

A system dynamics approach to operational and strategic planning of a container terminal

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ABSTRACT

Modern container terminal faces the pressure of providing both efficient services and adequate facilities parallel with the demanding needs from the customers. This paper presents the application of system dynamics simulation in addressing both the issues at the operational and strategic level. The operational level model is used to aid terminal operators on daily planning by understanding the relationship and interdependency between the berth and yard. The strategic level model on the other hand is used for capacity planning. This study bridged the gap between the literatures by integrating both operational and strategic level issues in a system dynamics model.

KEYWORDS:

Container terminal; Microworlds; Simulation; System dynamics

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