EcoStruxure™
Innovation At Every Level

CONNECTIVITY

Pioneering the future of dairy for good

MATAURA VALLEY MILK – New Zealand
Part of The a2 Milk Company

How EcoStruxure™ Plant is improving
safety, efficiency, and productivity
with an easy-to-use solution.

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Life Is On | Schneider Electric

Mataura Valley Milk's Project Manager, Scott Waddell shows a colleague the Schneider process drive installation.

Building the world's best nutritional business was the ambitious goal that New Zealand dairy company Mataura Valley Milk set out to achieve in August 2016.

Five years later and now operating as part of The a2 Milk Company, that goal is still relevant. Mataura Valley Milk's production plant is an impressive accomplishment that comfortably justifies its early ambition. Employing over 100 people and supplied by 39 dairy farmers, Mataura Valley Milk is now benchmarking innovation and performance for other milk plants.

Situated in McNab, north of Gore near the bottom of New Zealand's South Island, the state-of-the-art facility was delivered on-time and within budget, an impressive achievement for a greenfield project.

"The success of the project, and growth of the business since has been executed by an ever evolving and developing team here in Southland," says Mataura Valley Milk's General Manager, Paddy McMyler.

The business has invested significantly in its people over the five years of operation and is proud of the growth and development of the team, which is predominantly made up of local people.

Schneider Electric was one expert partner, delivering its EcoStruxure solution, tailored to Mataura Valley Milk's strict requirements for a fully connected and integrated facility with real-time visibility of every process.

Connectivity

At Mataura Valley Milk's core is its dedication to customers. This demands the ability to quickly adapt and tailor products to their requirements.

"We must have agility around what we produce with no sacrifice of quality. Producing nutritional products is a complex, high-reward approach so the plant must be nimble and our expertise unmatched. To confidently make these decisions, visibility and trust in our data is crucial" says Robinson.

Schneider Electric's EcoStruxure Plant solution delivers and provides context to live, real-time data on every process at the plant through AVEVA's System Platform, Batch Management and Manufacturing Execution System (MES) software. In short, Mataura Valley employees receive any data they require immediately and know they can trust it.

Goal

Mataura Valley Milk wanted to build the world's best nutritional business that could quickly tailor production to specific customer requirements while guaranteeing the delivery of best-in-class quality products.

Story

Mataura Valley Milk's first operating season proved that the plant can consistently manufacture world-class nutritional products with microbial results well below standard requirements. Over 3,300 Aerobic Plate Count tests were performed during the 2018/19 season to identify colony forming units per gram (cfu/g). Mataura Valley Milk's highest recorded result was a mere 190 cfu/g, with the accepted limit being 5,000 cfu/g, believed to be a first for New Zealand and indicating that the plant's critical hygiene areas and processes benchmark performance worldwide.

Solution

Schneider Electric specified a robust EcoStruxure Plant and Power solution that delivers connectivity across all layers of the operation, minimises energy usage, guarantees power quality, and provides real-time data so that transparency and integrity are maintained across the supply chain, from farm ingredients to manufactured products.

Results

A connected and scalable backbone that enables Mataura Valley Milk to seize market opportunities, secure in the quality of its product and the reliability of its infrastructure. The company can remain innovative, agile, and versatile by confidently making decisions based on live data it knows can be trusted.

"We're able to track and trace every ingredient as it is processed through the facility," says Mc Myler. This track-and-trace approach provides complete transparency and ensures we produce consistent products of the highest quality for our customers. Schneider's solution gives us all the connectivity and accuracy we need.

"The EcoStruxure solution delivers connectivity across all business layers. It enables us to clearly interrogate data in the MES, which ensures we can make information-based decisions every day."

An end-to-end solution

Maintaining the integrity of vital data requires a robust and reliable hardware solution.

Mataura Valley Milk deployed Schneider Electric products across the plant, from the switchgear in the offices to variable speed drives, programmable logic controllers, active harmonic filters, and power monitoring, according to Mataura Valley Milk's Project Manager, Scott Waddell.

The equipment list includes over 200 Altivar Process variable speed drives, 14 AccuSine harmonic filters to ensure power quality and minimise power factor correction, air circuit breakers to reliably protect staff and equipment, and TeSys U motor controls to optimise machine efficiency.

The real-time data visibility and connectivity are delivered by Modicon M580 Ethernet programmable automation controllers, part of EcoStruxure's Edge Control layer.

Ultimately, Schneider Electric's EcoStruxure solution provides Mataura Valley Milk with an open and connected system architecture that enhances the efficiency, reliability, safety, sustainability, and connectivity of its infrastructure.

Waddell says, "Standardising on Schneider equipment gives us confidence around our power supply and the integrity of our operations. It's not just the reliability of their equipment but also the support and expertise we get from Schneider. We're able to see our real-time energy usage, and AVEVA's System Platform provides context to our data, enabling fine-tuning of our power usage and carbon footprint."

"Schneider Electric's EcoStruxure Plant solution delivers connectivity to all our business layers. It proves itself to us every day as we interrogate data in the MES.

- Brent Robinson,
Mataura Valley Milk
Project Manager

A strong backbone

The foundational aim of building the world's best nutritional plant continues to motivate each staff member as Mataura Valley Milk raises the bar on production methods and product quality.

This journey enables it to innovate continuously and strategise for the future.

"It's all based on a good backbone. From the moment we drilled under the Mataura River to run the high voltage supply cables that secure power to the site, to when the first products left our warehouse, we've been looking at how we can broaden our offer, maintain maximum quality, and produce more," says Waddell.

"Along the way, we've proven that our approach was sound, and this is evidenced in our commercial performance as well as our compliance and audit results. We've successfully progressed through AsureQuality's five performance-based verification audit levels without being held back, which justifies our audit processes and validates the effort that our staff and partners – like Schneider Electric – have put into the operation.
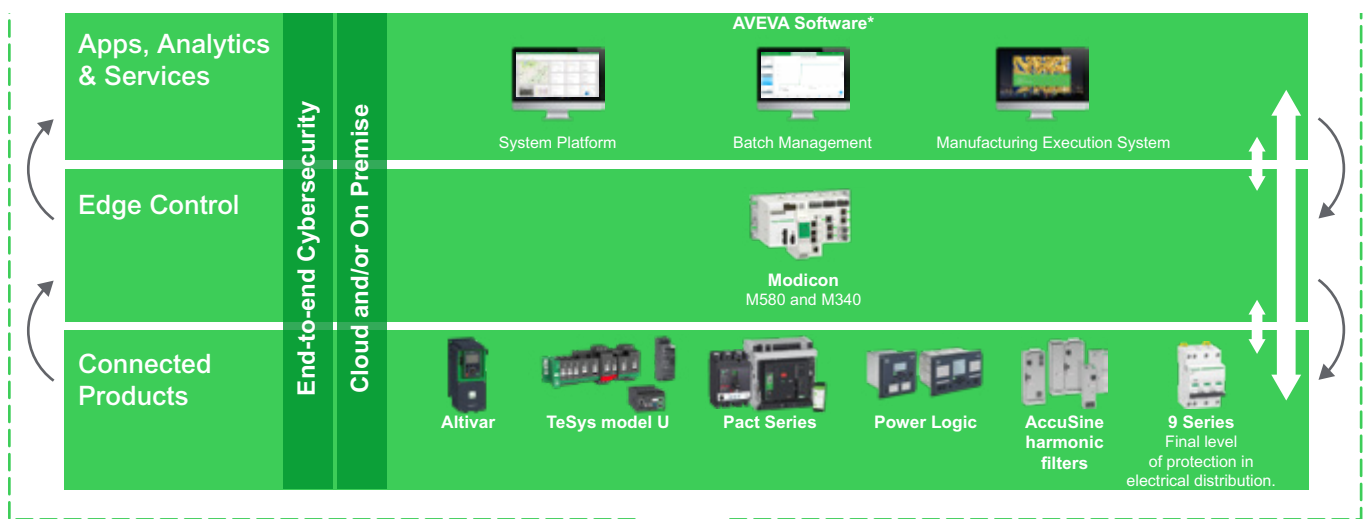
"The trust and confidence we bring to the table extends all the way through from our suppliers to our customers' customers. We're very proud of our short past and excited about our long future," Waddell concluded.

20%

faster time to market

EcoStruxure™ **Plant & Power**
Innovation At Every Level

*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.

EcoStruxure™
Architecture

Life Is On **Schneider** Electric

EcoStruxure™

Innovation At Every Level

IoT-enabled solutions that drive operational and energy efficiency

EcoStruxure is Schneider Electric's open, interoperable, IoT-enabled system architecture and platform.

EcoStruxure delivers enhanced value around safety, reliability, efficiency, sustainability, and connectivity for our customers.

EcoStruxure leverages advancements in IoT, mobility, sensing, cloud, analytics, and cybersecurity to deliver Innovation at Every Level including Connected Products, Edge Control, and Apps, Analytics & Services. EcoStruxure™ has been deployed in 480,000+ sites, with the support of 20,000+ system integrators and developers, connecting over 1.6 million assets under management through 40+ digital services.

One EcoStruxure architecture, serving 4 End Markets with 6 Domains of Expertise

EcoStruxure Building   EcoStruxure Power   EcoStruxure IT   EcoStruxure Machine   EcoStruxure Plant   EcoStruxure Grid
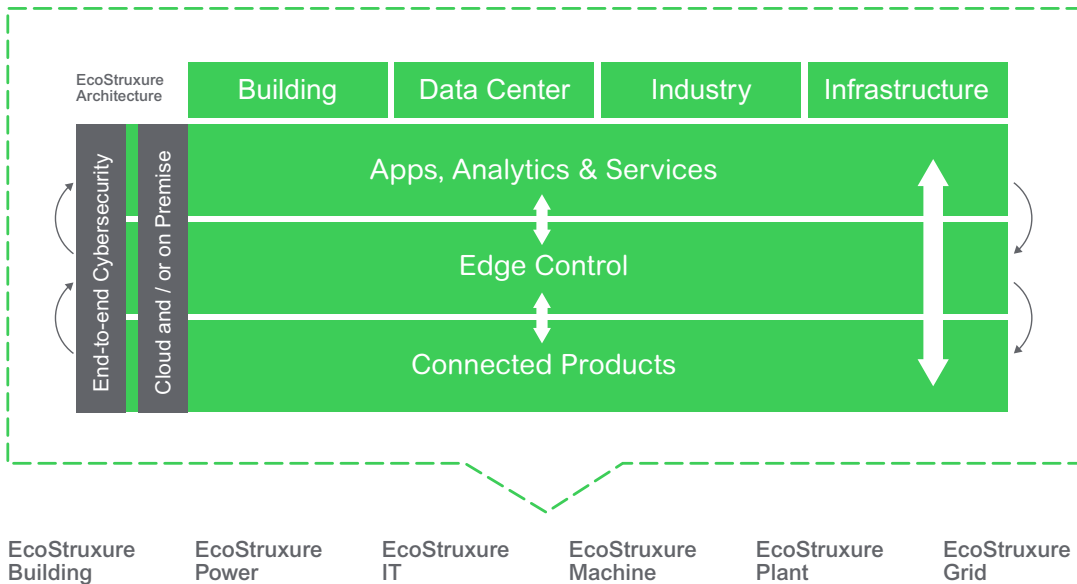
Connected Products

The Internet of Things starts with the best things. Our IoT-enabled best-in-class connected products include breakers, drives, UPSs, relays, sensors, and more. Devices with embedded intelligence drive better decision-making throughout operations.

Edge Control

Mission-critical scenarios can be unpredictable, so control of devices at the edge of the IoT network is a must. This essential capability provides real-time solutions that enable local control at the edge, protecting safety and uptime.
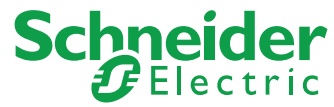
Apps, Analytics & Services

Interoperability is imperative to supporting the diverse hardware and systems in building, data center, industry, and grid environments. EcoStruxure enables a breadth of agnostic Applications, Analytics, & Services for seamless enterprise integration.

Find out more about EcoStruxure

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