detection

Optimize energy usage
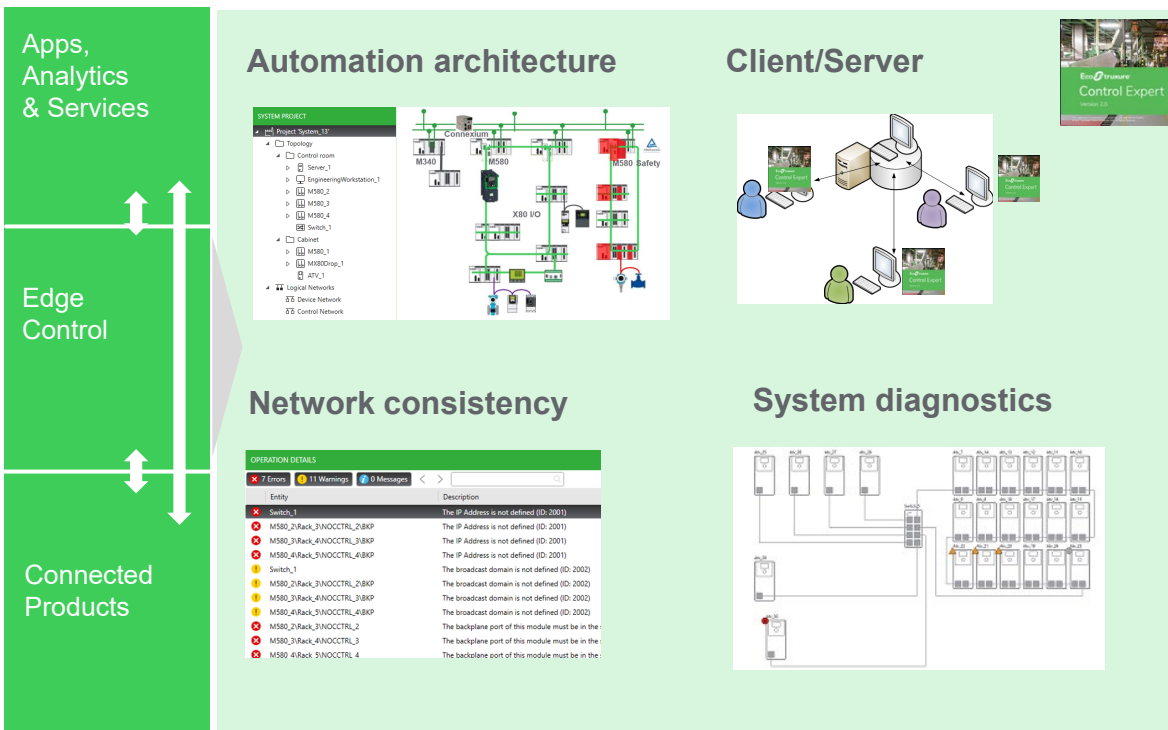Unique power measurement and state of the art harmonics mitigation capabilities

See the whole range

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Process Automation: EcoStruxure™ Control Expert

A simplified automation lifecycle

Apps, Analytics & Services

Edge Control

Connected Products

Automation architecture

Client/Server

Network consistency

System diagnostics

The solution

- A common environment to design and deploy the entire automation architecture : multi-PAC systems including various types of automation assets
- Easy to use graphical/tree presentation
- Network consistency check
- Client-server model with central repository
- Out of box system diagnostic

Business Value

- Simplicity to design and deploy automation architecture
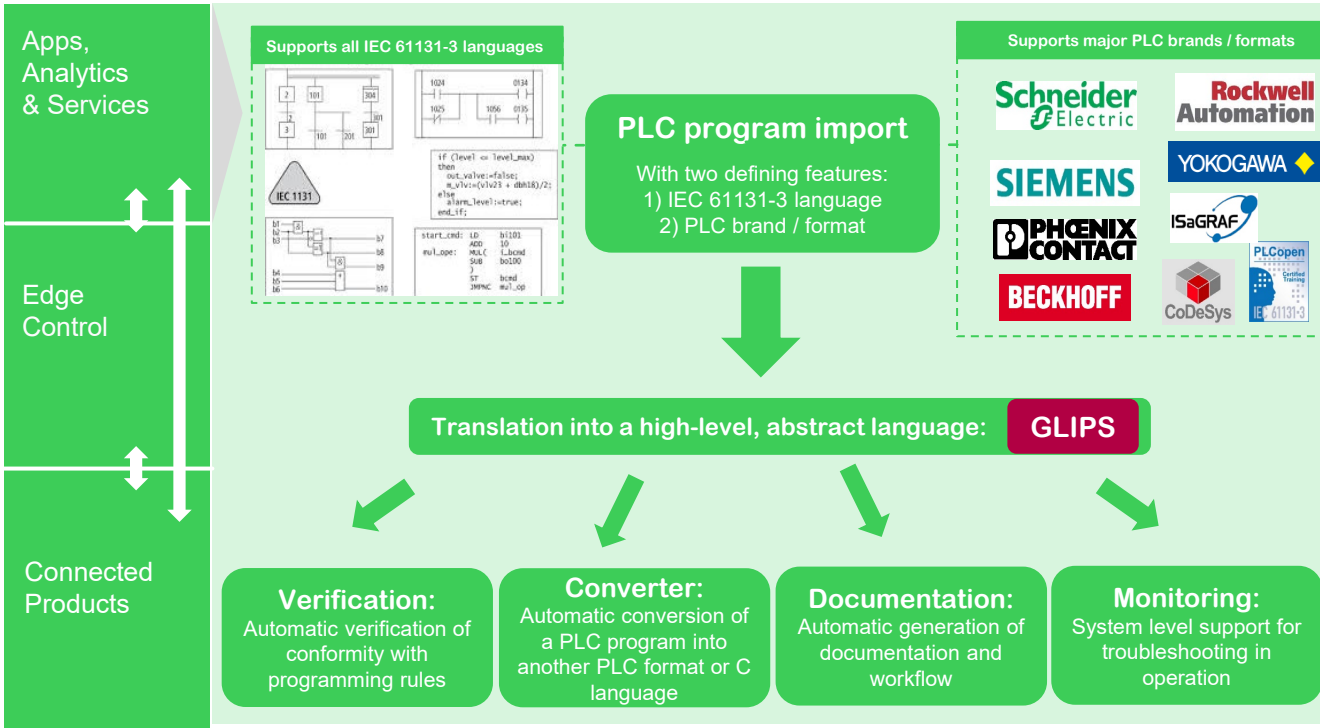- Efficiency to maintain the system

Learn more

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Process Automation : EcoStruxure Control Engineering

Bringing software engineering techniques to industrial automation

Apps, Analytics & Services

Edge Control

Connected Products

Supports all IEC 61131-3 languages

IEC 1131

Supports major PLC brands / formats

Schneider Electric

Rockwell Automation

SIEMENS

YOKOGAWA

PHŒNIX CONTACT

ISaGRAF

BECKHOFF

CoDeSys

PLCopen Certified Training IEC 61131-3

PLC program import

With two defining features:
1) IEC 61131-3 language
2) PLC brand / format

Translation into a high-level, abstract language: GLIPS

Verification: Automatic verification of conformity with programming rules

Converter: Automatic conversion of a PLC program into another PLC format or C language

Documentation: Automatic generation of documentation and workflow

Monitoring: System level support for troubleshooting in operation

The solution

- software-tool assisted approach to automate tasks that can no longer be efficiently carried out manually.

- 40 languages for 11 brands and 20 PLC models currently supported

Business Value

- Improve efficiency of program development and verification
- Fast and Automatic code conversion
- Prevent loss of intellectual property
- Facilitate troubleshooting with real time diagnostics

Learn more

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Process Automation: Control Libraries

Multi-facet Device and Process Control Object Library

Apps, Analytics & Services

Edge Control

Connected Products

Namur NE 107
Situational Awareness
Multilanguage
Diagnostic
Styles
Parameter Management

Power distribution

Drives & Soft starters

Motor Control & iPMCC

Process Instruments

The solution

- Prepackaged know-how implementing both control and operation facets
- Complete set of Hybrid Batch Control & Device integration
- Control / Equipment Modules options :
  - Liquid Processing
  - Bulk Material handling
- Automatic synchronization of Object hierarchy into Aveva system platform
- Globally supported and maintained

Business Value

- Customizable Enterprise standard
- Reduced engineering effort
- Enhanced operation

Learn more

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Wilmar Sugar

Simplifying control systems for improved safety

Customer Challenges
- Modernize the customer's largest sugar mill, the Invicta Mill, which has been operating at its current site for 98 years
- Replace the Invicta Mill's existing boiler control system equipment that was reaching its end of life
- Simplify systems
- Embed safety procedures

The Solution
As a long-time Schneider Electric customer, Wilmar chose an EcoStruxure Plant architecture with the Modicon M580 Safety PLCs and AVEVA's Citect SCADA software for their new control systems.

Customer Benefits
- Simplified control systems into one interface
- Improved safety, efficiency and productivity with a solution architecture that is easy to use
- Installation of the M580 Safety PLCs has allowed Wilmar to increase factory automation, driving better efficiencies through improved operational performance
- No lost crush time, reduced crush rates or reprocessing of materials required
- Approx. 20% reduction in commissioning & start-up time through the use of dynamic simulation

The Results: Life Is On with ... **Zero** lost crush time & **20% faster** start-up, setting a new benchmark for safety & reliability to be rolled out to additional plants
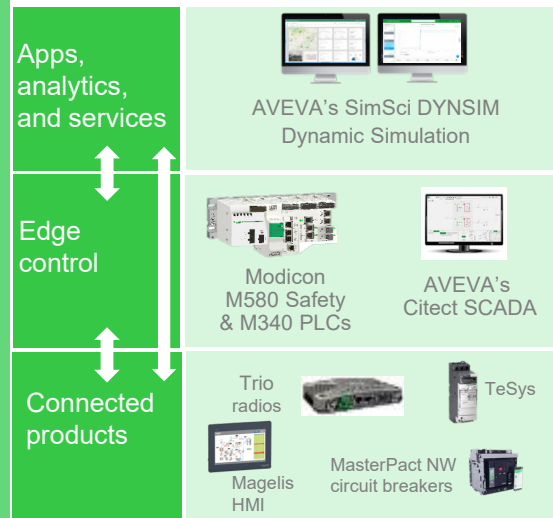
"We have been able to combine our automation, connectivity and software into one system which allows us real-time control and visibility."

**Russell Brown,
General Manager for Asset Management
Wilmar Sugar**

Link to Video
Link to Paper

Australia's **leading** producer of raw sugar, with an output of **2.5 million** tons of sugar a year from its **8** mills

EcoStruxure Innovation At Every Level **For Food & Beverage**

Apps, analytics, and services — AVEVA's SimSci DYNSIM Dynamic Simulation

Edge control — Modicon M580 Safety & M340 PLCs — AVEVA's Citect SCADA

Connected products — Trio radios — TeSys — Magelis HMI — MasterPact NW circuit breakers

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RCL Foods

Leading South African-based producer of branded & private label food products

Customer Challenges
- Improve uptime
- Scalable & expandable solution
- More operational information
- Local support & expertise
- Process control optimization not possible
- Reliance on external resources, skills on obsolete equipment

The Solution
Complete EcoStruxure Plant solution, with integrated software and domain expertise, designed and delivered by highly experienced Master Alliance and Certified Wonderware partner system integrator.
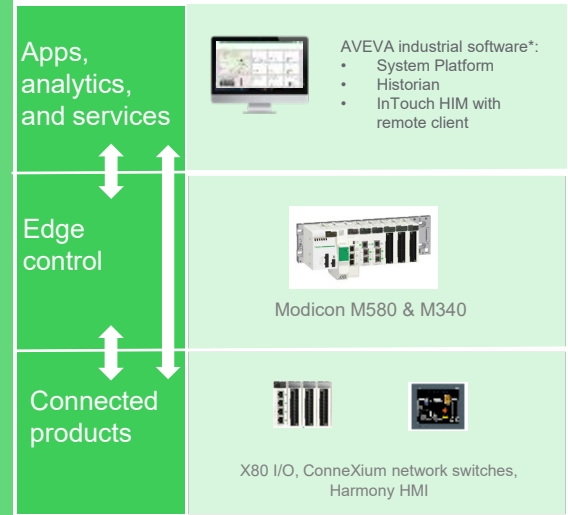
Customer Benefits
- Enabled technology (simplified process optimization)
- Modern, high performance PLC system with high availability in RIO & Hot Standby
- Reduced downtime (site received most improved division award)
- Improved operational information thanks to new software standards
- Expert local support
- In-house first line support

The Results: Life Is On with... A reliable and flexible automation system that facilitates 20% increase in plant's throughput

Close **partnership** with Master Alliance Partner, Control Software Solutions, modernizes & digitizes aging sugar mill

EcoStruxure For Food & Beverage
Innovation At Every Level

Apps, analytics, and services
AVEVA industrial software*:
- System Platform
- Historian
- InTouch HIM with remote client

Edge control
Modicon M580 & M340

Connected products
X80 I/O, ConneXium network switches, Harmony HMI

Link to Video   Link to Video (for SI)
Link to Paper

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Mataura Valley Dairy

Digitizing to meet growing market demand

Customer Challenges
- To build the "world's best nutritional plant"
- Traceability of product manufacturing
- Process batching
- Drilling under the Mataura River to run MV supply cables (11kV to 33kV)
- Maintain power supply integrity

The Solution
- Full EcoStruxure solution for automation and power systems, with integrated software
- Delivered by OEM partner with knowledge to meet customer requirements for batching, traceability, and seamless dataflow across the complex manufacturing process
- Strong service support
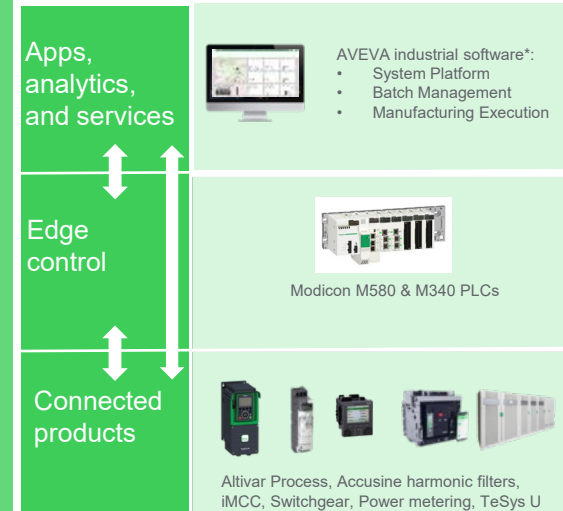
Customer Benefits
- Ease and flexibility to increase product portfolio & volume to meet growing demand
- Reduced OPEX budgets compared to conventional systems
- 20% faster time to market
- Cleaner power
- More cost-effective power
- Connected & integrated facility

The Results: Life Is On with... 20% faster time to market

Link to story

Back

China-controlled **240 million-dollar** plant in New Zealand turns out high-quality dairy products

EcoStruxure™ For Food & Beverage
Innovation At Every Level

Apps, analytics, and services

AVEVA industrial software*:
- System Platform
- Batch Management
- Manufacturing Execution

Edge control

Modicon M580 & M340 PLCs

Connected products

Altivar Process, Accusine harmonic filters, iMCC, Switchgear, Power metering, TeSys U

*The Schneider Electric industrial software business and AVEVA have merged to trade as AVEVA Group plc, a UK listed company. The Schneider Electric and Life is On trademarks are owned by Schneider Electric and are being licensed to AVEVA by Schneider Electric.

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EcoStruxure for Food & Beverage / CPG

Agile manufacturing
Boost manufacturing flexibility and efficiency

- Manufacturing Operation Management
- Industrial Information Management
- Process Control System
- HMI and data Integration
- Process Automation
- Packaging Automation

Efficient facilities
Safer, more available, and greener resources

- Smart Building Management
- Power Safety & Availability
- Power Quality & efficiency
- Renewable Energy & Microgrids
- IT Infrastructure Management

Resilient supply chain
Manage complexity and reduce logistics costs

- Agriculture Efficiency & Sustainability
- Suppliers Management
- Supply Chain Optimization
- Cold Chain Monitoring
- Product Information Management

Food Safety & Traceability
Ensure compliance and trust across the product life cycle

- Food Defense
- Cybersecurity Services
- Digital Calibration
- Raw material traceability
- Production traceability
- Product Identification & Tracking

Energy & Sustainability
Reduce footprint and meet sustainability goals

- Sustainability Consulting
- Energy Demand Services
- Strategic Energy Sourcing
- Enterprise data management
- Energy as a Service

Asset Performance
Maximize return on capital expenditure

- Assessment and Consulting
- Enterprise Asset Management
- Condition Monitoring
- Predictive Analytics
- Line & Process Optimization
- Modernization services

Workforce Empowerment
Improve staff knowledge, productivity and collaboration

- Operator Training Simulator
- Augmented & Virtual Reality
- Workflow Management
- Staff Schedule Management
- Operator Knowledge Sharing

Digital Engineering
Cut time, cost and risks of capital project engineering

- Electrical CAD
- Building Information Modelling
- Integrated Engineering-Design
- Digital Asset Visualization

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Let's talk about

Eco**struxure**™
for Food & Beverage

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