Volvo CE is one of the world’s largest manufacturers of construction equipment, with 17 plants on four continents. Expansion has primarily been through mergers and acquisitions, so integrating its various plants and supply chains are critical for continued growth and customer satisfaction. As part of this integration process, the challenge of quickly identifying, distributing and continuously improving global manufacturing best-practices was difficult.

In order to increase efficiency, visibility, collaboration, quality and synchronization across its manufacturing operations and globally integrated supply chain, Volvo CE sought a better solution to share process innovation and best practices that could also function as a framework for continuous process improvement. And, it had to be installed within a reasonable time period to justify Return on Investment (ROI) while seamlessly integrating with its existing SAP Enterprise Resource Planning (ERP) system.

Global Manufacturing Operations Management

In order to accomplish these objectives, Volvo CE selected the Apriso solution for Manufacturing Operations Management (MOM). Currently operational at plants in the United States and South Korea, Apriso executes and manages Volvo CE’s operations while consolidating process data at a Center of Excellence (COE), a collection of global best practices.

Assembly and fabrication is now synchronized across manufacturing operations. Complete process integration has been achieved between production equipment – regardless of location – and Volvo CE’s existing ERP, which has added new value and functionality to their ERP investment, with improved process synchronization to their extended global shop floor.

“Apriso gives us visibility and control over our production, quality and maintenance operations. It sequences production, verifies materials flow properly and ensures components are delivered to the right place at the right time, contributing to improved performance across manufacturing operations,” said Scott Park, Senior Vice President and CIO, Volvo CE. “As an enterprise-class manufacturing operations management solution, Apriso continuously collects global operations data that is fed to suppliers to help improve delivery performance. Best of all, our Apriso implementation was relatively quick – about 6 months for one facility – helping to achieve a return on this investment within the same fiscal year.”
Real-time Visibility for Continuous Quality Improvement

Apriso has provided a framework for managing continuous process improvement, helping Volvo CE to improve quality for a lower total cost. Production processes have begun to be standardized; real-time visibility generates alerts that notify if performance is “out-of-spec.” Volvo CE uses an Andon system that draws production data from Apriso. “With real-time visibility to manufacturing operations, Apriso has enabled quick comparisons to production metrics. If a problem arises, operators take immediate action to resolve issues before they impact the entire line, helping to minimize potential delays while improving manufacturing and quality performance,” commented Park.

Volvo CE has all the information it needs for Six Sigma programs. “It would be very time-consuming to attempt Six Sigma without Apriso,” noted Park. “Now our production status reports contain granular detail so we can quickly identify queues and bottlenecks.”

Standardized Processes Reduce Operational, IT Costs

Volvo CE is leveraging their Center of Excellence (COE) to not only identify best practices, but to spread the standardization of these practices across manufacturing operations. With real-time, global visibility and standardized measurement capabilities of business processes in Apriso, the effectiveness of continuous process improvement initiatives has been enhanced, saving additional manufacturing operations and IT costs.

“I have done implementations without a process template whereby each plant went in its own direction. It was a nightmare,” said Park. “With Apriso, we can build a COE containing all the processes we need, and then deploy it to various manufacturing plants. The COE is managed by a team of end users who own the global process and are empowered to make changes throughout the system. As a MOM solution seamlessly integrated with ERP, Apriso ensures greater consistency. As processes are implemented, modifications are straight forward, contributing to reduced IT and operations costs.”

Apriso’s simplified user interface requires less training and support – ideal for shop floor workers. Their solution has streamlined process improvement for a lower cost, which have been deployed from the “top floor” to the “shop floor.” Process standardization has helped Volvo CE’s “Manufacturing Excellence” objective of building any product at any location. Apriso has been so successful that Volvo CE is actively engaged in expanding their implementation. “At the end of the day, Apriso lets us quickly achieve superior quality, improved operational excellence and a globally integrated supply chain,” says Park.

Volvo CE embraced the challenge of doing more with less, faster. They identified an IT project to implement in six months and achieved an ROI within six months. Volvo CE accomplished their objective. Are you up to the challenge?

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