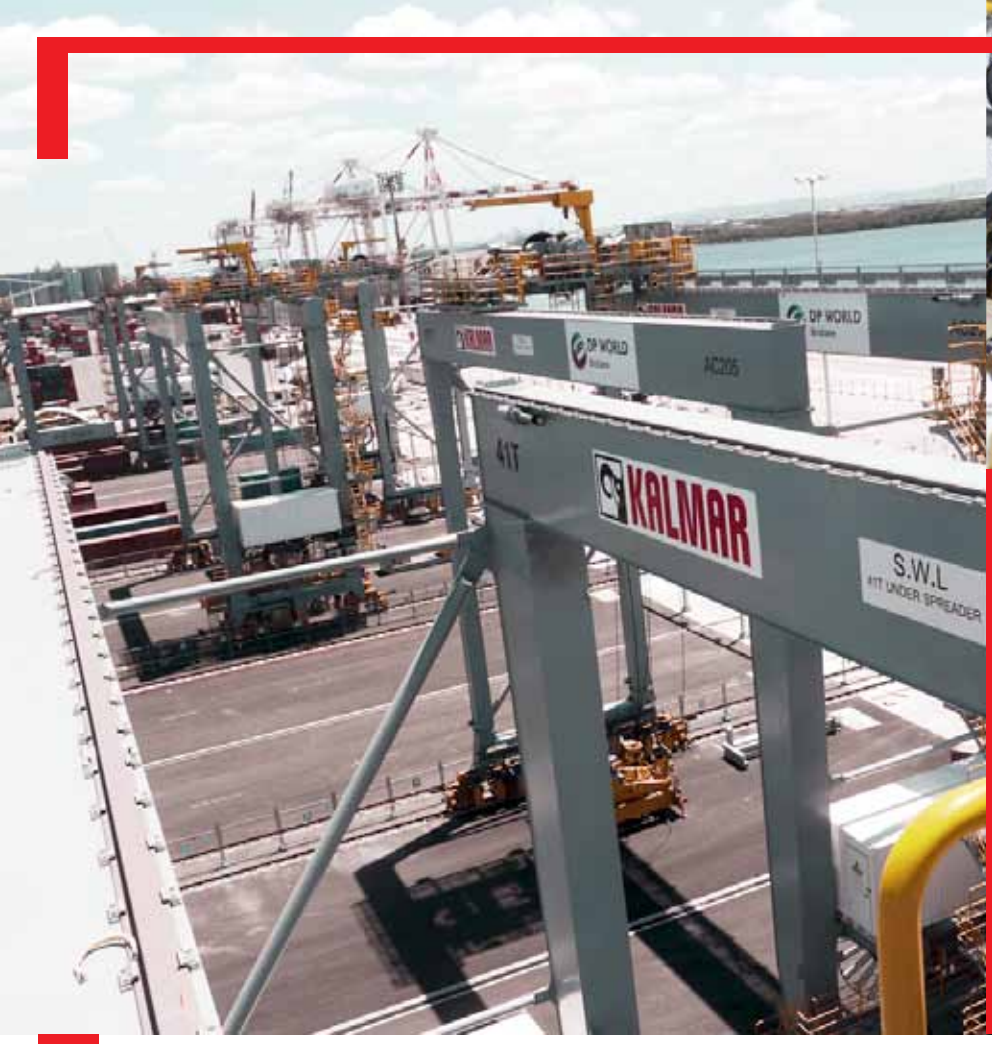

"Ultimately, we felt that a combination of ASCs and shuttle carriers would not only provide the best financial return on investment, but also the highest level of waterside productivity."

MARK HULME,
COO, DP WORLD AUSTRALIA

Fundamental shift

DP World and Kalmar's cooperation has made the Port of Brisbane one of the most highly automated facilities in the world.

Terminal

DP World Brisbane's facilities are located on the mouth of the Brisbane River in Australia. The Port of Brisbane is the largest port in Queensland and presently the fastest growing port in the country. DP World Brisbane is a modern terminal offering a full range of electronic business support to clients, including electronic customs import release of cargo, electronic data interchange reporting and web based information services.

In 2008 the company signed a new 40 year lease with the Port of Brisbane. Since then DP World Brisbane has invested A$250m to automate its landside operations and introduce semi-automated technology to its waterside operations.

Challenge

The competitive environment at the Port of Brisbane became tougher with the arrival of a third stevedore in 2012. Additionally, the other two stevedores at the port have also deployed automated systems and equipment, reforming the local competitive environment.

DP World Brisbane realised that it would have to make more effective and efficient use of terminal space while maintaining the highest standards of safety, and comply with maritime transport security regulations and customer service.

Solution

The company opted for a system in which containers are transferred by manned shuttle carriers from the quay crane to the interchange area at the waterside end of a module serviced by automated stacking cranes (ASCs). There will be seven operating modules each serviced by two ASCs. The overall annual capacity of the seven modules is around 900,000 TEU, providing DP World Brisbane with significant future development capability.

KALMAR

Technology

DP World Brisbane has adopted the latest automation technology from Kalmar and Navis to ensure fully integrated operations that deliver optimum productivity and reduce operational costs.

Fourteen Kalmar shuttle carriers operate between the ship-to-shore cranes and ASCs to transfer containers between vessels and the land.

Kalmar Automated Truck Handling automates the landside operations in the terminal. It uses laser sensors to measure the exact location of the truck trailer's twistlocks and feeds the information to the crane, which automatically adjusts the position of the container for a perfect grounding of the container onto the trailer.

Added value

The combination of automated stacking cranes and shuttle carriers from Kalmar, integrated with N4 TOS, will offer DP World Brisbane excellent customer service as a result of higher waterside productivity, added stacking capacity, more consistent operational performance and additional pickup and delivery flexibility.

Safety and environmental aspects are further enhanced by fully automated, electrically powered operations, which reduce the emission levels to zero.

Results

There has been a fundamental shift in how the facility operates and a reduction of some 50 percent of operational employees.

The project will increase DP World Brisbane's terminal capacity from 600,000 to 900,000TEU and will be one of the most highly automated terminals in the world.

With the turnkey solution of automated stacking cranes and manual shuttle carriers, this world-class automated terminal can now meet the shifting demands of the business – both today and tomorrow.

Contact

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Kalmar is the industry forerunner in terminal automation and in energy efficient container handling, with one in four container movements around the globe being handled by a Kalmar solution. Kalmar is part of Cargotec.

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