



# Gati's Dynamic Route Optimization: The Future of Last Mile

This is how a logistics company optimised its operations to meet increasing demands.

By G.S. Ravi Kumar, Chief Information Officer, Gati Ltd

The e-commerce revolution has turned the 'traditional' supply chain on its head. From speed of delivery to increased expectations on "user experience". This change has in large part been driven by the empowered consumer of today. However, it is in the last-mile that many of these challenges manifest.

The expectations of buyers are increasing and therefore it is necessary for the industry to come up with a robust and strong delivery system. The sector has its own challenges of high costs and inconsistencies associated with the last mile delivery process. If the delivery does not happen at the first go, it results in second or third delivery attempts leading to loss of time, money and poor customer experience.

The major chunk of the total delivery cost comes from the last-mile. Current expectations from customers are visibility of shipment movement, on demand delivery, particular time slot delivery, etc., which has put a greater strain on the costing. In addition, the consumers want to see and track the shipment movement. The attrition rate in the logistics industry is on rise and the new delivery personnel lose a lot of time in reaching the final destination due to newer areas, improper address etc.

Gati Limited has adopted a robust dynamic route optimization software for its last mile delivery planning in ma-

The major chunk of the total delivery cost comes from the last-mile. Current expectations from customers are visibility of shipment movement, on demand delivery, particular time slot delivery, etc., which has put a greater strain on the costing. In addition, the consumers want to see and track



Gati Limited has adopted a robust dynamic route optimization software for its last mile delivery planning in major cities

major cities like Hyderabad, Bengaluru, Mumbai, Pune and Delhi which enables them to remove the roadblocks and achieve the delivery metrics. Eventually this software would be rolled out to all locations of Gati. This software automatically plans and optimizes the on-demand and scheduled deliveries by clustering shipments based on geography, with minimal overlaps, respecting time windows, SLAs and other business parameters. It checks the traffic at a particular time and develops the route accordingly. The software minimizes the human intervention and uses inputs to derive the best route systematically. It also provides a Hawk Eye View of the entire fleet which can be tracked live at any instant.

In the earlier process, planning of delivery would start once the shipment reached the delivery location. Each delivery area is served by a delivery agent

and it was fixed. If the delivery agent was on leave, Gati faced issues as the substitutes were not familiar with the new area. Apart from this, distribution of shipments were uneven among the delivery agents which meant that one person would carry 10 shipments and the other would carry 50 based on the load of the particular area being served.

Currently in the new process, the shipment data is sent to a dynamic route optimization engine and in a matter of minutes a route plan is created for delivery based on a number of shipments, delivery window time frames and vehicle-types. Subsequently, the plans are assigned to the delivery agents for execution. When the delivery agent is on the field, they can see the shortest route on their hand held devices between delivery locations. On delivery, they update the delivery details of the shipment on their devices. This dynamic planning process mitigates the unevenness in distribution of shipments among the delivery agents. Moreover, it eliminates the human dependency to a large extent on last mile delivery planning.

Major impacts of a Dynamic Route Optimization on Last Mile Delivery:



1. **Cost:** Optimal usage of vehicles and delivery personnel based on geographical cluster with no static area or route
2. **Transparency:** The end customers can track their shipment movement through tracking links sent as an SMS, leading to an improved experience, and reduced support calls.
3. **No Waiting Time:** Intelligent order clubbing and route optimization ensures deliveries are done quicker and are high on-time performance. It also considers the specific time given by the customers and maps accordingly.
4. **Quicker and Timely Pickup:** Since the exact location of the rider is available through a robust communication dashboard, any unplanned pickups can be done in no-time.
5. **Turn-by-Turn Navigation:** Route Optimization Software offers Turn by Turn navigation support, ensuring fast and timely deliveries, and reduces fuel consumption.
6. **Hit Rate (HR):** The waiting time has been removed and scheduled according to the customer's time, it has helped to deliver higher percentage of shipments which are taken out for delivery.

Currently in the new process, the shipment data is sent to a dynamic route optimization engine and in a matter of minutes a route plan is created for delivery based on a number of shipments, delivery window time frames and vehicle-types.

---

7. **Productivity:** Since the capacity utilization has increased and dynamic routes has been developed, the software makes sure that the delivery personnel carry maximum shipments based on the time-frame and vehicle-type.

Dynamic Route Optimization has enabled Gati to take an edge in the ever competitive market.

Customers can benefit from Gati's extensive range of service offerings such as Express Distribution, Warehousing Solutions, M-VATS (Bulk Load, Point to Point), Cold Chain Solution, E-commerce Logistics, Fulfilment Services, Freight Forwarding, and Trading Solutions. Gati serves the top leading organizations across FMCG, Auto, Textile, Engineering, Pharma, IT, Retail, Electrical Electronics among others. 