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Case Study: Wireless Warehouse Initiative Transforms Materials Management Operations and Improves Delivery Speed by 66%

Industry: Industrial Machinery for the Oil & Gas and Power Generation Markets

Services Provided: Project Management, Project Scheduling, External Vendor Management

Company: A provider of highly efficient turbine-driven gas compression, oil pumping and power generation packages for on- and offshore applications worldwide.

Challenge: With increasing logistics and labor costs threatening to seriously impact profit margins, the company's supply chain sectors in North America saw a need for improved material management to meet rising demands for order accuracy while increasing productivity and reducing costs. The major challenges they faced were overhead control issues such as inaccurate inventory counts, shipping errors, receiving errors, and a need to improve delivery speeds.

Value Delivered

Thanks to a retooling of the materials management system incorporating radio frequency (RF) automation, the company's warehouse accelerated delivery speed of parts by 66%, creating a significant reduction in overall time to market. This complex automation project came in on time and more than 18% under budget.

Analysis concluded that improvements would best be achieved by substituting technology for potentially error-prone human activities such as receiving, putaway, picking, shipping and inventory counting. Providing an automated means for data to be conveyed directly from the warehouse floor into SAP's Supply Chain Management (SCM) software rather than via a manual counting and recording process would improve accuracy, reduce overhead costs, and provide real-time supply chain visibility.

Solution: The organization decided to take advantage of radio frequency (RF) automation and SAP integration within the warehouse to achieve optimum supply chain efficiency and productivity. Midway through the project, it became apparent to the company that they did not have the appropriate level of project management capacity available in-house. They called upon PM Solutions to provide a senior-level project manager to lead the "North America Program Team" in the implementation of a warehouse RF solution for the final third of the project duration. PM Solutions' project manager immediately assumed responsibility for developing and managing the overall project plan, which consisted of three distinct components:

- Install shop floor wireless network
- Build, configure, and connect Radio Frequency devices
- Incorporate RF-associated SAP changes

PM Solutions' project manager performed the roles of project manager and system integrator, being responsible for overseeing requirements gathering, systems design, procurement and installation of the necessary hardware and software, and coordinating user acceptance testing.

Result:

The new RF solution was delivered on schedule and more than 18% under budget. The biggest gains from this implementation were improved inventory accuracy and increased productivity. The expected delivery speed of parts from the warehouse was reduced by 66% (from 24 hours to 8 hours), producing a significant improvement in overall time to market. This successful project laid the groundwork for subsequent operational improvement initiatives now underway at the client's locations in the US and Europe.