

Continual Improvement in Terminal Management

Port Taranaki: Improvements to maritime scheduling challenges



Established in 1875, Port Taranaki is New Zealand's only west coast deep-water port and handles large volumes of diverse cargoes. Utilised as a servicing base for sea transport, a provider of related maritime support and specialists in 'heavy lift' services, the port chose Körber to provide its new marine planning software, as part of its drive for continual improvement.

The Challenge

Following an evaluation of existing systems, technology and processes for ship planning and communication, Port Taranaki identified the need to replace existing technology used when processing a vessel call. Specifically, they needed a solution which provided optimum vessel throughput, reduced waiting time and to meet the port operating objectives.

They looked at existing systems in other ports in New Zealand, but many of these were in-house systems

At a glance

Solution

- K.Motion Marine Enterprise

Features and benefits

- Improved accuracy
- Improved communication
- One source of the truth
- Real-time information



which did not have the level of support or an ongoing development programme they wanted.

The Solution

The team at Port Taranaki found Marine Enterprise Suite (MES) would feed into a bigger IT ambition for a series of improvements to its port-management. They especially liked the scheduling algorithm which had the ability to automatically include the Taranaki constraints in the scheduling process. Additionally, Taranaki expressed an appreciation for the Körber implementation team who understood the intricacies of the maritime scheduling challenge.

“Through evaluating our systems, technology and processes for ship planning and communication, we needed to replace our existing technology for planning the many resources used when we process a vessel call. The Marine Enterprise Suite will provide us with an algorithm that will assist and improve the planning process, whilst also taking into consideration the safety and operating constraints that apply at that point in time, before communicating the mooring plan to customers internally and externally.”

- Guy Roper, CEO at Port Taranaki

MES helps ports and terminals to plan, schedule and manage vessel calls – providing higher productivity, increased efficiency, leading to higher profitability, and customer service. The system’s algorithm assists and improves the planning process by taking into consideration the safety and operating constraints that apply at that point in time, creating a workable planning schedule that is available online to users.



Meeting all the demands of a modern terminal, MES applies planning and scheduling algorithms, performance monitoring, constraints like Under Keel Clearance, and terminal analytics and interactive vessel charts – accumulating in ensuring vessel ETA’s can be accommodated and the best utilisation of resources achieved.

Results

By implementing MES, the solution has improved long-term planning at Port Taranaki, helping to identify potential delays, and ensures all information about the ships and their cargo is known. This facilitates best use of the port infrastructure and allows scheduling of berth outages for maintenance, whilst highlighting which vessel calls can still be maintained. Also, the scheduling capabilities keep the port operating efficiently.

Services required for each vessel visit are displayed so that all teams involved in the call understand the requirements of their customers and when those services need to be delivered. The timings of the forecast services are automatically updated as changes are made to the plan.

When faced with more unusual problems, the technology can deliver a rapid response to test the schedule as well as offer ‘what if?’ scenarios to assess options for long term procedural or structural change. “The system has proved even more valuable during the recent COVID-19 pandemic, enabling our people to work safely from home whilst offering real-time visibility of the scheduling and peace of mind,” said Roper.

Working with the Taranaki team has led to a robust implementation methodology being implemented. Several MES reports were created to streamline PTL record keeping and communication. For example, a delay reports shows nominations which suffered a chosen delay reason and a ‘berth occupancy’ report gives a summary of the occupancy achieved for any previous chosen.

Also, due to the global COVID-19 pandemic, working practices at the port have had to adapt with terminal workers off-site and working from home. They have heavily relied on MES for business continuity – having the peace of mind that the software provides visualisation and accuracy, even if they can’t be there in person.

As Port Taranaki moves forward, the MES technology will continue to enable the Port Taranaki team to further optimise their operation and reduce costs.