

Supply Chain Management Solution utilizing SAP template

Renesas Electronics Corporation



Customer

- Renesas Electronics Corporation

Challenges

- To quickly adapt to market changes, Renesas had to construct a more flexible manufacturing structure to meet demands for producing and quickly delivering high variety in small volumes.
- Renesas wanted to streamline its system operational efficiency and cut ICT costs by migrating and consolidating the core systems deployed in their various factories to the cloud.
- Renesas wanted to build an environment which allowed them to utilize diverse management information collected rapidly from each factory.

Solution

- Renesas adopted a supply chain management solution based on NEC's proven and globally deployed SAP template. Using this system, they were able to develop a system that was tailored to the specific business needs of local factories.
- Leveraging NEC's data center, Renesas migrated core systems from the factory to a private cloud.

Results

- By integrating the core systems of four factories in Asia in the near future, Renesas will be able to dynamically adjust production in line with fluctuations in demand.
- Migrating core systems including production management, warehouse management, sales, and accounting to the cloud allows Renesas to centralize system operations management and support operations. This will not only streamline operations, it will also slash ICT costs since the various factory sites will no longer need their own hardware assets.
- Since the data required to draft management strategies can be gathered and assembled at headquarters, this will significantly shorten the financial closing schedule. It will also enable development of an executive dashboard to support timely management decisions.



Rapid optimization of global value chain by upgrading core systems of factories throughout Asia

Introduction

Renesas Electronics is one of the leading semiconductor manufacturers in Japan. Renesas deploys three major semiconductor solutions—solutions for devices, for kits, and for platforms—across a range of sectors including the automotive industry, manufacturing, home electronics, office automation, and information and communications technologies (ICT). In order to maintain growth in a changing and highly competitive global semiconductor market, Renesas has been focusing on global standardization of their business processes by integrating the core systems that support the operations of the company's widely dispersed factories.

Challenges

Consolidating the core systems deployed in each factory

Renesas has made a host of improvements and upgrades in response to more diversified market needs, yet there still remains a crucial challenge to be addressed; namely, upgrading core systems supporting the company's manufacturing plants throughout Asia. Shozo Tajiri, Manager in the Sales & SCM System Department, provides some of the background.

"To adapt quickly to market changes, it is essential that we produce and quickly deliver high variety in small volumes. Unfortunately, up to now each factory has operated on its own core systems, and this has required close coordination between each factory to adjust the production levels. Essentially, what we need is global standardization of business processes to remedy this situation. So, starting with our Malaysian operation, we decided to tackle this problem by completely upgrading the core systems of the factory."

In launching this project, Renesas decided to implement a supply chain management solution. The company deployed a new system covering all basic business functions—procurement, inventory, production, costing, accounting—so that Renesas could standardize business processes across factories and across national borders.

Solution

Standardized business processes across factories and national borders

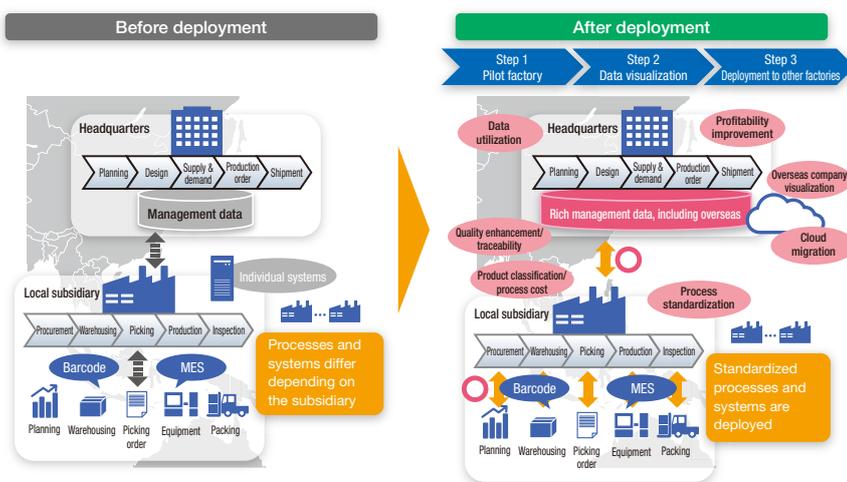
Renesas decided to partner with NEC in pursuing this important project.

Hirofumi Sato, Manager in the Production and Administration Department, describes how the initial decision was made: “Basically, we wanted an optimal system that matches the company’s business strategy, yet also provides a one-stop structure for operations and maintenance linking our corporate headquarters in Japan with our overseas factories.” Ultimately, Renesas plans to extend the system to four factories throughout Asia. They were especially impressed by NEC’s flexible systems that addressed Renesas’s business needs and NEC’s consolidated approach that offered systems operations and maintenance on a global scale.

This solution took full advantage of NEC’s wide range of proprietary expertise and know-how. One example was NEC’s SAP template, a proven system that is widely deployed around the world. Sato explained: “Original SAP encompasses such an enormous range of functional capabilities that it’s practically impossible at first to anticipate what specific functions your business is going to need. This is where NEC’s template comes in, for we were able to tailor the system to the specific business needs of each factory.”

Another key feature of the project is that the system is implemented on a private cloud utilizing NEC’s data center. “By migrating all the core systems from the factory to the cloud environment, we could consolidate the operations and management of all systems,” says Sato. “And because this eliminates the need for capital investments in systems such as on-premises environments which is normally done on a five-year schedule, this will substantially reduce ICT costs.”

- New SAP core system solution available from NEC



Leveraging NEC’s proven and widely deployed SAP template helps to streamline Renesas’s development operations. Running various business systems on a private cloud ensures excellent stability coupled with flexible scalability. Within the next few years, Renesas will integrate the core systems of four of its Asian factories using this SAP solution.

NEC’s top-notch security measures also factored into the decision. Core systems are vital for supporting production operations throughout Asia, so security is critically important. This led Renesas to conduct a thorough assessment, and NEC’s cloud solution was found to satisfy their exacting security requirements.

Results

Optimization of the entire global value chain

Now that the system is up and running, the true value of the system will become increasingly apparent in the years ahead. Indeed, some of its beneficial effects are already manifest.

For example, production efficiency at the Malaysia plant, the first factory where the system was implemented, has been markedly improved by the new system. Production planning used to be done separately at the various factories by working out schedules on Excel spreadsheets, but by cutting over to the system, planners are able to grasp data from all the other sites at a glance. Factories are also able to get a detailed picture of their inventory and costs early on, and this will provide many benefits in terms of optimized parts procurement, shorter financial closing with reduced man-hours. At production sites, use of barcode management can be greatly extended to provide better control over information about materials, location management, and a host of other improvements.

Corporate headquarters will now be able to assemble all the information needed to generate future management strategies. Of course, Renesas has always had a way to gather information from the various factories, but unfortunately the core systems were different at each factory, which meant that the data had to be reformatted so it could be compared and combined.

“Now however, data obtained from corporate headquarters and factories can be integrated into the system, which allows management information to be managed and utilized as is without reformatting,” says Tajiri. “And if the latest data is needed at headquarters, it can be retrieved very quickly without causing extra work for staff at the factories.” Renesas plans to extend the system to the remaining three factories in the near future, and this will allow the company to achieve its original goal of standardizing business processes across the factories. Looking further ahead, this should help the company achieve its ultimate objective of optimizing its global value chain. Tajiri adds, “We have taken the first step toward integrating the company’s core systems. By acting in concert with other in-house reform projects, we hope to put in place the optimum business environment.”