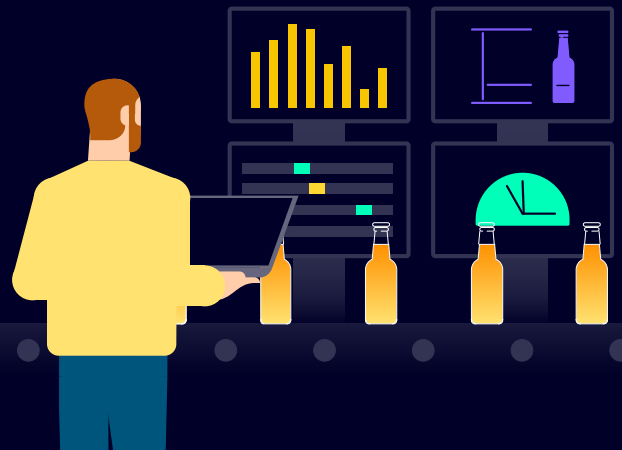


FOOD & BEVERAGE INDUSTRY

Brewing Transparency and Efficiency with Real-Time Digitalization

Carlsberg India



Enhancing Process Visibility and Performance



Carlsberg India, a global leader in the brewing industry, embarked on a digital transformation journey at its Mysuru facility located in Nanjangud to modernize its Brewhouse and Process (B&P) operations. The goal was to transition from manual logbooks to a fully digital, real-time monitoring system that would enhance operational efficiency, ensure data integrity, and support continuous improvement.

The brewery faced challenges such as manual tracking of brew batches, fragmented data on quality parameters, and limited visibility into equipment performance. These issues impacted consistency, traceability, and responsiveness. To address this, Carlsberg partnered with Siemens to implement a pilot “Digitalization of Brewhouse & Process Performance Management System” as part of its Industry 4.0 roadmap.

Siemens Solution for “Digital Brewing Intelligence”

Siemens’ comprehensive digital solution seamlessly integrates with Carlsberg’s existing automation infrastructure. The system captures real-time data directly from the source, eliminating manual intervention and ensuring accuracy and transparency across the brewing process.

Key components of the solution include:

- **WinCC V8.0 SCADA and PM Add-ons 10.4** for real-time process visualization and analytics
- **Automated Brew Cards and Filtration Charts** for batch-wise tracking
- **Key Activity Indicator (KAI) Dashboards** for performance benchmarking
- **Automated email reporting** to key stakeholders for enhanced shopfloor transparency
- **Live dashboards** for machine status, brew cycle time, and fermentation tracking



The system also supports historical data analysis, enabling brewers and management to identify trends, optimize processes, and respond proactively to deviations.

Real-Time Insights and Tangible Benefits

The digital platform provides a plant-wide view of the brewing process, from raw material handling to fermentation. Operators and managers can monitor:



Live brew tracking

with cycle time and batch status



Fermentation progress

across all unitanks with deviation alerts



Machine performance

including ON/OFF status, idle time, and breakdowns



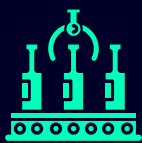
Shift-wise operator performance

and maintenance schedules



Reduction in beer loss

and improved quality control



Golden batch prediction

for consistent product quality



Customized reports

for daily, weekly, and monthly production metrics



Remote access for SMEs

to monitor and analyze brew quality anytime



Improved operator ownership

through intuitive dashboards



Enhanced traceability

and compliance with digital logbooks

The digitalization of Carlsberg's brewing operations has delivered measurable improvements across multiple dimensions. Operators now have access to live dashboards that provide real-time insights into machine status, brew progress, and fermentation conditions. This has enabled faster response times, reduced downtime, and improved ownership among shop floor personnel.

The system has also contributed to tangible resource savings. **Steam consumption has been reduced by 0.2 KWH per hectoliter, while power savings have reached 200 units per month.** These efficiencies have supported Carlsberg's sustainability goals and optimized energy utilization across the plant.



With the ability to track each brew in real time and analyze historical data, Carlsberg has introduced the concept of a "golden batch"—a benchmark for quality that can be replicated in future production cycles. The digital platform also facilitates lean manufacturing by maintaining historical data for up to one year, enabling brewers to investigate customer complaints and continuously improve processes.



Partnering with Siemens has been a game-changer for Carlsberg India. Their domain expertise and advanced easy to adapt solutions have enabled us to seamlessly integrate our brewing and filtration processes, automate data collection, and enhance real-time monitoring. As a result, we've achieved significant improvements in operational efficiency, data accuracy, and resource utilization. Siemens' solutions have empowered us to set new standards in the brewing industry, ensuring consistent quality and optimal performance.

Alokesh Biswas, Head Manufacturing Operations, Carlsberg India

Holistic approach from the field to glass with Siemens Xcelerator

The increasing demands for healthy, sustainable products and their sustainable production require a holistic approach. Digitization enables manufacturers to prove at all times, from the field to the table, that they comply with regulations and ensure the best possible quality of beers. To do this, they need to become a Digital Enterprise, which is possible with **Siemens Xcelerator** at speed and scale.

It is our open digital business platform that serves as a catalyst for accelerating your digitalization journey. **Siemens Xcelerator** makes it easier than ever before for companies to navigate digital and sustainable transformation. It provides step-by-step support, enabling you to undergo digital & sustainable transformation with minimal resources and tangible impact. By combining the real and the digital worlds across operational and information technology, we empower you to boost productivity, competitiveness and scale up innovations with **Siemens Xcelerator**.



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