

## Management Summary

Process standardization can benefit the company in many aspects such as cost reduction and predictability. Given the increasing demand and the complexity of container industry's environment, this business can surely take advantage of standard settlement. With the aim of standardizing the processes in the operation of automated container terminals it is needed to gain a generic perspective and to be able to represent it within a useful and consistent approach. Afterwards, a critical view can be given in order to conclude whether this standardization is possible and up to what degree it is so. Identifying the main issues and limitations of this standardization are key steps in this process.

In line with the research of process standardization for the operation of an automated container terminal the following points are undertaken along this report.

- Identification and analysis of the main characteristics of an automated container terminal that happen to be relevant **factors** influencing the **operation** from a theoretical perspective.
- Building of a **process model** that aims to represent the processes taking place in a non-specific terminal. The process model is meant to be standard and therefore suitable to be used for different terminals within the same terminal operator. It is built with the purpose of being descriptive, prescriptive and explanatory and uses a standard terminology in order to stay general. The Process Model consists mainly in two parts:
  - List of processes taking place in a generic terminal in a classified and prioritized system.
  - Process map and process description for each of the processes considered in the process list.
- Study of a real case of a semi-automated container terminal in Virginia, USA. The case study is related to the two points developed before and has the subsequent aims:
  - **Operations Observation** and analysis regarding the studied influencing factors for several processes within the terminal. Out of these factors, regulations, terminal layout and equipment are the most significant ones.
  - **Application of the Model** in order to test its performance and its main limitations. The model developed is clear and descriptive. The functionality of the model is depending on its level of detail which is considered appropriate for obtaining a general perspective of the operation.

As a conclusion it is obtained that standardization obstacles can be overcome with an appropriate trade-off between level of detail and generalization and with the use of more case studies for the model iterative improvement. The model is therefore a first step to process' standardization although it needs to be enhanced in order to be effective.