

Centre for Operations Excellence

Business Dockside Crane Efficiency for a Marine Terminal Services Company

Client Profile

The client is a marine terminal services company that operates two container terminals and handles the bulk of Vancouver's container traffic. It operates Vanterm, Vancouver's largest container terminal, and Deltaport, both of which combined allows the company a handling capacity of more than one million TEUs (Twenty foot Equivalent Units) of container traffic per year.



Business Challenge

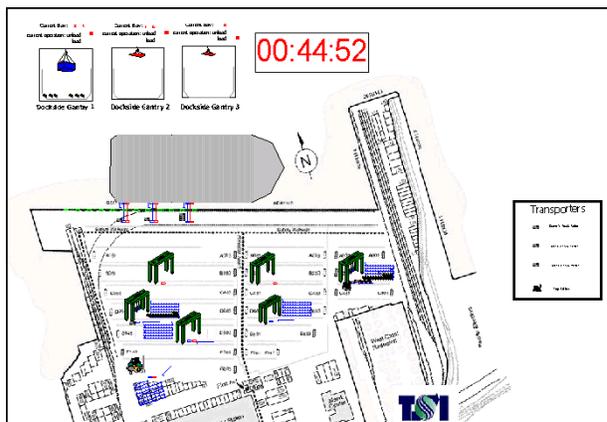
To accommodate the fast turnaround demands of shipping companies, the company was searching for opportunities to increase the overall productivity of the Vanterm container terminal. Management proposed the replacement of existing transport equipment with new equipment. To determine the potential increase in Vanterm's efficiency and the required amount of new equipment prior to purchasing the equipment, it turned to the Centre for Operations Excellence (COE) to simulate both the current and proposed systems. If the proposed system were found to be more productive than the existing one, the COE's study would be used to support the capital requisition for a new equipment configuration.

Value Delivered

The COE team contributed the following:

1. Provided a comparison of the productivity of the current and proposed systems.
2. Determined the optimal configuration for the current and proposed equipment set-up.
3. Provided a powerful simulation model that could be used to analyze different configurations and operations scenarios in the future.

The COE Approach



operation. The scenarios were developed in conjunction with company management and involved different equipment allocations.

1. *Process Mapping*
The COE team conducted site visits and interviews and created process maps of the company's container operations.
2. *Simulation*
The COE developed two animated simulation models to analyze both the current and the proposed operations. The models were validated against actual operational data. In the future, the company could use the simulation models to predict its operations.
3. *Scenario Analysis*
A number of operational scenarios were tested to determine the efficiency of the proposed