Case Study: Oil & Gas

Enterprise Integration at Scale

A global oil and gas leader improves operational efficiency and drives growth via end-to-end warehouse automation and integration.

One of the world's largest petrochemical producers based in Saudi Arabia was a veteran of digital transformation, having implemented many different SAP modules in recent years. But integration between the components was lacking, meaning the company's staff had to consult a number of disconnected systems in order to get the best data for decision making. Another major gap: The company's warehouse management system (WMS) had not yet been modernized and was largely based on spreadsheets and manual processes.

The petrochemical company was looking to improve productivity and increase accuracy via an end-to-end WMS automation initiative, along with integration of key SAP components including financials, Human Capital Management (HCM), Application Management Services (AMS), Enterprise Content Management (ECM) and Auto-ID Infrastructure (AII). We proposed a modern, integrated WMS based on SAP's Extended Warehouse Management (EWM) solution (encompassing SAP EWM integrated with SAP Auto-ID, RFID

At a Glance

A major Saudi oil and gas company needed to automate its end-to-end warehouse management system with SAP EWM. We helped the company implement core functionality to streamline its warehousing operations.

Outcomes

- Warehouse efficiency increased to 200% after plant automation.
- $5.6 million savings per year as a result of plant automation, with return on investment targeted for three years.
- Improved operational efficiency with up to 99% tracking visibility.
- A 30% improvement in operational efficiency.

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and SAP Fiori). SAP EWM is a state-of-the-art warehouse management system that is capable of track-and-trace of product from the conveyor line to the container with 100% visibility, providing all the required functions for an organization's warehousing and distribution operations. After submitting a proof of concept and demo, the company engaged us for the project. The project's timeline was aggressive – less than a year for development on an initiative that would typically take at least two years.

A Complex Undertaking

The company's SAP ERP modules lacked integration with other key systems, which hampered the executives' ability to make decisions. There was no "single version of the truth" – one place where business users could go to obtain numbers and data they could trust. Without the right integrations in place, the company was missing a significant opportunity to improve the speed and accuracy of its decisions.

The company's massive warehouse operations were manually based, radically increasing the time to complete processes and reduce the rate of errors. The warehouse function was complex. The company produces petrochemical components and ships them to business customers in Saudi Arabia and other businesses around the world. This meant multiple movements of shipping containers from the company's premises to its clients. Challenges included:

- **Poor process synchronization:** In its day-to-day operations, 40 to 50 staff members handled pallets, operated forklifts, did labelling, performed pick-and-pack operations and did other manual tasks. A radio frequency identification (RFID) tagging system supported the stock-location process but its role was limited due to integration restrictions.

- **Complex manual processes:** The company used systems that required excessive manual paperwork, as well as emails and calls to track procure-to-pay and order-to-cash cycles for delivery of products. Business users did not have the visibility required to track products from production to the client's premises.

- **Dynamic requirements:** The initial ERP environment was seven years old. Systems capabilities had evolved but did not keep pace with changing user needs. There was no baseline for user requirements, so we needed to create that before work began.

Cognizant performed a feasibility study to evaluate the solution suitability, expected business benefits, outlined implementation challenges and prepared a blueprint for SAP SCM, EWM and RFID implementation.

After evaluation and successful completion of a proof of concept on SAP EWM module, the client asked Cognizant to implement the full-fledged solution in two phases.

Phase one focused on installation, configuration, integration and testing of SAP EWM and RFID in three Polymer warehouses while phase two is an expansion of the solution to five additional plants. The goal is to ensure smooth operations of the extended warehouse facility.

A Host of Business Benefits

Implementation of phase one of the solution paid off in a variety of business benefits:

- **Improved reporting to drive better decisions.** Previously, it took three to four weeks to prepare critical reports for the business users. That has been reduced down to one week, speeding the executives' decision-making capability.

- **Cost savings** of $150,000 on a one-time basis with expected savings due to efficiencies of $5.6 million annually. The project is expected to achieve a return on its investment within three years.

- **Greater warehouse operational efficiency.** Warehouse staff has been reduced from 40 to 50 people down to 15 to 25. All the inventory is now integrated into the system so staff members can immediately see what is available to ship. Integrating the RFID system with the SAP Fiori user interface permitted tracking of container

movements from yard to port along with real-time reporting. This enabled the client to achieve 99% visibility into the tracing and tracking of product orders with one consolidated platform. In total, this improved the operational efficiency by 30%.

- **Reduced general ledger consolidation period.** The general ledger consolidation in the company previously took from two to three months. After the implementation of SAP finance modules, the business can now close the consolidation within two weeks.

- **Improvement of the employee benefits system.** Before implementation of SAP HCM, benefits such as loans offered, employee paid time off, family yearly travel advances/ allowances, and visa requests were managed manually. After implementation and integration of the HCM application, users can see their status progress in real time. This has improved the system usage and its adoption.

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About Cognizant

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 195 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at **www.cognizant.com** or follow us @Cognizant.

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