

**LOGIX : A SOLUTION TO INCREASE UTILIZATION OF  
EMPTY SHIPPING CONTAINERS AND MINIMIZE  
TRAFFIC CONGESTION/ACCIDENTS**

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## **Abstract**

Transportation of empty containers have vastly contributed to the inefficiency's in Maritime transportation. Some of the main causes of the transshipment of empty containers is due to the limited mixed terminals, under/over utilization of human resources and the less value given to the importers/ exporters. Shipping Container company's and Freight forwarders are affected by the transportation of empty containers in an equal manner. Shipping companies are reluctant to change procedures and have less tracking of empty containers thus leads to not utilizing a container to its maximum potential. Similarly, this affects Freight forwarders as they could have utilized this empty container after it was dispatched from its consignment but was unaware of such a container. In addition to the inefficiency's, transportation of empty containers has also increased the frequency of traffic congestion and road accidents.

This project aims to analyze and identify barriers of empty container utilization and to design, develop and evaluate an IT Solution for better tracking and use of these said containers. The project focuses on addressing the issues of freight forwarders and importers/exporters as well as increase awareness of empty container transportation to Shipping companies. In designing an effective solution various factors including repositioning of the empty containers and finding the most preferred container analyzed using existing literature. The findings were validated via interviews and questionnaires distributed amongst experts in the logistics industry.

The results indicate the necessity to give importers/ exporters the preference to choose their containers as well as being able to utilize a container efficiently making the process better for all parties. Further, reflects the need for awareness of consignments and when it is completed as well as easy location of a container. Thus, considering the identified factors, a mobile application to increase efficiency and transparency – “Logix” has been designed and developed for the ease and increase of empty container utilization to reduce traffic congestion and road accidents. Logix is an all in one platform that offers Freight forwarders, Shipping companies and shippers to add consignments, search for containers and locate empty containers in a fast and easy manner. The solution was evaluated by

expert and non-expert stakeholders, to validate the success and was commended in terms making the process to find a container very efficient.

**Keywords:** Shipping containers, Freight forwarders, empty containers, Shipping container companies, importers, exporters, Maritime, Logistics, congestion.