

INTERACTIVE SESSION: ORGANIZATIONS

DP WORLD TAKES PORT MANAGEMENT TO THE NEXT LEVEL WITH RFID

DP (Dubai Ports) World has reason to be proud of its accomplishment of becoming one of the leading terminal operators in the world. Today, DP World has 60 terminals across 6 continents, and 11 new terminals are under development. The firm employs an international professional team of more than 30,000 people to serve customers in some of the most dynamic economies in the world.

DP World has adopted a customer-centric approach to enhancing its customers' supply chains by providing quality, innovative services to effectively manage container, bulk, and other terminal cargo. The firm invests heavily in terminal infrastructures, technologies, and people to best serve its customers.

Like other global port and terminal operators, DP World helps shippers around the world address the often complex and costly challenges of managing the supply chain. One of the typical problems encountered in container terminal operations is traffic congestion at port entry points. This congestion is often due to delays introduced by lengthy procedures and paper-based logistics. In response, DP World has introduced many IT-based solutions to enhance terminal capacity utilization. These solutions include the electronic custom release of cargo, Electronic Data Interchange (EDI) reporting, two-way digital radio communications, and the "e-token" advanced booking system.

DP World management wanted to take things a step further and decided to make the loading and unloading of containers operate on "just in time" principles to improve container turnaround. It found that Radio Frequency Identification (RFID) technology was an effective way of increasing the efficiency of truck movements through port access gates. Today, DP World uses RFID-enabled automatic gate systems at the port terminals it operates in Dubai and Australia. According to Mohammed Al Muallem, managing director of DP World UAE, the introduction of an automated gate system would not only eliminate traffic congestion but would also help to eliminate a number of lengthy procedures, increasing productivity at the ports, and improving customer satisfaction. This will in turn, increase the turnaround of shipping goods.

Prior to the RFID deployment, DP World spent several months performing proof-of-concept trials involving several competing RFID suppliers. Because of the rugged environmental conditions at the ports, DP World required that 99.5 percent of all tags be read successfully, which was a key challenge for many vendors. After extensive testing and evaluation, DP World selected Identec Solutions, a global leader in active wireless tracking solutions, as its RFID supplier.

How does the RFID tracking system work? Trucks that visit a port terminal are equipped with active RFID tags supplied by Identec Solutions that are fixed on the rear chassis. As a truck moves towards the gate, its unique tag ID number is read by an RFID reader, which is integrated with an automated gate system. At the gate, an optical character recognition (OCR) system determines if the truck is loaded with a container, identifies the ID number of the truck's container, and reads the truck license plate number as a backup identification. The system uses the supplied information to automatically issue a ticket to the driver that specifies the lane the truck should proceed to in order to load or unload the container. The system can also automatically determine if the truck is on time, which is essential information for the efficient pickup and drop off of containers. As the truck leaves the gate, the RFID tag is read once again, and the driver receives a receipt for the completed transaction.

RFID has enabled DP World to increase the productivity of container handoffs, speed the entry and exit of trucks through terminal gates, and increase fuel efficiency. Victoria Rose, regional office project coordinator at DP World Sydney maintained that RFID would improve gate efficiency through improved truck management, reducing queues and congestion around gates, and removing the number of trucks from public roads by streamlining procedures.

Identec's RFID-based solution has also enabled DP World to improve customer satisfaction by enhancing the efficiency of customers' supply chains through smoother, faster, and more effective delivery of their containers at terminal gates. The elimination of lengthy paper transactions and

manual inspections at gates and the reduction in manual data input errors demonstrate DP World's customer-centric approach to delivering a superior level of service. The technology also allows transport companies to save time, increase revenues, and reduce costs.

DP World's use of RFID has also helped it to tighten security by providing better accuracy on inbound and outbound truck movements through the terminals. For instance, the system can automatically check whether a truck has a booking and whether it is authorized to enter the port.

As a next step, DP World will consider expanding its use of RFID-enabled scanning and tracking technology to further optimize supply chain flow. In the future, Rose hopes DP World will focus on

investigating its use within the yard, and how data captured can be used.

Sources: Dave Friedlos, "RFID Boosts DP World's Productivity in Australia," RFID Journal, July 27, 2009 (www.rfidjournal.com/article/view/5086, accessed October 20, 2010); Rhea Wessel, "DP World Ramps Up Its Dubai Deployment," RFID Journal, August 13, 2009 (www.rfidjournal.com/article/view/5130, accessed October 20, 2010); "DP World UAE Implements Automated Gate System at Jebel Ali Port," The Zone, May-June 2008 (www.jafza.ae/mediafiles/2008/10/23/20081023_Issue-11.pdf, accessed October 20, 2010), p. 11; DP World (www.dpworld.com, accessed October 20, 2010); Identec Solutions (www.identecsolutions.com, accessed October 20, 2010).

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CASE STUDY QUESTIONS

1. How did Identec Solutions' RFID-based technology help DP World increase the efficiency and effectiveness of its customers' supply chains?
2. Describe two improvements that resulted from implementing the Identec RFID-based solution.
3. How does the concept of supply chain execution relate to this interactive session?
4. What managerial, organizational, and technological challenges might DP World have faced in the early stages of the RFID project's deployment?