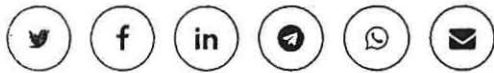


Here's how tech helped Aavin Dairy double production capacity

The dairy saw a significant increase in operational efficiency and improved operations in the processing segment, ensuring dependability and quality.

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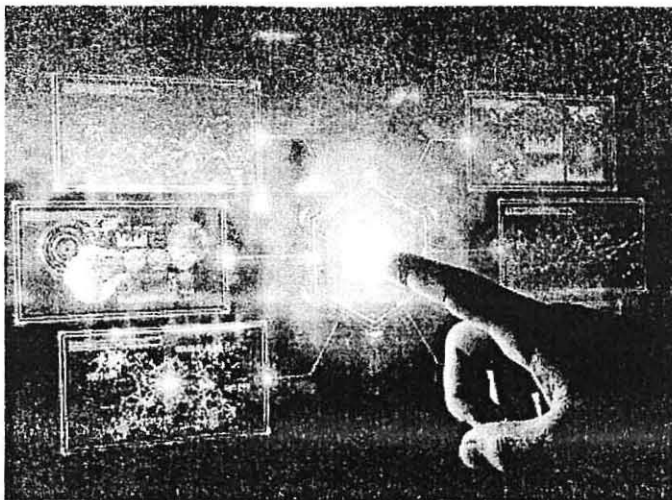


By Vanshika Sharma

Aavin Dairy, an institution of the Tamil Nadu Co-operative Milk Producers' Federation Limited, with over one crore daily consumers, elevated its performance in the Indian dairy industry by leveraging IoT.

It improved its productivity levels, asset management, energy efficiency, and further increased the processing capacity from 2 LLPD to 3 LLPD when commissioned, and now has scaled up to 5.5 LLPD.

The dairy operates to promote the economic development of the farming community by procurement of milk from villages, along with processing and manufacturing milk products. However, the segment faced numerous challenges,



including shifting consumer preferences, developing competitive, profitable, safe, and desirable products. Hence, it necessitated the development of advanced digital technologies capable of providing transparency, security, regulatory compliance, and reliability.

To boost the performance in the Indian dairy industry, the dairy focused on building a solid

business model. The vision was to improve the reliability and quality of milk processing while also ensuring efficiency aiming to match the pace of technological advancements with the rapidly changing environment.

"Back in 2014, we thought of renovating our plants to become better prepared for the future. Automation promises increased plant productivity, higher returns on CapEx and OpEx, and achieving optimum energy efficiency. Schneider Electric EcoStruxure Process Expert (formerly Ecostruxture Hybrid DCS) has helped us in improving our operational efficiency," says Jai Kumar, General Manager, Aavin Dairy.

Before the deployment, the dairy managed its operations manually, facing the initial challenge to convert and upgrade the manual plant into an automated facility.

"Once the plant was automated and transformed, we were faced with another issue of lack of know-how and expertise to handle the new technology. However, with appropriate training sessions, we were able to empower, skill, and upgrade our workforce to transition towards an automated style of working," Kumar adds further.

Because the dairy is open 365 days a year, regardless of natural disasters or other issues, it was therefore necessary to implement a technology that allows for continuous and smooth operations. Due to the automated transition, the dairy was able to improve operational precision and reduce errors. Furthermore, it has increased end-product quality and reliability while increasing the plant's overall operational efficiency, flexibility, scalability, and ease of maintenance.

The EcoStruxure Process Expert helps to coordinate processes such as pasteurization, homogenization, CIP, and others. In addition, the facility has a comprehensive control and monitoring system for the entire dairy process, including the electrical and utility systems. Because of the availability of overall Sequence of Events (SOE), focused MIS reporting, Trend, and Historian data of all dairy processes, it has experienced a streamlined rise in efficiency with increased resource optimization.

"There is data for everything that empowers informed decisions. Further, the time taken to manage the daily tasks has reduced. Asset management and energy efficiency have improved our production capacity from 2 lakh liters per day to 5 lakh liters per day," Kumar said.

Along with EcoStruxure Process Expert, the dairy has also used Altivar Drives for pump application, AS-Interface Ethernet PnF Gateways with control system for discrete actuators valves, Conventional MCC Panels Switchgears, and APC UPS of 20KVA for automation & IT system.

The company has now addressed the issue of insufficient monitoring, which affects operational efficiency and poorly affects the visibility into energy use and scalability. As a result of digital transformation, new revenue and value-creating opportunities have emerged. The F&B supply is also being realigned and digitized to improve efficiencies and ensure that products can be handled, stored, and delivered safely.