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Whitepaper |

Uncovering Value
Secondary Distribution

Addressing challenges faced by a large FMCG company in transportation planning.

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Abstract

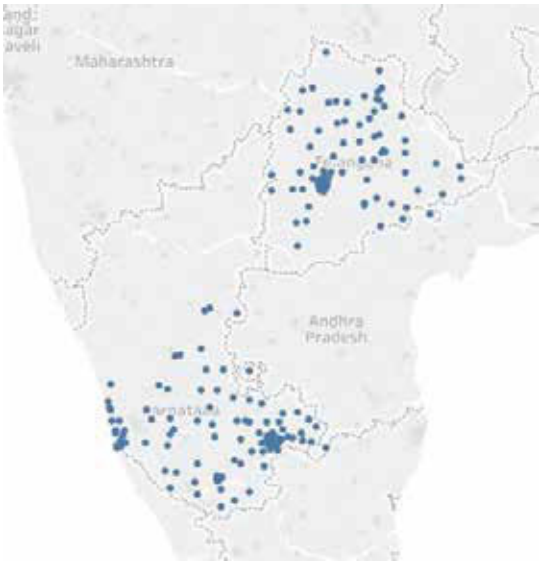
Managing inventory by keeping stock of the correct quantity of goods at the right time at the customers' locations (dealers, retailers) to ensure that no stock-out and loss of sales happen is a critical challenge faced by FMCG companies.

FMCG companies must manage the different segments of customers - modern trade, general trade, etc. which have different SLAs, delivery schedules, and stocking requirements. Moreover, there are also many constraints related to clubbing of deliveries, frequency of deliveries, and lane preferences of carriers which add to the complexities while doing route planning.

While meeting these challenges, FMCG companies must improve the baseline KPIs such as the total costs to deliver, cost/ trip, and cost/ Kg, number of trips, % utilization of trucks to make the best use of the assets. This article provides an overview of how the use of a logistics platform with powerful transportation planning capabilities can address those challenges and improve the key metrics through robust planning and execution.

Challenges

FMCG companies have to service a wide network of the dealers/ retailers from the centralized warehouses/ depots. At the same time, they also have to ensure that delivery costs are optimized. The snapshot shown below will give clarity into the complexity of the network. The snapshot shows 2 clusters of the entire secondary distribution network for an Indian FMCG major.



Currently, the company uses manual planning, which is static (predefined clustering of delivery locations into routes, carriers, and trucks) in nature. Unlike dynamic planning, manual planning offers little scope for further cost savings. It is imperative to address different constraints while determining an optimal route plan, but this is not possible with manual planning.

Some of these are:

- Constraints - Availability of trucks, labor, business hours, delivery windows
- Trade-off between vehicle reuse (multiple trips in a day) and daily working hours, loading/ unloading time and labor cost
- Different priorities of customer orders, modeling of business rules - mixing of orders
- Driving rules as mandated by the transportation authorities

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Opportunity

Dynamic planning of routes addresses all the constraints and the business rules mentioned above and provides the opportunity to reduce delivery costs and meet SLAs. We performed a scenario modeling using the client's already executed trip data which showed real-world savings despite all the constraints.

Approach

Our approach involved constructing the model to build the baseline scenario where the constraints as applicable in the existing planning done by the client were put into the platform. Once we established the baseline results to match those of the client's, we moved ahead by letting the platform re-plan the same trips keeping all clubbing and operational constraints the same as that in the baseline scenario.

Our approach involved building a highly accurate distance matrix for all delivery locations. Even at this stage, the optimizer generated the savings that were feasible in execution and validated by the client. We went a step further to soften certain clubbing restrictions and increased the availability of some vehicle types – all based upon the review feedback from the client's SMEs. This further improved the results and maintained the feasibility of execution.

The results shown below are for a peak month:

- Reduction in the number of total trips by 10%
- Reduction in the total cost/ unit by 9%
- Improvement in truck utilization by 11%

Conclusion

With the increasing competition within the industry, it is crucial that an FMCG company performs efficiently and makes sure its product is always available for consumers. The company must focus on building a strong logistics network. Thus ensure that the deliveries are made on time and within reasonable costs. Leveraging a strong planning system holds great potential for building an optimal network which can lead to savings.

About us

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

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