Blending energy efficiency and production optimization at a Slovenian ice cream factory

Incom Leone achieves cost savings with zenon

Incom Leone is one of Slovenia's largest food exporters. As one of the country's fastest growing companies, it produces 130 tonnes of ice cream daily. Its current growth means at least one new production line is added every year. To support this growth, Incom Leone recently switched to COPA-DATA's zenon software platform to control its 20 production lines.
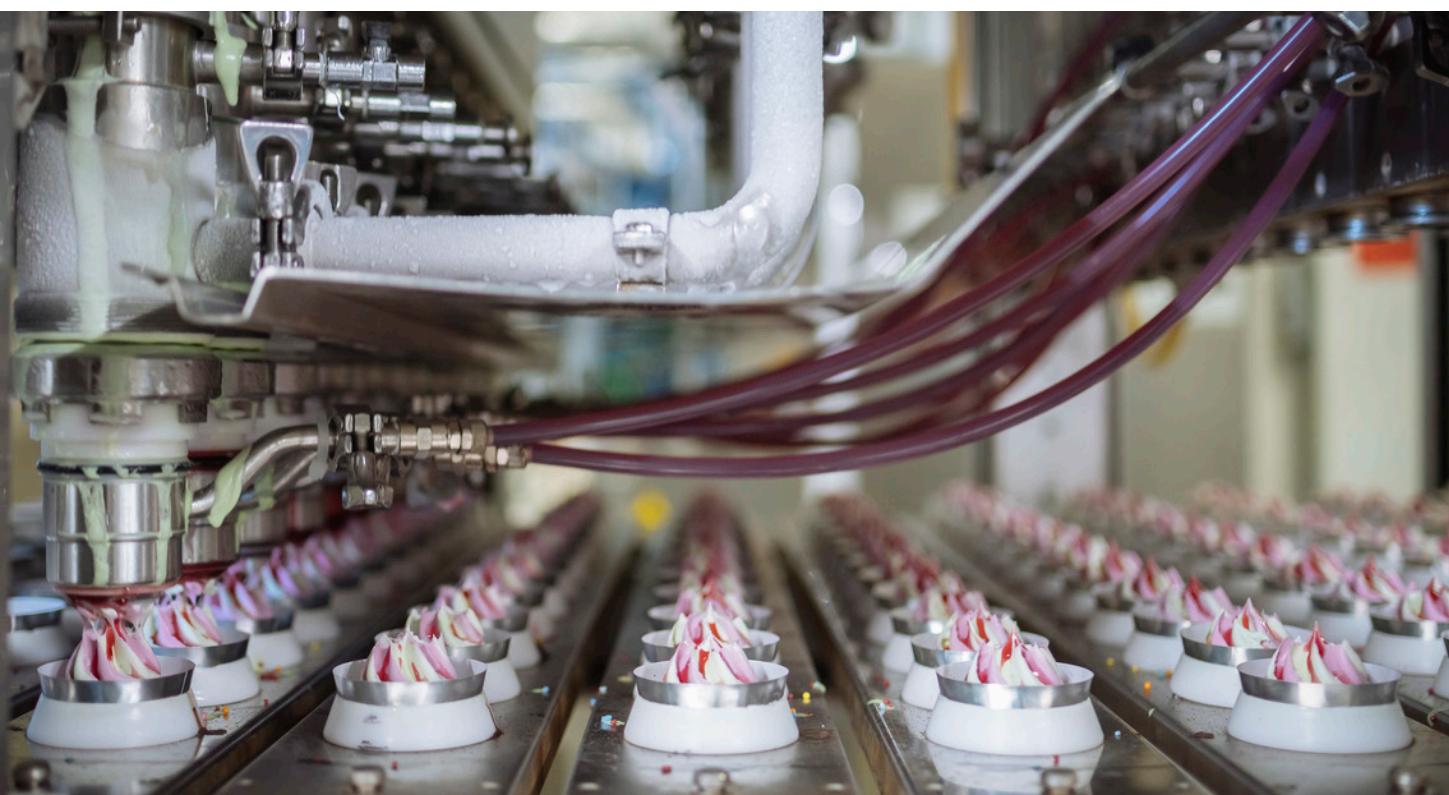
Incom Leone is a fast-growing Slovenian ice cream and chocolate manufacturer. Its success and international growth are based on continuous innovation, development and optimization. Much of the company's services are provided inhouse. The company's headquarters in Ajdovščina is home to a technical laboratory and a modern metal workshop where Incom Leone manufactures machines and machine parts for use in its ice cream production.

The company employs around 700 people. Together, they produce around 130 tonnes of ice cream each day. Of the 20 production lines, 13 are dedicated to ice cream. Five produce the chocolate which the company needs for its own ice cream.

Two further production lines make chocolate confectionery for sale, including protein chocolate drops and licensed chocolates.

THE NEED FOR DIGITALIZATION

The young, highly educated and experienced team members at Incom Leone constantly strive for improvement and innovation – especially those in the technical development department. As the number of customers increases, the growing production demands cannot be allowed to affect the high quality of the products. This has led to a need for greater digitalization in production so that quality standards are maintained consistently.

Production control ensures product quality.
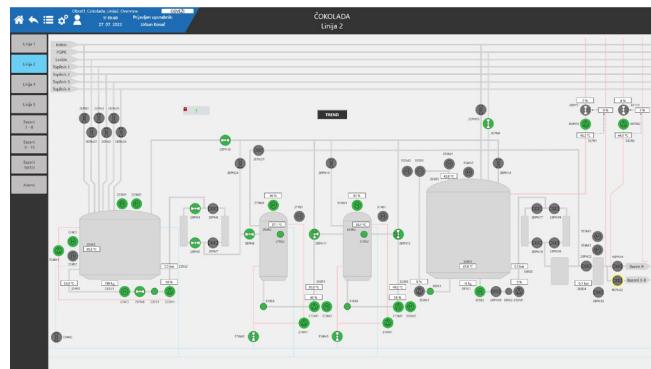
Overview of the chocolate production line.

> " *The savings from zenon are enormous. There are no more production stoppages, the production lines run smoothly.* "
>
> **ROK SLOKAR, TECHNICAL MANAGER, INCOM LEONE**

This can only be achieved through comprehensive, quality-oriented production control, data collection, and analysis.

A SCADA system was already in use in production to collect data from the production lines but it had a significant drawback: it only communicated with controllers from the same manufacturer. As a result, digitalization initiatives couldn't progress from their infancy. Processes were automated but the devices were not connected to a common network for process control or efficient data collection. Incom Leone therefore needed a universal SCADA system for control and data collection that could be connected to machines from different manufacturers across its production lines.

EFFECTIVE CONTROLS TO ENSURE PRODUCT QUALITY

Incom Leone chose the zenon software platform from COPA-DATA because of zenon's flexibility. With more than 300 protocols and drivers supported, zenon enables wide-ranging, simplified connection to devices from different manufacturers. Now, with the implementation of the zenon software platform, all machines and production lines are linked to a central control system. This enables comprehensive event monitoring, alarm handling, and data analysis.

"As a development-oriented company, with continual development of products, processes and technologies, it is important to have precise and continuous control of processes, especially those that depend on several different variables," explains Rok Slokar, Technical Manager at Incom Leone. "zenon enables just that. It is responsive, resilient and brings flexibility to our processes."

FREEDOM TO WORK WITH OR WITHOUT LOCAL PARTNERS

When choosing a SCADA system, it was also important to Incom Leone's engineers and programmers that they could adapt and upgrade the SCADA for themselves. This way, they can keep up with changes in technology and processes without being dependent on external contractors.

Nevertheless, Incom Leone also wanted to be able to work with a local partner with system expertise. The official representative for COPA-DATA's zenon software platform in Slovenia is EXOR ETI. Incom Leone chose to work with

Trend of the main parameters monitored
on R744 refrigeration compressors.

Overview of the dairy aging tanks
where the mixed ice cream is stored.
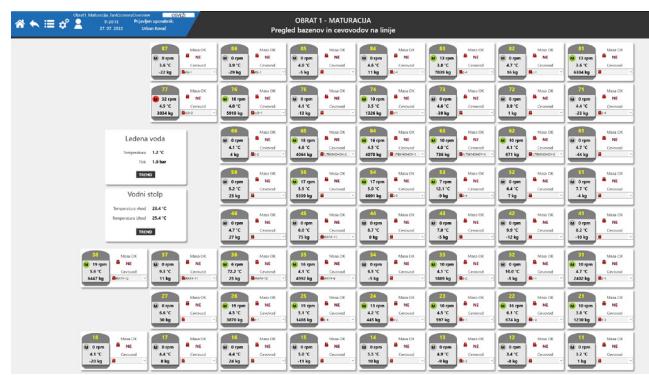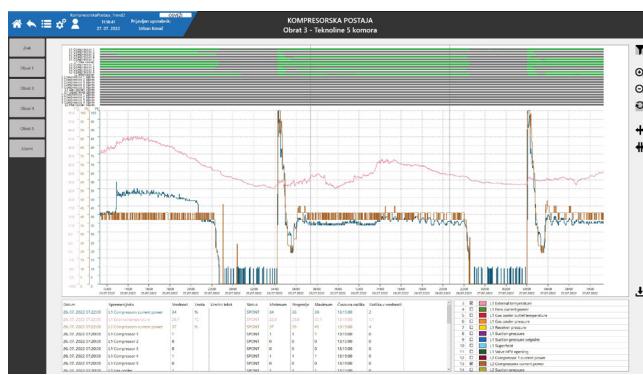
EXOR ETI as a partner and its support has enabled faster progress, says the Incom Leone team.

MAJOR SAVINGS AND PROCESS EFFICIENCY

Incom Leone now has centralized control of processes and events, with all devices in the production lines connected to a single zenon system. Real-time data is collected. Trend reporting and alarms facilitate a rapid response to unforeseen events. Unplanned downtime on production lines is avoided, resulting in significant cost and energy savings.

Thanks to the simultaneous monitoring of all machines, the Incom Leone team can now see correlations between the operation of individual machines. Based on data collected from machines and using trend analysis in zenon, the team can clearly identify where anomalies are occurring and investigate their causes. By adjusting hardware settings and software parameters, the engineering team can easily resolve any problems.

MOVING TOWARDS FURTHER DIGITALIZATION

Incom Leone is satisfied that it has achieved the goals identified at the start of the project – including production optimization, central data collection, data storage and analysis. This has, in turn, delivered significant cost savings for the business. Rok Slokar states, "The savings from zenon are enormous. There are no more production stoppages and the production lines run smoothly."

However, this is far from the end of the line for the company in terms of digitization. The zenon project has heightened the Incom Leone team's awareness of the potential of digitalization.

Digitalization is now perceived as an important business goal that can power continual improvement. Incom Leone adds at least one new production line every year, so there is always room for learning and improvement. Efficient energy management is a key part of Incom Leone process optimization – and it will be an area of particular focus in the future, with the help of zenon.

HIGHLIGHTS:

▸ Central data collection from production lines
▸ Error notification enables timely responses
▸ Eliminating downtime and reducing production costs
▸ Optimizing machine performance
▸ SCADA system upgrade option thanks to zenon flexibility
▸ Simplified design due to zenon parameterization
▸ Foundations for future energy optimization