

# SAFETY

Safety must be at the very heart of your business; to protect your people, assets, and the environment while ensuring maximum profitability.

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Life Is On

**Schneider**  
Electric

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- Do you need control safety functions up to SIL3?
- Do you need hot standby safety with redundant CPU and power supplies?
- Do you want dual certification for process and machine?
- Do you need to integrate process instrumentation for safety instrumented functionality?
- Do you want to connect to drives and other safety devices using CIP safety?



# Safety control and monitoring

## Solution architecture



Safety system for critical applications, such as access control and guarding, emergency shut down, burner management systems, fire and gas.

## Why it matters

- Process and safety control in the same engineering environment, in the same Programmable Automation Controller
- Increased overall availability, reliability and safety of process control systems
- A single product which help you comply with multiple safety directives.
- Simplified wiring, interfaces with complex safety devices (Altivar Drives, robot, etc.)
- Helps provide the extensive information required for plant Safety Instrumented Function management

# Wilmar Sugar Safety control and monitoring

## Customer challenge

Wilmar Sugar needed to modernize aging control systems at their largest sugar mill and take advantage of the latest automation technologies to integrate safety functions, replace end-of-life boiler control equipment, and improve their operation's overall performance and reliability.

## The solution

EcoStruxure Plant architecture with Modicon M580 Safety, M340 PLCs and AVEVA Plant SCADA software.

- Energy accounting and sustainability
- Safety and control functions in a single, combined engineering environment
- Enhanced real-time control and visibility
- Improved operational safety, efficiency, and productivity
- Upgrade completed with no lost sugar crushing productivity and 20% reduction in commissioning time

## Results

- Zero lost crush time and 20% faster start-up
- Established a new corporate benchmark for plant safety and reliability

[Learn more](#)

Australia's leading producer  
of raw sugar, with an output of  
2.5 million tons of sugar a year  
across 8 processing facilities

- Do you need an MES that has all functionality defined by ISA95 standard?
- Do you need to ensure safe operations, guidance and rules compliance for your workforce?
- Do you need to eliminate potential safety risks due to unplanned operations and inappropriate time pressures for your workforce?
- Do you need manufacturing execution system with reporting and analysis?



# Manufacturing execution system

## Solution architecture



Effectively manage safe operations, tracking material movement, consumption, asset and resource utilization, as well as optimize operations, including manufacturing execution, reporting and analysis.

## Why it matters

Maximize efficiency, uptime, quality, traceability, profitability and compliance of manufacturing operations. Proven ROI:

- More production efficiency
- Quality improvement
- Equipment uptime
- More sustainability
- More resiliency
- Manufacturing cost reduction
- Just in time production
- Bottleneck reduction
- Stock reduction
- Global view of production status
- Workforce empowerment by more safety for your workforce

# Valmet Automotive

## Production lines in Uusikaupunki, Finland adopting MES to improve operations and performance

### Customer challenge


- Due to growing demand for energy-efficient electric automobiles, the company was eager to have an MES solution installed quickly to enable the immediate ramp-up of manufacturing.
- It was important for the new software solution to easily integrate with existing software and hardware currently installed at the facility for quicker ROI

### The solution

- To enable production data to be easily transferred between the automation and ERP systems.
- To more easily share production information between departments and company executives.
- To effectively manage bills of materials and track and trace data used in the production of the end product

### Results

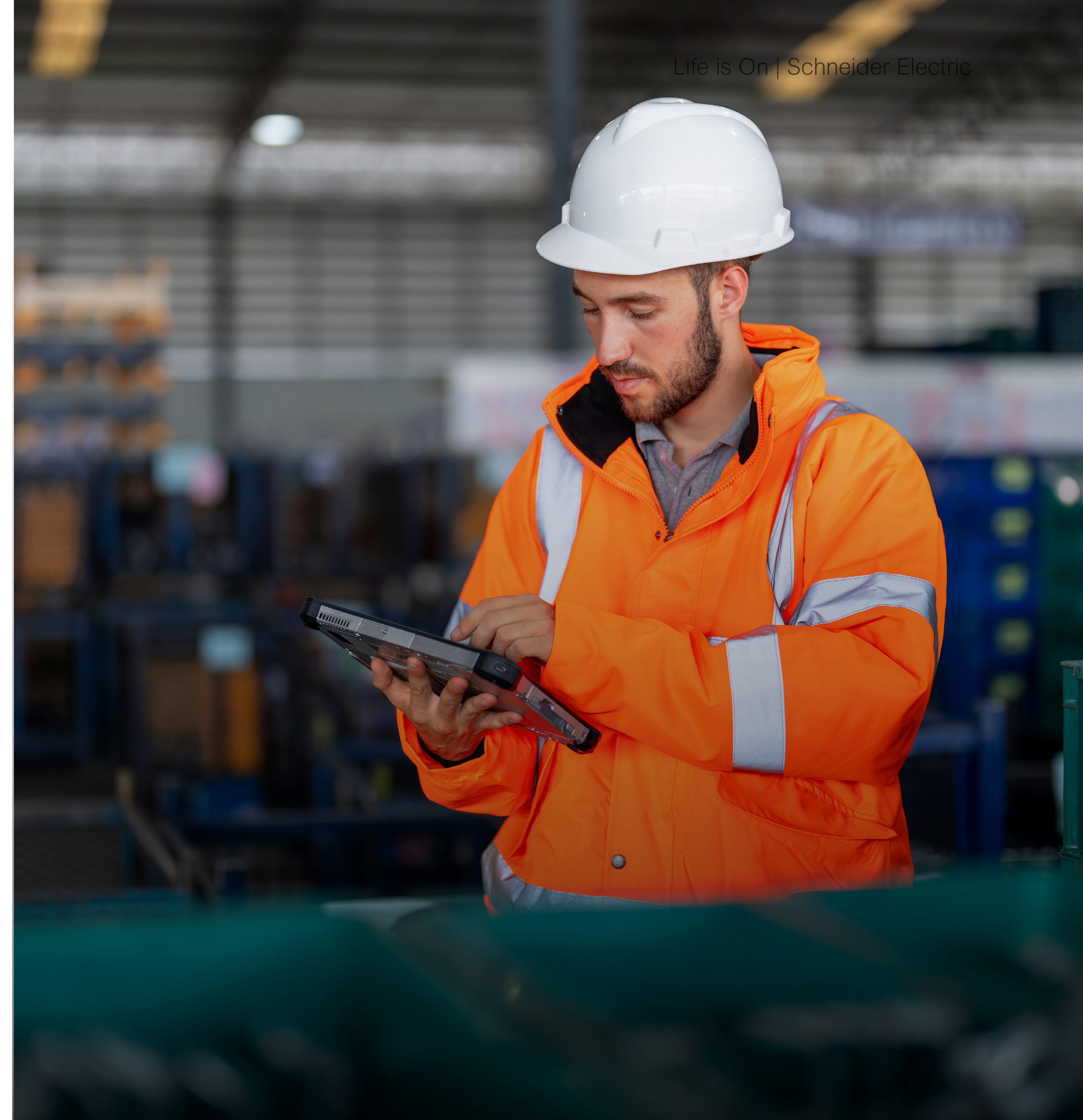
- The AVEVA solution was installed quickly, enabling Valmet to bring manufacturing online in three months.
- The software provided flexibility in the management of production data and bill of materials documents.
- With its web-based reporting capabilities, all necessary production managers and executives have immediate access to manufacturing data, enabling more effective decision-making.



Valmet Automotive's long-standing track record in the production of premium vehicles, including Porsche sports cars, has firmly established the reputation of this car maker of over their 40+ years of history.



- 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



A range of cost-effective to high-performance packaging automation systems. 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.

# Livetech S.r.l. Comprehensive packaging automation

## Customer challenge

To gain a competitive edge with their customers by reducing product changeover time, optimizing process energy consumption, and reducing machine time to market and footprint.

## The solution

EcoStruxure Machine solution including Lexium MC12 multi carrier, PaC Drive motion control, Harmony Edge Box, EcoStruxure Machine Advisor and EcoStruxure Augmented Operator Advisor.

- Advanced augmented reality solution for more effective, efficient maintenance
- Global support for Livetech's machine control systems
- Reduced footprint, time to market and changeover time thanks to Lexium MC12 multi carrier and motion control systems
- Embedded cybersecurity

## Results

- 30-40% cost savings
- 50% faster changeover time

[Learn more](#)

Building high-performance and environmentally friendly machine systems for the food industry

- Do you need a blueprint for the essential security and connectivity foundation required to deploy and implement industry 4.0 and IIoT concepts and models?
- Do you want to digitize industrial and production environments to achieve significantly improved business operation outcomes?
- Do you require documentation and secure reference architecture as part of your common defense in depth strategy?
- Do you need to authenticate all user and machines before authorizing any action at control level?



# Secure Architecture with M580 End-to-End Cybersecurity

## Solution architecture



Protecting business making plant networks more secure with defence against cyber threats.

## Why it matters?

Architecture compliance with 62443-3-3

- Built in security capabilities to protect your equipment and your production
  - OPC UA advanced security features e.g with certificate authority integration
  - Secure Engineering link Modbus over https
  - Secure firmware download
  - Firmware integrity
  - In-rack IPsec-VPN capabilities for EIP/Modbus
- Built in security features
- Designed for Critical Infrastructure and Essential Services providers
- Help maintenance teams make the right decisions remotely
- System security to protect data and assets
- Ensured business continuity
- Secure plant operation

# Industry #1 Beverage Company, UK



## Customer challenge

- Remote access cybersecurity solution
- 141 global manufacturing sites
- Remote desktop solution offering full IT/OT separation & military grade hardware
- Multi-factor authentication
- Configuration & user management.
- Threat analysis & patch management

## The solution

- Solution customized to meet customer's global operation demands
- Customer relationship management by Schneider UK team
- Local installation and site support offer

## Results

- Regional security expertise supported by global organization
- Fully compliant with ISA/IEC62443
- Ongoing comprehensive service offer
- OT provider with IT expertise

- Do you need to enhance the positioning precision of any movable machine / mobile equipment?
- Do you need INS (Inertial Navigation System) technology to be more robust to anomalies?
- Do you need to provide position solutions with higher availability and smoother trajectory?
- Do you need to provide precise remote monitoring of trajectory?



# High Precision Positioning System

## Solution architecture



A state-of-the-art positioning system for the MMM Industry for moveable machines (stackers, reclaimers, etc.) in outdoor environment with 2cm precision.

## Why it matters?

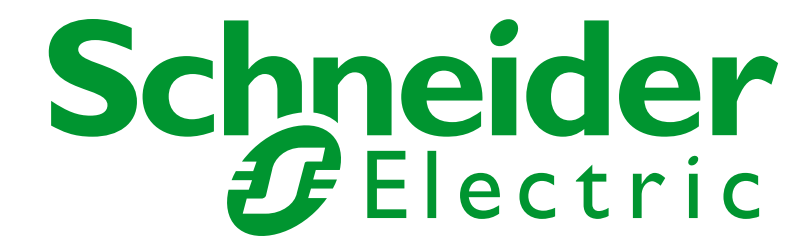
- Faster positioning of the machines leading to enhanced productivity
- Minimum maintenance efforts increase asset availability
- Minimize collision risk even in case of RTK\* communication outages
- Real-time positioning report increases awareness of nearby equipment operators
- Allow automatic and precise positioning without operator intervention

\*RTK=Real Time Kinematic

[Learn more about how this safety solution works in the MMM Industry](#)



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