

# SUSTAINABILITY

## Conserving energy and the environment

Veolia Water Technologies – Punta Gradelle, Italy

How EcoStruxure™ for Water & Wastewater optimizes water treatment processes and energy consumption for the benefit of the local community and the environment.

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Schneider  
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## A mandate to serve and protect

Veolia Water Technologies is a global provider of water and wastewater services and solutions for both the public and private sectors. They were contracted to build a water treatment facility on the Sorrento coast, one of the most picturesque parts of Italy, that would provide critical services to local residents as well as protect the environment.

The situation was serious as more than half of the population was discharging waste directly into the sea, and the other half into a treatment facility that did not comply with regulations. These challenges drove Veolia to design a state-of-the-art solution for their plant at Punta Gradelle.

With sustainability being one of their key values, Veolia's plan was not only to treat wastewater, but to also do it sustainably, reusing the recovered material for industrial and irrigation purposes. To realize these ambitions, they needed an advanced supervision system that could provide insights for efficient management across the facility as well as individual operating units.

## Applying a holistic approach for holistic results

"Ensuring operational reliability of such a complex system, located in a tunnel, demanded a trusted technology partner. Schneider Electric, with its dedicated platform for the water sector, met this requirement," said Gianfranco Favali, Manager of the Project Design Department at Veolia Water Technologies, Italy.

Schneider's EcoStruxure for Water & Wastewater delivered solutions for both process and energy efficiency. The automation of the plant's processes was based on EcoStruxure Hybrid DCS, covering the four operational areas of the facility: pre-processing, oxidation, sludge processing, electrical distribution.

The automation architecture provides multiple distinct control units, an efficient, high-speed network for exchanging information between the control units, a network for data exchange between control units and their supervisors, and a central supervision system delivering information to personnel.

## Goal

Implement a sophisticated water treatment plant control system inside a tunnel. Reduce CapEx and OpEx costs, while ensuring service continuity, reliability, and regulatory compliance.

## Story

Veolia Water Technologies was tasked with building a water treatment plant on the Sorrento coast that would help safeguard the environment and residents' health.

## Solution

EcoStruxure for Water & Wastewater solutions, including Plant Operations & Energy Management, EcoStruxure Hybrid DCS, MV & LV power meters, and Altivar Machine variable speed drives.

## Results

- Up to 15% energy – and associated costs – saved
- 20% improvement in production efficiency
- Reduced downtime and response times, improved service reliability

An advanced control room interface enables operators, maintenance staff, and system engineers to access analytical insights for efficient system management, electricity distribution, and preventive and corrective maintenance.

The plant's electrical system, consisting of four cabins assigned to the facility's four operational areas, was equipped with Schneider's iPMCC solutions for power and motor control and energy management.

These electrical panels are integrated into the site infrastructure through an intelligent communication architecture open to all main industrial networks (Ethernet TCP/IP, PROFIBUS-DP, DeviceNet, Modbus, etc.). This way, real-time data is centralized and aggregated to support decision-making on energy efficiency, equipment reliability, and maintenance.

### Counting the savings

Implementing EcoStruxure at the Punta Gradelle water treatment plant brought Veolia tangible results. "The benefits achieved are truly remarkable," said Gianfranco Favali. "We have estimated an annual energy savings of around 15% and a 20% improvement in production efficiency."

Another area that has shown improvements is service continuity, as the plant has minimized downtime. Through high-level data analysis, Veolia is better able to perform predictive and corrective maintenance, making the whole process more efficient as crews work on priorities alerted by the system.

"The quality of the results achieved from the use of this platform has fully met our needs and will be replicated on other projects," concluded Favali.

Up to  
**15%**

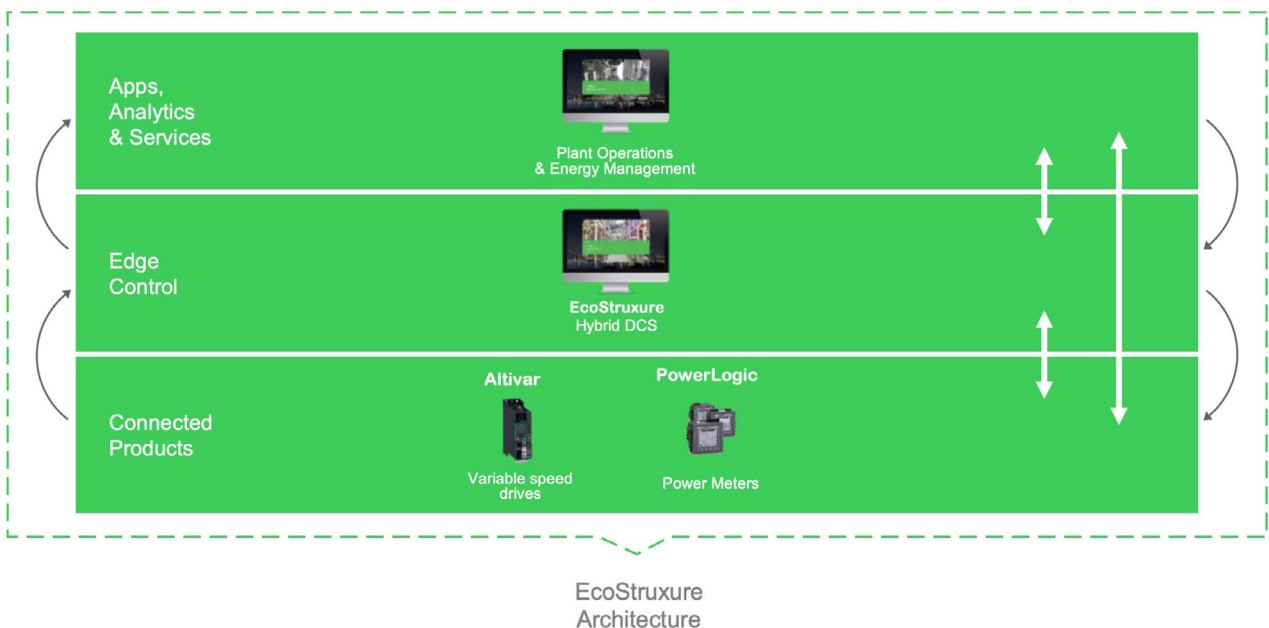
energy savings

**+20%**

production efficiency



## for Water & Wastewater



# EcoStruxure™

## Innovation At Every Level

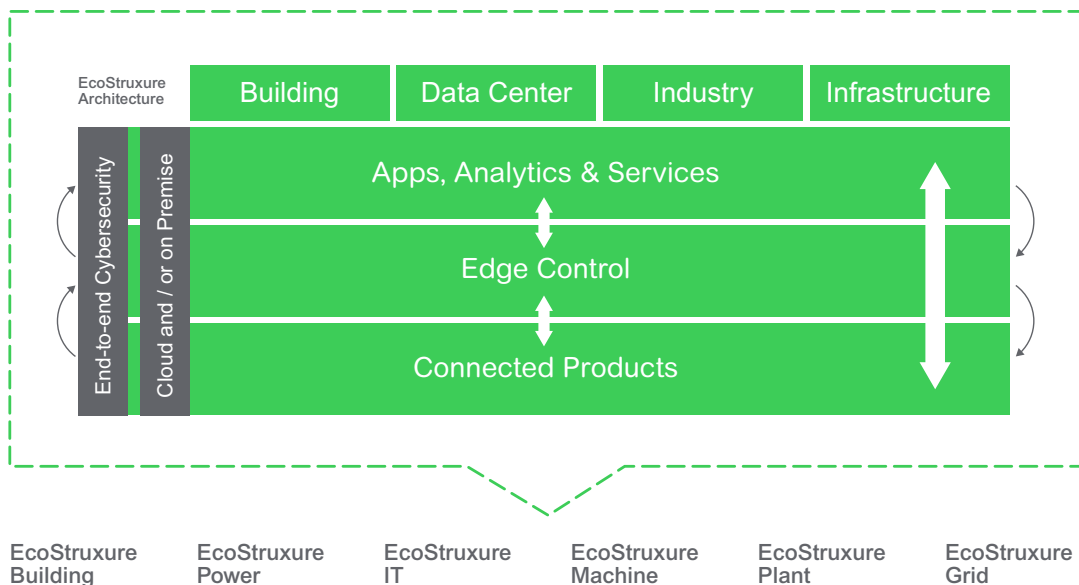
IoT-enabled solutions that drive operational and energy efficiency

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



### 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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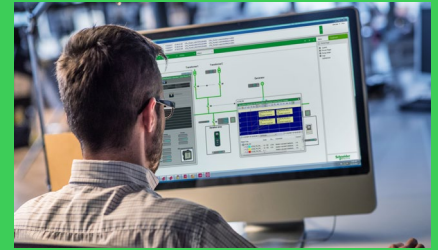
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