Hitachi drives Global Manufacturing Innovation with DELMIA Apriso

Hitachi, Ltd., Information & Telecommunication Systems Company (hereinafter referred to as “Hitachi”) offers a wide range of solutions and services, highly reliable IT platforms such as storages, servers, middleware, telecommunications equipment, as well as IT services.

IT Platform Division Group, which makes servers and storage devices, launched a project of implementing “GMES (Global Manufacturing Execution System)” to standardize manufacturing processes while improving visibility into production and quality operations on a global scale. As a platform of GMES, Hitachi selected the DELMIA Apriso products since they found its global support system to be satisfactory through their past experiences of implementing Apriso in the U.S. This project targeted sites located in Japan, U.S. and France. By achieving these deployments, it also enables to enhance their BCP (Business Continuity Plan) globally. A first step was to establish a global “Core” model, as a foundation for deployment. That Core model is now being used to standardize manufacturing processes across sites located in the U.S., France and Japan.

**Background to Deploy a Global MES**

Historically, Hitachi’s Servers and Storage Devices had been produced independently in each plant, having unique manufacturing cultures and systems. However, due to Hitachi’s desire to improve their global competitiveness, Hitachi decided it needed to establish global standardization of their manufacturing processes and IT foundation. This decision enabled an improved supply system and quality on a global scale across all sites, which drove the launch of their “GMES (Global-MES) project” for standardized manufacturing processes and a unified MES system at three factories in Odawara, Japan, Hitachi Computer Products (America), Inc.(based in Oklahoma, America, hereinafter referred to as “HICAM”) and Hitachi Computer Products (Europe) S.A.S. (based in Orleans, France, hereinafter referred to as “HICEF”) that produce storage products on a global scale. This project has been extended to oversea production of server products of Kanagawa factory (Japan). The following are the primary goals of this project:

- To achieve KPI (Key Performance Indicators) visibility of business processes in all plants by consolidating existing, disparate systems into one common platform to serve as a centralized hub of information related to production, inventory, equipment, quality
- To improve global quality and customer satisfaction by consolidating different manufacturing cultures and deploying best-practices developed by the mother-plant to their overseas operations

**Importance of Track-record, Deep Industry Knowledge**

Prior to launching GMES, in 2009 HICAM had introduced Apriso products to replace a legacy MES, and to integrate Apriso products with other IT systems. Through this introduction, Hitachi evaluated the substantial effects attained by HICAM from real-time-visibility into manufacturing processes including production, inventory, equipment, quality management and serial-based traceability activities. In addition, the demonstrated deep level of industry skill and business understanding of its professional services and

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**Benefits Achieved**

- Leveraged a common global manufacturing platform for improved manufacturing visibility and traceability across all sites on a global scale
- Established a Global COE (Center of Excellence) team to better drive global continuous process improvement of best practices
- Utilized a “Core” deployment strategy to enable greater process flexibility and governance, while incorporating local requirements (as needed) as part of their globally standard model
- Improved Quality and Production KPI analytics through deeper, faster visibility into operations data
consulting team was an important part in the evaluation process. The combination of these two factors helped Hitachi to decide on Apriso to standardize its global manufacturing operations processes.

**Governance Enhanced by Global COE Team**

After Apriso had been selected, a Global COE (Center of Excellence) team was established, which consisted of members from the management team and each site. This was the first time Hitachi had set up a global project team. With one global team, Hitachi created greater synergy on a global basis – the whole team was now able to better share and work towards management and plant goals. HICAM staff leveraged their Apriso experience to lead others. Apriso consultants helped to ensure best practices and it was headed by the Japan team. Through these combined efforts, the governance of the whole project was strengthened.

**Flexible Deployment Met Global and Local Requirements**

At this stage of their Apriso deployment, models, processes and functions were standardized as much as possible beyond their manufacturing cultures by utilizing a Core approach. Given this history, the team was able to leverage several existing processes as a starting point for their new global Core model and defined “Rule-Book,” which is used for standard development. As a first phase, Hitachi deployed their Core model to the storage production process of HICAM and HICEF in March 2014. From then on, Hitachi deployed the Core model in a server division at these sites in May 2014.

In parallel, Hitachi has been deploying some unique local requirements at their Odawara factory, the “mother” plant of Hitachi’s storage products. The local process is Configure To Order (CTO), which other sites did not support. This unique process was promoted separately from the global Core Apriso deployment, and went live in the summer of 2013. Before the introduction of Apriso, this CTO process was very labor intensive, with more than 300 configurations to manage and operational efficiency was difficult to achieve. Through the use of Apriso, Hitachi now promotes substantial improvement in this area.

Greater flexibility with their Apriso solution has led to reduced development costs, which is attributed to the embedded business process management architecture of Apriso products. The Apriso Process Builder application has simplified IT system modifications to meet changing business requirements.

**Future plans for GMES**

For the first phase of deploying a common manufacturing platform, Hitachi’s GMES project has been progressing quite successfully. In the near future, Hitachi is looking to go live with all their manufacturing processes from production to shipping at four sites while standardizing their manufacturing performance through greater global visibility across all sites. Hitachi continues to enhance its traceability capabilities to include local requirements, such as CTO management. Hitachi has now started to deploy GMES at its Odawara and Kanagawa factories, and other Japanese domestic sites.

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