Zerynth

CASE STUDY

Heat exchangers manufacturer

Interconnection of machinery and production monitoring

- Industry 4.0
- Complete visibility on machinery
- Production monitoring
- Bidirectional communication 4.0

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PRODUCTION EFFICIENCY: MACHINE AND CONSUMPTION MONITORING, VISIBILITY AND TRACKING OF PRODUCTION PROCESSES THANKS TO INDUSTRIAL IOT TECHNOLOGIES.

- Remote control of production machinery
- Full view of the active shop floor with heterogeneous technologies a nd vendors
- Bidirectional communication between machines and management systems

Industry

Manufacturing

Asset

Production Machinery

The Challenges

The coexistence of different types of machinery within a single facility can make full interconnection a difficult task. Extracting data and accurately **tracking total costs** and **energy consumption** is crucial for implementing optimization and production efficiency strategies.

A company that produces standard and custom heat exchange solutions for commercial and industrial applications sought a solution to **enable bidirectional communication** between their machines and management system in order to improve the integration of information across Planning, Production and Control Management.

The goal was to **monitor and interconnect 16 different types of production machinery**, facilitating the automated transfer of batches and production instructions to the machines, and obtaining a complete view of the machine fleet, including data related to their operation and energy consumption.

Achieving full integration of the machines was essential in order to embark on a complete digitalization path and enable the Industry 4.0 transformation.

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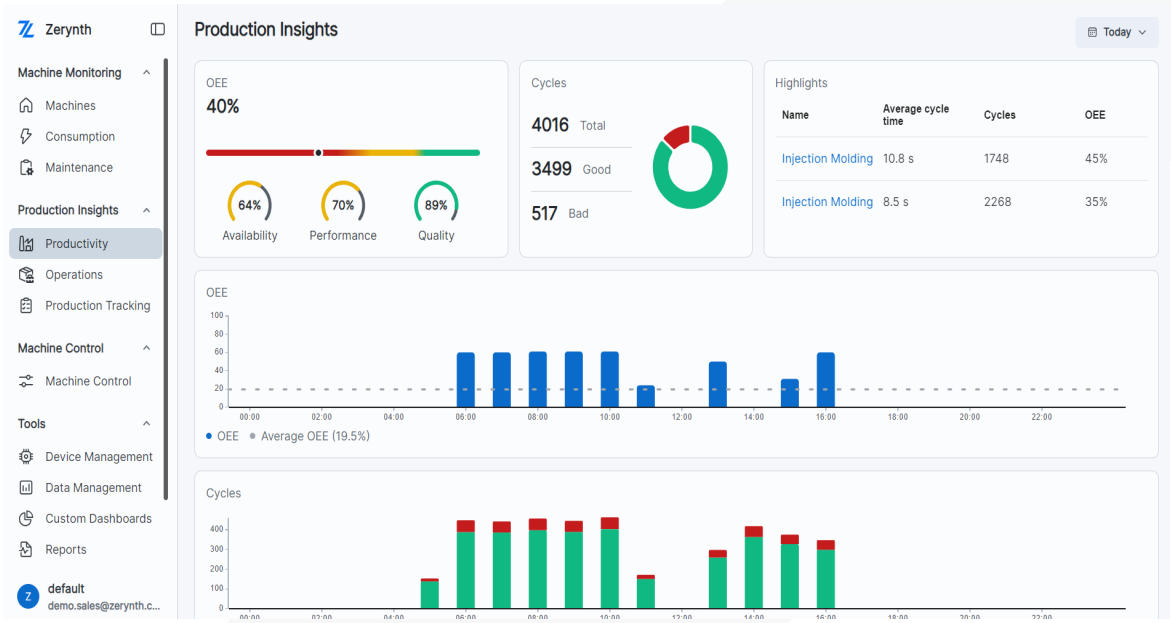
The Solution

Zerynth's team proposed a solution that involved the implementation of the Zerynth Industrial IoT & AI Platform. This has enabled a **complete integration** of information between the **planning and management** control departments, allowing for a comprehensive view of the active machine park.

By using an ammeter transformer, connected to Zerynth's Edge Device, it becomes possible to extract valuable data related to the **energy consumption of each machine**. Production data, read from the PLC, is aggregated on the edge and sent to the cloud every minute. As a result, the management software already in place within the company is able to receive real-time information concerning the progress of the work and production processes.

The extracted data concern both production data, such as start and end date of production or the status of the executed processing program, and process data, i.e. the status of the machinery or the gas consumption of the orbital welders.

The system is able to automatically record machine times and, depending on the type of machinery, the processed pieces, consumption, waste, and test results. Moreover, by sending instructions to the machines, it can **remotely control the entire plant.**



The Results

Data Automation
Programming of the machines and sending production commands
Full data integration
Bidirectional communication between machines and management system
Reduction of costs and energy consumption
Production optimization

Why choose Zerynth?

With the help of Zerynth, in just a few weeks, the company was able to interconnect 16 machines of 10 different types within the same facility. This enabled active monitoring of production costs, energy consumption, and tracking of work orders.

The reliability of the Zerynth Platform ensures secure exchange of production data and persistence, as acquired data is stored on the cloud and temporarily archived on-the-edge in case of network issues.

The digitization of the machines in an Industry 4.0 perspective facilitated data exchange with the existing management system in the company and precise integration of information coming from machines with management systems.

About Zerynth

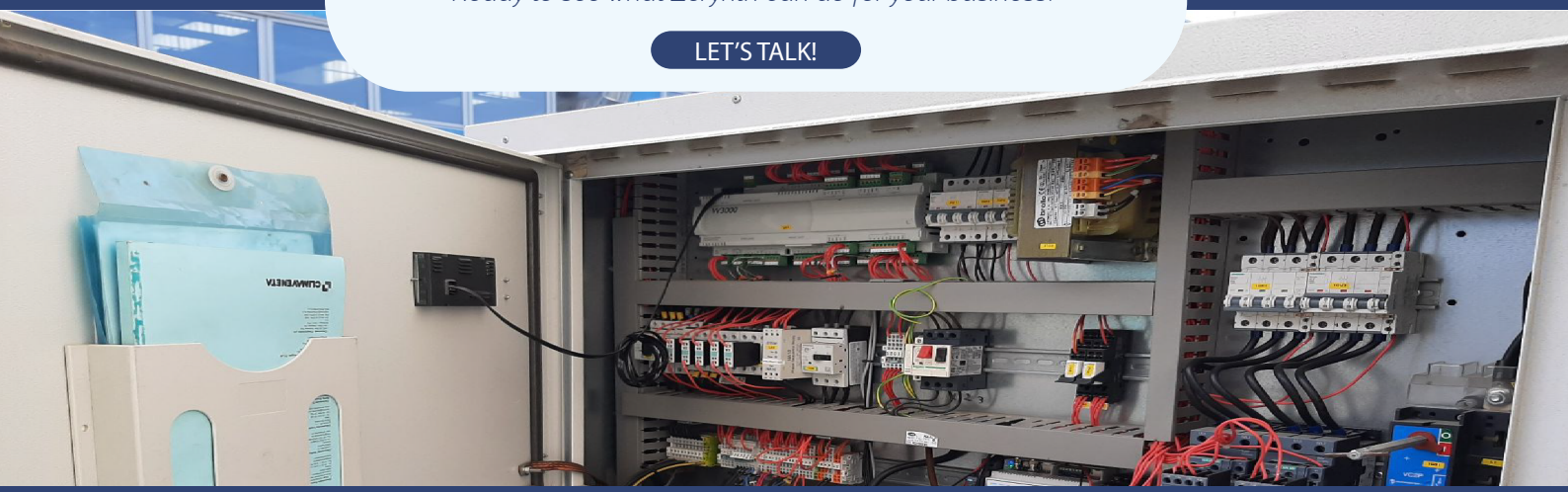
Zerynth enables companies to streamline production processes and increase the value of connected industrial products. Through a plug-and-play IoT & AI platform, we connect any industrial machine, allowing for a complete 4.0 transformation quickly, flexibly, and securely.

Founded in 2015, Zerynth has grown steadily. Today it has 40+ team members with deep IoT expertise and industry knowledge with over 150 customers across many industries: from manufacturing to agriculture to energy to logistics. Zerynth is based in Pisa, Italy, but also is active in international projects, and foresees an expansion both in EU and non-EU countries during the next three years.

GET STARTED WITH ZERYNTH

Ready to see what Zerynth can do for your business?

LET'S TALK!



+39 050 8068225 | info@zerynth.com | www.zerynth.com