

Trend in transport: the role of intermodal transport in the international logisti...

[Transportation](#)



Globalization and the consequently expansion of the geographical firm's borders led an increase of the international transport's demand, promoting the develop of transport's sector. In fact, the growth of the amount of freight being traded, as well as, a great variety of origins and destinations promotes the importance of international transportation as a fundamental element supporting the global economy. In particular, since the trading distances involved are often considerable, there has been an increase of demands on the maritime shipping industry and on port activities.

In this process China had an important role, in fact, as its industrial and manufacturing activities developed, it started to import growing quantities of raw materials and energy and export growing quantities of manufactured goods, fostering a surge in demands for long distance international transportation. International transportation system have been under increasing pressures to support additional demands in freights volume and distance at which this freight is been carried.

This couldn't have occurred without considerable technical improvements permitting to transport larger quantities of goods, and this more quickly and more efficiently. Container played, of course, a crucial role, promoting, furthermore, the development of the intermodal transport. Intermodal transport modes recover an important role in international transportation, in fact, because of the involved geographical scale, most international freights movements involve several modes, especially when origins and destinations are far apart.

Among the numerous transport modes, two are specifically concerned with international trade: ? Ports and maritime shipping ? Airports and air transports Maritime transportation is very important in international trades, in fact in terms of tonnage it handles about 90% of the global trade. Although in terms of tonnage air transportation carries an insignificant amount of freight(0. 2% of total tonnage) compared with maritime transportation, its importance in term of the total value is much more significant: 15% of the value of global trade 70 times more valuable than its maritime counterpart) .

This is due to the fact that air transportation, being more expensive, is used mostly to carry rich freights. Road and railway modes tend to occupy a more marginal portion of international transportation since they are above all modes for national or regional transport services. Their importance is focused on their role in the first and the last part of the door to door transportation chain. For this reason they result anyway an important factor that should be considered by a firm in the logistics planning of the distribution of freight to the customer.

As said before the driver of intermodal transportation has been the container, which permits easy handling between modal systems, in fact it is designed to be moved with common handling equipment enabling high-speed intermodal transfers in economically large units between ships, railcars, truck chassis, and barges using a minimum labor. The container, therefore, serves as the load unit rather than the cargo contained therein, making it the foremost expression of intermodal transportation.

The usage of containers shows the complementarity between freight transportation modes by offering a higher fluidity to movements and a standardization of loads. For logistics managers intermodal transportation offers significant advantages over single mode alternatives. First, intermodal transportation minimizes handling and total transit time, expediting the entire transportation process and thus shortening the customer's order cycle time. Second intermodal transportation allows to take advantage of the best characteristics of all modes, permitting to offer the most efficient transport service at the lowest possible price to the customer.

Third intermodal movement cuts down on theft, loss and transport costs in general by eliminating virtually all handling of individual goods. Another important factor is that intermodal transport uses container and this makes easier tracking the freight during all the transportation process. This is possible thanks to a new technology called RFID (radio frequency ID) a firm (but also a customer) is able to know what assets it has and where they are at every hour.

In fact this relatively new technology, that promises to change the way inventories are managed, consists in an RFID device that transmits a signal when it is activated by an RFID receiver. Depending on the device, this signal can have a range as short as 6 feet or as great as 90 feet. The data transmitted can include various product identifiers of value to the manufacturer, shipper or purchaser. So the signal emitted by an RFID device can help company tracking the location and quantity of their inventory .

The use of RFID in logistics application is one of the pre-eminent fields where the technology can shine. Products can be tracked from points of manufacturer (and even earlier if source components are tracked using RFID) all the way through the distribution chain, and down to the retail level. This new technology has helped many organization solve the main challenge at every node in their supply chains: the lack of visibility of logistics data. RFID technology is a powerful solution to improves asset visibility, data quality, inventory management, and interoperability in an end-to-end integrated supply chain.

In addition the use of this technology allows to reduce costs as replacement costs as well as avoiding shrinkage. It also helps to reduce capital costs, increase customer satisfaction, as well as ensuring the assets are in the correct place at the right time, recovering an important function in the logistics process of a firm. An added advantage is the reusability of these tags, so company, which want greater control over assets and their management, have opted to use RFID and logistics management techniques .

Using RFID and logistics management strategies will serve to improve capital utilization, lower the total operational costs as well as improve the availability of assets. The use of these asset management techniques has improved customer retention significantly. This technique will help improve visibility of assets in transit, availability management of much needed assets and transportation management The use of RFID and logistics management techniques are especially useful for manufacturers, where parts bins feed

parts in an automated plant, since the placement of the right part in the right place is critical.

The company can use these techniques in areas where they have expertise whereas professional help can be sought for areas where they lack control such as transportation, delivery, pick up etc. Companies should consider implementing RFID and logistics management techniques, as they will greatly benefit from it. It will reduce cost, increase control and availability, decrease chances of loss of assets due to various factors as well as prove to be very economical.

In conclusion we can affirm that transport is one component of the logistic mix that is undergoing a great deal of change. Intermodal transport is a reflection of the changing nature of transport in general, signifying as it does the logistics managers ability to combine the advantages of two or more modes of transport into one seamless shipment that reaches the customer faster and with less damage than a mode-by-mode routing could providing.

Therefore to better control the delivery process of the goods, being able to provide value added to the customer, could be useful for a firm develop a tracking system of the freight from the factory to the final customer. This could be seen as value added logistics service useful to satisfy the customer saving costs at the same time.