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Volker Sievers, Project Lead, Howaldtswerke-Deutsche Werft GmbH

AT A GLANCE

Company

- Name: HDW-Gaarden GmbH
- Location: Kiel, Germany
- Industry: Engineering, construction, and operations – shipbuilding
- Products and services: Special-container vessels, large yachts
- Revenue: €2.2 billion (ThyssenKrupp Marine Systems AG)
- Employees: 2,344
- Web site: www.hdw.de
- Partners: IBM Application Services GmbH, SAP® Consulting, SAP Custom Development organization

Challenges and Opportunities

- Change organizational structure to spin off a new company and new plant
- Retain all historical data
- Ensure process continuity
- Safeguard warranty obligations concerning materials

Objectives

- Spin off business unit of Howaldtswerke-Deutsche Werft GmbH (HDW) to establish the independent company HDW-Gaarden
- Ensure full operating capacity by retaining all previous processes and functions in new company

Solutions and Services

- System Landscape Optimization group from SAP Consulting and the SAP Custom Development organization
- SAP Organizational Structure Change services, specifically the company code split and plant split services

Implementation Highlights

- Completed project within 4 months
- Created new master data to reflect new organizational structure
- Retained full performance of production management tools

Why SAP

- Technological approach of the System Landscape Optimization group (recommended by ThyssenKrupp AG)
- Consulting expertise
- Proven effectiveness of the consulting services, which ensure process continuity after data transfer

Benefits

- Rapid transition to independence
- Process and data continuity
- Legal compliance in separating material inventories, assets, and production orders
- Cross-plant production and common controlling area for HDW and HDW-Gaarden, despite separate company codes

Existing Environment

SAP R/3® 4.6C for logistics and accounting (functionality now found in the mySAP® ERP application)

HDW-GAARDEN

System Landscape Optimization Group Ensures Process and Data Continuity

In its long tradition of shipbuilding, Howaldtswerke-Deutsche Werft GmbH (HDW) has often set the standard. Most recently, the company, based in Kiel, Germany, once again asserted its status as a technology pioneer. True to its motto “faster, quieter, deeper,” HDW developed for mass production a submarine powered by fuel cells that produce electricity from hydrogen and oxygen. This air-independent propulsion system allows the submarine to cruise submerged for weeks, generating neither noise nor exhaust heat. HDW’s development represents a world-wide first.

HDW is part of the new European shipbuilding group ThyssenKrupp Marine Systems AG. Based in Hamburg, the group was founded in early 2005 following the merger of ThyssenKrupp-Werften and HDW. ThyssenKrupp Marine Systems emerged as a leading provider of submarines, naval surface vessels, and yachts. In addition to Hamburg and Kiel, the group has locations in Emden and Rendsburg, Germany; Karlskrona and Malmö, Sweden; and Skaramanga, Greece.

Within ThyssenKrupp Marine Systems, HDW provides the expertise in submarine manufacturing. In October 2005, an independent production facility was founded, HDW-Gaarden GmbH, to assume responsibility for the group’s merchant ship manufacturing. Also based in Kiel, HDW-Gaarden builds container ships and yachts, working regularly with other member companies of the group: Nordseewerke in Emden and Blohm + Voss in Hamburg.

Separating Out a Business Unit

HDW-Gaarden came into being as an independent company within months of the HDW executive board's decision in April 2005 to create it out of an existing HDW business unit. The objective was to have HDW-Gaarden functioning as an independent legal entity with full data and process integrity by the end of the fiscal year, October 2005. At the desired time the board's resolution was reality.

To transform a business unit into an independent company, the business unit's assets, material inventories, production orders, and ship manufacturing projects must be separated out from those of the rest of the company, while retaining all functions

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and processes to ensure full operating capacity. This meant a split in HDW's integrated system landscape, from both a legal and a technical perspective. Yet, its day-to-day business could not be compromised at any time during the process.

In order to successfully accomplish its goal, HDW had to correctly transfer its employee data and safeguard the integrity of its accounting and controlling processes. It had to assure the full functionality of its production management tools, including tools used for CAD and CAM. A further requirement was to preserve full data exchange between the enterprise resource planning software and the warehouse management software.

The first step involved intensive consulting and coordination with the parent company, ThyssenKrupp, and IBM Application Services GmbH (part of IBM). IBM Application Services was responsible for overseeing the smooth operation of the SAP® software and for application management support. HDW gathered information on experiences gained in comparable projects and possible procedural models.

Sophisticated Project Methodology

On ThyssenKrupp's recommendation, HDW contacted the System Landscape Optimization group of experts from SAP Consulting and the SAP Custom Development organization. In seeking their expert support, HDW had several very concrete requirements in mind. They included maintaining the continuity of the business unit's processes and completing the spin-off of the business unit by the end of the fiscal year, October 2005. Technically, the organizational change had to be performed in such a way as to ensure the legal independence of the business unit. This involved implementing the plant separation in the SAP software so as to produce two company codes – one for HDW, one for HDW-Gaarden. Each company was to have its own plant, but share the same controlling area. HDW also required that the project work be performed by a single team. It chose the System Landscape Optimization group for its comprehensive knowledge of methods and systems, acquired from its experience successfully piloting numerous other spin-off projects.

HDW's first workshop with the consultants took place in May 2005. It included an in-depth discussion of what would be necessary to complete the organizational change successfully and stay on schedule.

For its part, the consulting group provided extensive information on its proven project methodology and explained that before the process of changing a company's organizational structure begins, the customer's individual situation is always analyzed. This lays the foundation for selecting a solution procedure, forecasting the required resources and costs, and planning a preparatory project workshop. Workshop participants typically include a specialist from the consulting group and a representative from each of the affected departments. They identify and verify the criteria upon which the structural change is to be based, the objects and processes to be changed, and the rules for modification. In addition, they ensure logical consistency and address individual integration issues. As a result, participants in the workshop gain a rough idea of what is involved in changing the organizational structure of a company. The standardized analysis/workshop approach proved to be reliable, serving as the cornerstone of HDW's successful project.

Smooth Project Start

Then HDW really got moving. It established a project group and notified its user departments to put all their current IT projects on hold. HDW handled overall management for the spin-off project. HDW and IBM Application Services each assigned a person to coordinate the individual teams, which were organized according to SAP software functionality. The teams consisted of IBM employees. Some teams included SAP consultants and HDW department representatives. For the realization phase, the team members were joined by colleagues from the user departments.

By the end of July 2005, team members had developed a concept. HDW user departments then reviewed the concept to make sure the project would fulfill legal requirements concerning financial reporting, retention periods, and IT and process monitoring –

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areas that had to run smoothly following the structural change. In addition, there were business issues to resolve subsequent to the structural change, including how responsibilities would be allocated, how data would be organized by content, and how internal billing would be handled in the future.

In this phase HDW developed scenarios for the functional tests, which IBM Application Services carried out later in the project. The System Landscape Optimization group was responsible for the technical implementation and data conversion. “The group from SAP Consulting quickly familiarized itself with the particular requirements of our spin-off project,” says Volker Sievers, who led the project for HDW. “We benefited from the project experience and methodological competence of the group’s experts from the very beginning, which helped us keep the project running.”

Balancing Act Between Separation and Integration

Despite the spin-off of HDW-Gaarden into an independent company, the production and controlling process of HDW-Gaarden and HDW were to remain integrated. HDW wanted to be able to continue to work across plants on orders and handle billing between the plants internally in controlling. This presented an additional challenge to the project team. Its members had to redevelop processes and reports to accommodate multiple plants and multiple company codes.

HDW decided to transfer eight completed ship construction projects to HDW-Gaarden, keeping the rest with the original company for warranty processing. A total of 54,000 production orders were affected by the transition to the new company.

Over 1,500 Customer Objects Processed

In the course of the project, HDW and its partners had to adjust financial master data and implement a cross-company code billing system. The task involved examining and separating out for the new company the relevant ship construction projects from HDW’s very complex project portfolio. Despite the complexity of detail, the work progressed smoothly.

Changing the organizational structure of a company and plant to spin off a new company and plant places significant demands on materials management. For the HDW project, all customer objects – sales orders, production orders, contracts, and project management documents as well as follow-up documents – had to be reprioritized and reassigned to either HDW or HDW-Gaarden. The work involved examining the customer objects for data continuity and data consistency in order to determine to which company and to which project to assign them.

About 3,000 customer objects had to be examined and half of them revised. IBM Application Services reprioritized primarily those related to controlling and accounting, project management, materials management, and human resources. Depending on priority status of each object, the revision would take place during the first, second, or third test phase. Some objects were scheduled to be revised after December 31, 2005, the date of project completion.

1.3 Million Material Masters Copied Without Incident

The realization phase began in early July 2005. HDW and its partners planned three test phases in a time frame of three months. HDW and IBM Application Services handled the customizing work and adjusted the master data and standard programs. The System Landscape Optimization group took on the technical conversion of master and transaction data for logistics and controlling. Their work laid the foundation for locating and continuing long-term projects in the new structure. In addition, 1.3 million material masters were copied using a conversion tool provided by the consulting group – a process that would have been tedious without it. “Thanks in large part to the performance and excellence of the System Landscape Optimization group’s tools, our highly complex spin-off project went off without a hitch,” says Norbert Bader, head of the Customer Competence Center (CCC) at HDW.

To handle the technical side of the spin-off, HDW selected the System Landscape Optimization group for its proven expertise in providing the SAP Organizational Structure Change services and specifically for their experience in executing company and plant spin-offs. For the project work, the consulting group used its standardized conversion workbench (CWB) tool. With CWB, the experts modified data structures and converted data – specifically, the HDW company code that served as the basis for the spin-off of HDW-Gaarden. The CWB tool operates directly at the table level to guarantee high performance and fast data conversion. Data availability, document flows for all completed and in-process projects, and the continuity of open transactions were ascertained after the technical conversion was completed.

The realization of and the effort required for the conversion depended on individual factors, such as split criteria characteristics of the SAP software and its usage. The prerequisite for the technical implementation was that the criteria on which the structural change was based be complete and integrated.

Three Test Cycles and a Successful Cutover

Prior to cutover in October 2005, HDW and its partners completed three test cycles, each of which took place on a new, up-to-date system copy. In the first test cycle, project members verified that the split tools functioned. The second test cycle featured the incorporation and inspection of changes and supplementary measures deriving from the first test cycle. The final test cycle served as a test run before the actual cutover.

Due to the complexity of the organizational structure change, the conversion of the objects had to be handled in 350 individual steps that took 92 hours. The process was made more difficult by the considerable interdependence of the steps. All of this required that the cutover be perfectly streamlined.

“The System Landscape Optimization group and IBM Application Services provided an overview of the complex relationships between various forms of data. The way they complemented each other’s expertise was stellar,” says Sievers. “The cooperation of all our project partners was exemplary. The consulting group handled new information and situations openly and proactively. Its members responded with dedication and flexibility to our requirements.”