



# Efficiency and sustainability, improved

A complete, open EcoStruxure™ solution  
for fishing farms and aquaculture facilities

# How the aqua-culture and fish farming industry is evolving

## Navigating the challenges for producing smarter

These are the key issues and challenges for fish farming and aquaculture that are accelerating the need to adapt and digitize processes.

### People's safety and empowerment

In a labor-intensive industry, ensuring people safety by guaranteeing social distance is first priority, together with providing the tools for plant and facilities operators to remotely monitor real-time operations and take information-based decisions.

### Reaching full production potential ensuring fish welfare

Producers need to improve the use of feed and resources and prevent fish death to reduce operating costs and maximizing profitability.

### Resiliency and food safety

Winning end-to-end process and distribution visibility across the whole supply chains is key to ensure business continuity and food safety.

### End-to-end traceability

Traceability demands from market, regulators and channel are key not only for consumers' trust, but for maximizing efficiency and time to market.

### Stringent regulations compliance

Not being able to attend to key regulatory compliance in a timely fashion may have a big cost impact.

### Reduction in water and energy usage

Producers know that temperature, water and nutrients are key to achieve optimal production, but they also deal with the need of a comprehensive reduction in water and energy usage.

### Environmental impact

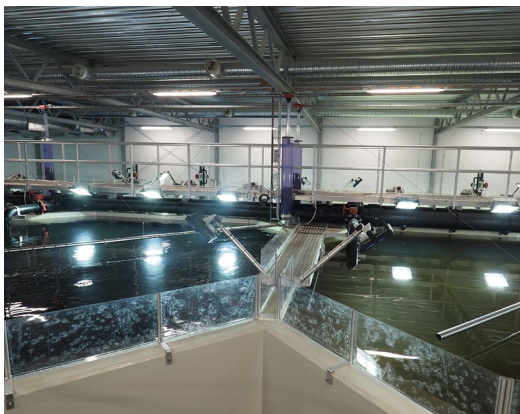
Environmental blueprint and waste cycling - for instance by removing fish excrements and sludge in order to dry it and leverage it as fertilizer - are some of the challenges. Companies are committed to show tangible results of their action plans.

## 25%

greater raw materials utilization, leveraging automation technologies.

“Sjøtroll will consume as much energy as the whole community of Fitjar. Therefore, it is crucial to have an electrical system that provides the opportunity to control and monitor the energy usage in the plant, in addition to an automated industrial plant that makes the process as smooth and efficient as possible”.

— Andreas Bjørnøy,  
Responsible for  
Automation and Electro,  
Krüger Kaldnes



### What if you could...

- Remotely monitor and manage the environment your fish lives in in real time, to ensure **optimal productivity and fish health** at all times?
- Reduce your facilities' **energy costs**, mitigate energy price risk while having visibility into real-time operations performance?
- Collect all product manufacturing information and reduce regulatory non-compliance costs without compromising **product quality**?
- Assess in real-time for **performance** of all water-related infrastructure?
- Manage sources of power including backup, **renewable**, and utility?
- **Predict** the impact of today's decisions on future performance?

# EcoStruxure: a complete and open solution

IoT-enabled | Plug-and-play | Open & Interoperable architecture and platform

The use of **data** across the supply chain will play a key role in maximizing efficiency. As time to market is critical, digital solutions may help in rapid scaling of new processes, preventing fish loss and waste, and ensuring sustainable food production, processing, and distribution.

Including AVEVA's end-to-end software, EcoStruxure for fishing facilities helps producers in their way to high yield, better fish welfare and good quality.

From first-class connected products, such as HVAC controllers, sensors, valves, actuators, power meters, circuit breakers and contactors (ACB, MCCB, FD), we are able to **collect data in real time**.

The integrated automation solutions for Environment Management will help you to **efficient control your production and operations facilities**: access control, light,

cooling and heating, water supply and based on sensors information and any other installed devices.

**Remote management**, facility alerts via apps anytime, anywhere, and additional digital services will help plant and facility managers' **mobility** and peace of mind. They will have full visibility of operations and you will get **better insights** about your assets to adjust your CapEx and OpEx needs.

And on the top of this, software and analytics suite will **workforce empowerment** and provide the intelligence for your future **information-based decisions**. From installations and security, power and water management to product information management, supply chain traceability and sustainability impact measurement, all these bricks will **convert the IoT data into knowledge**.

Reducing environmental footprint and power consumption with a smart, reliable and green energy system.

**"Schneider has lifted us into the digital landscape, and there is no doubt that digitalization will be crucial to the success of sustainable solutions - also within the aquaculture industry".**

— Jan Henning Legreid,  
Head of Product Development and Sales at Blue Ocean Technology  
[Watch the video](#)

## EcoStruxure for aquaculture and fishing farms

With EcoStruxure™ for fish farming, maritime industry and food production, Schneider Electric provides comprehensive solutions for management and maintenance of facilities of the future.

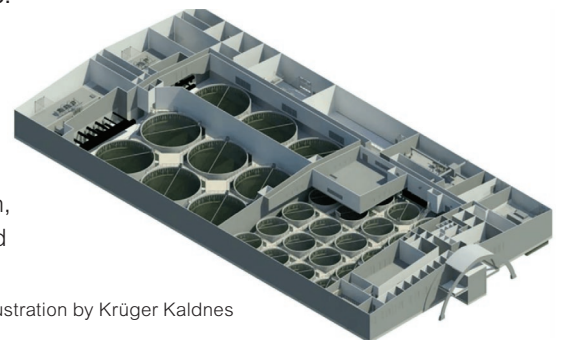


Illustration by Krüger Kaldnes

### Boost manufacturing efficiency

- Process Automation
- Process Control System
- Machine and Robotics
- HMI and data Integration
- AVEVA Industrial Information Mgt.
- AVEVA Manufacturing Operation Mgt.

### Manage complexity and improve supply chain visibility

- Suppliers Management
- Fish-farming efficiency & sustainability
- AVEVA Supply Chain Optimization
- Product Information Management
- Warehouse Management
- Cold Chain Monitoring

### Safer, more available, and greener resources

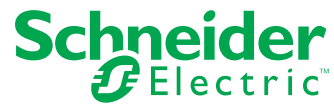
- Power Safety & Availability
- Power Quality & efficiency
- IT Infrastructure Management
- Building Management
- Renewable Energy & Microgrids
- Efficient Utilities

Increased **productivity** while ensuring safety

Up to **25%** cold chain energy consumption reduction

**24x7** Remote monitoring

Life Is On



[se.com/food-and-beverage](https://se.com/food-and-beverage)

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