



# Optimizing Spare Parts LOGISTICS

Creating an efficient transport planning of spare parts  
for Automotive OEMs.

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# Abstract

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Spare parts logistics networks have complexities in inbound and outbound movements of parts. Inefficiencies and cost slippages arise due to sub-optimal planning and lack of visibility in ETA. Such issues in the inbound movement have a cascading effect on the outbound networks. They cause congestion in the warehouse and create uncertainty about the status of requested parts for the dealer.

This article provides an overview of how to achieve efficient spare parts transportation using an optimization tool and an enterprise platform to collaborate with different stakeholders.



# Challenges

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The biggest challenge is in change management, managing uncertainties, and differentiating the nuances of multiple sites. One way to manage this is through the structured roadmap, utilizing principles of crawl, walk, run methodology for automation and quick improvements followed by objectives that have a vast impact.

The logistics platform can be used to build a pan operations template covering majority of the requirements followed by site-specific configurations to address those needs. An equally powerful challenge is data accuracy. Without the right data, even the most powerful AI-powered optimization platforms would have very little impact on the logistics performance and would in fact, appear counterproductive.

Ensuring the right data means working with a subset of data to identify the inaccuracies and find the right data sources for optimal logistics planning and execution. The business needs should define the data requirements.



# Opportunity

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To understand the opportunity, let's define the inbound network where a supplier gets a weekly demand for a part X. And from the parts distribution center (PDC), the outbound network consists of several dealers who have placed orders for the part.

## Traditional approach

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The traditional approach would be that the supplier chooses to fulfill the demand as per the supplier's schedule but makes sure to meet the weekly demand. Though in most cases, even this may not happen. The trucks that reach the supplier often return with fewer quantities than required. In other cases, the trucks must wait idle since the supplier does not have the parts in ready stock.

The PDC does not have enough supply of part X during the week, and it ends up having the requirement met only towards the end of the week or the following week. The outbound team at PDC has no visibility on when the parts will arrive, so they do uninformed truck planning. Hence, the transportation plan they create is sub-optimal. It leads to fire fighting and higher transport costs.

The dealer also has no visibility on when the ordered parts will arrive. Hence, he cannot commit to the end customers. Because each stakeholder works with nonaligned objectives and KPIs with no clear one truth platform, inefficiencies creep into the logistics network.



# Logistics planning & execution on an enterprise platform

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Let us look at how we can transform the network through logistics planning and execution on an enterprise platform. In the inbound flow, the logistics platform uses inputs from demand planning to optimize and build the loads across the week and ensure that the PDC team has clear visibility regarding parts ETA and at which docks to expect the same. Also, ensuring that the utilization of truck capabilities is optimal.

Any dock overflow situations get recognized during the planning stage for alternative action. During the execution of inbound movements, any ETA changes are captured by the platform through tracking feeds. In case of trip delays, alternative docks as per business rules and/or dock overflows alerts are communicated to the team to reduce operational issues. With clear visibility of shipments from the inbound side, the platform now plans the outbound loads with more certainty and accuracy.

The outbound shipments are optimized by the platform into trips to dealers. Dealers also have full visibility into order statuses during planning itself and any deviations during execution are communicated by the platform. Adding on to all of the above are easy freight reconciliation, automation of the workflows and with all the data in one platform, everyone from the business heads all the way down to the dock loaders sees part of the same picture. A unified logistics platform makes all the players in the network more efficient and hence brings around all-round savings.





# Conclusion

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There is a clear case for using enterprise-level logistics planning and execution platform. The stakeholders can easily overcome these challenges if they give up their individual agendas and come together to create an efficient network. With the digitization of logistics, this would be the next step for the spare parts logistics network.



# About us

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Incorporated in May of 2017, we at Smartlinks are constantly working in making logistics reliable through innovation and technology. With our strong consulting expertise in the transportation area across the globe, clubbed with our passion to explore and bring the latest technologies to the enterprise customers your logistics problems will surely have a solution with us, be a Partner today. [www.smartlinkstech.com](http://www.smartlinkstech.com)

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