

E-Guide

5 steps to improve service and efficiency in store delivery

A guide for retail supply chain leaders working to improve store delivery performance.

In this guide

These five practical steps help retailers improve service, control costs, and use available capacity more effectively.

ORTEC

Introduction

Reliable store delivery has become harder to manage. Retailers are balancing tighter delivery windows, labor constraints, rising transportation costs, inventory pressures, and growing service expectations. Every delivery decision affects store operations, transportation efficiency, and product availability.

Customers are demanding better service and quality, which results in a larger product portfolio and the need for faster response times.

Transportation and last mile delivery decisions have a direct effect on operating costs, product availability and the customer experience. Limited labor across transportation, distribution and store operations adds another constraint to already complex delivery plans.

How can retailers meet tighter delivery windows while using transportation and store resources more efficiently? How can they give each team greater visibility into the plan and its execution?

Effective retail logistics supports product availability, reliable service and profitable operations across grocery, consumer goods and other retail environments. Improving performance requires coordinated decisions across stores, distribution centers and transportation teams.

Connected planning and execution help retailers build more reliable schedules, manage exceptions and provide accurate arrival information. By combining current orders, operating constraints and real-time updates, supply chain teams respond more quickly to changing conditions while maintaining greater control over service and cost.



The following five steps show how better planning, execution, and performance insight improve store delivery.

Retailers have increased their use of digital planning and execution tools as delivery requirements have become more demanding. Store delivery represents a significant logistics cost, and receiving windows are often constrained by local regulations, store activity and labor availability. More reliable plans help store managers prepare for deliveries without disrupting employees or customers.

Limited inventory space and fewer employees available for shelf replenishment make delivery timing increasingly important. Stores need deliveries to arrive when products can be received and shelved efficiently, ideally outside peak shopping periods and within available labor hours.

Supply chain managers also need to implement a repeatable structure, especially if replenishment occurs frequently during the week. Delivering products at the same time of day helps to create balance and efficiency, as well as insight into consumption and forecast figures.

These requirements also put pressure on transportation and distribution operations. Retailers must maintain service while managing tight margins, workforce constraints and increasingly complex labor and transportation rules.



5 steps to improve service and efficiency in store delivery

Step 1



Balance workload through better store delivery scheduling

Step 2



Use advanced optimization to improve daily routes

Step 3



Extend planning beyond individual deliveries

Step 4



Connect planning, visibility, and execution with a control tower approach

Step 5



Leverage data-driven decisions to support continuous improvement

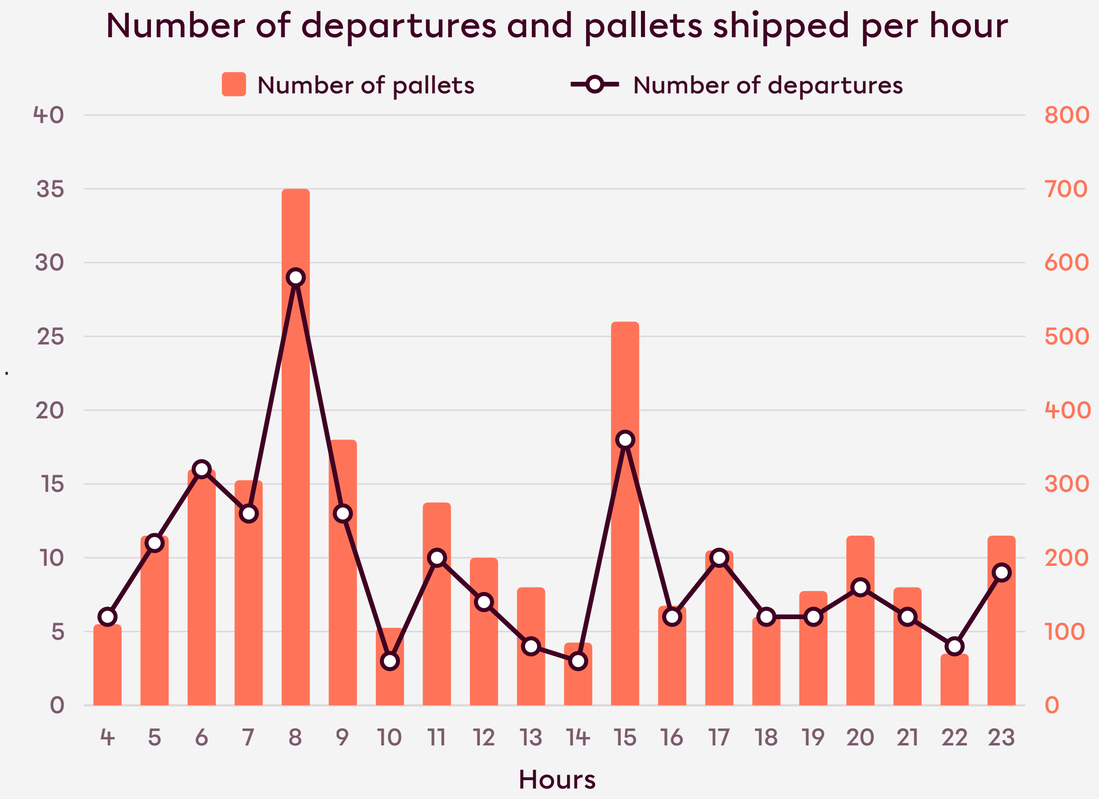
Step one

Balance workload through better scheduling

Improving store delivery starts with the delivery structure. How often is each store replenished? Are deliveries made on fixed days or scheduled as needed? How much are volumes likely to change during the planning period? What service commitments and receiving restrictions must the plan respect?

The first step is to determine the appropriate weekly delivery frequency for each store based on expected demand, promotions and minimum and maximum inventory levels.

The next step is to assign delivery days and time windows. The schedule should support efficient routes, balance workload across the day and week, and meet business and store requirements. These delivery time slots per store should also comply with local restrictions.



Clustering compatible deliveries reduces driving time and supports more reliable arrival times

Advanced tactical solutions can create the type of schedules described above. The solution output provides a starting point to establish schedules with each store for delivery time slots over the week.

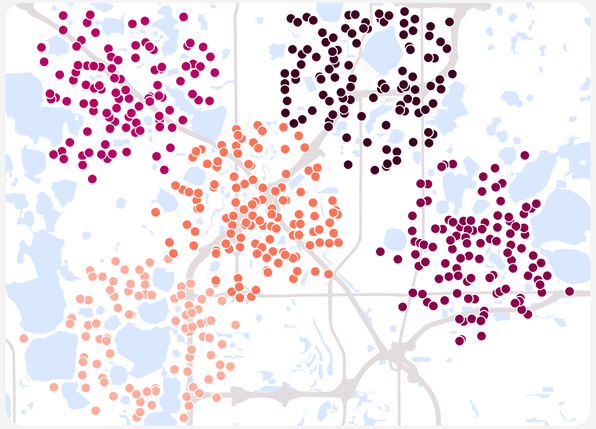
Historical data can help forecast expected volumes while accounting for normal variation and uncertainty.

Teams can then test higher- and lower-volume scenarios to understand how well the schedule will perform under different demand conditions.

Improvements in tactical capacity planning typically yield between 5-10% in savings, depending on the quality of the current schedule and the flexibility stores have to change time slots.

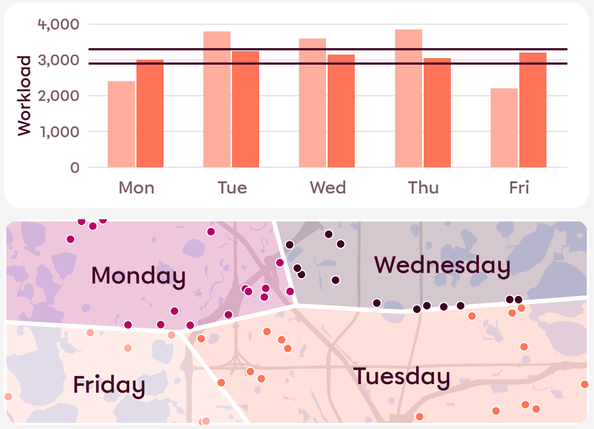
Territory optimizer

“Assign stores to regions”



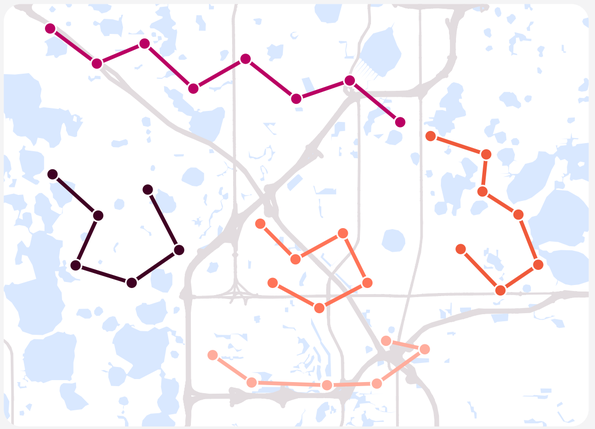
Visit day optimizer

“Balance workload”



Routing

“Calculate optimal routes”



Step two

Use advanced optimization to improve daily routes

Once weekly delivery windows are established, planners can build operational plans using the latest volume forecast. Daily routes are adjusted to reflect current orders, capacity, and operating conditions.

When volume is relatively stable, standard routes give warehouses an earlier start on order picking because teams do not need to wait for every order before beginning the planning process. By default, the same driver visits the same store every week.

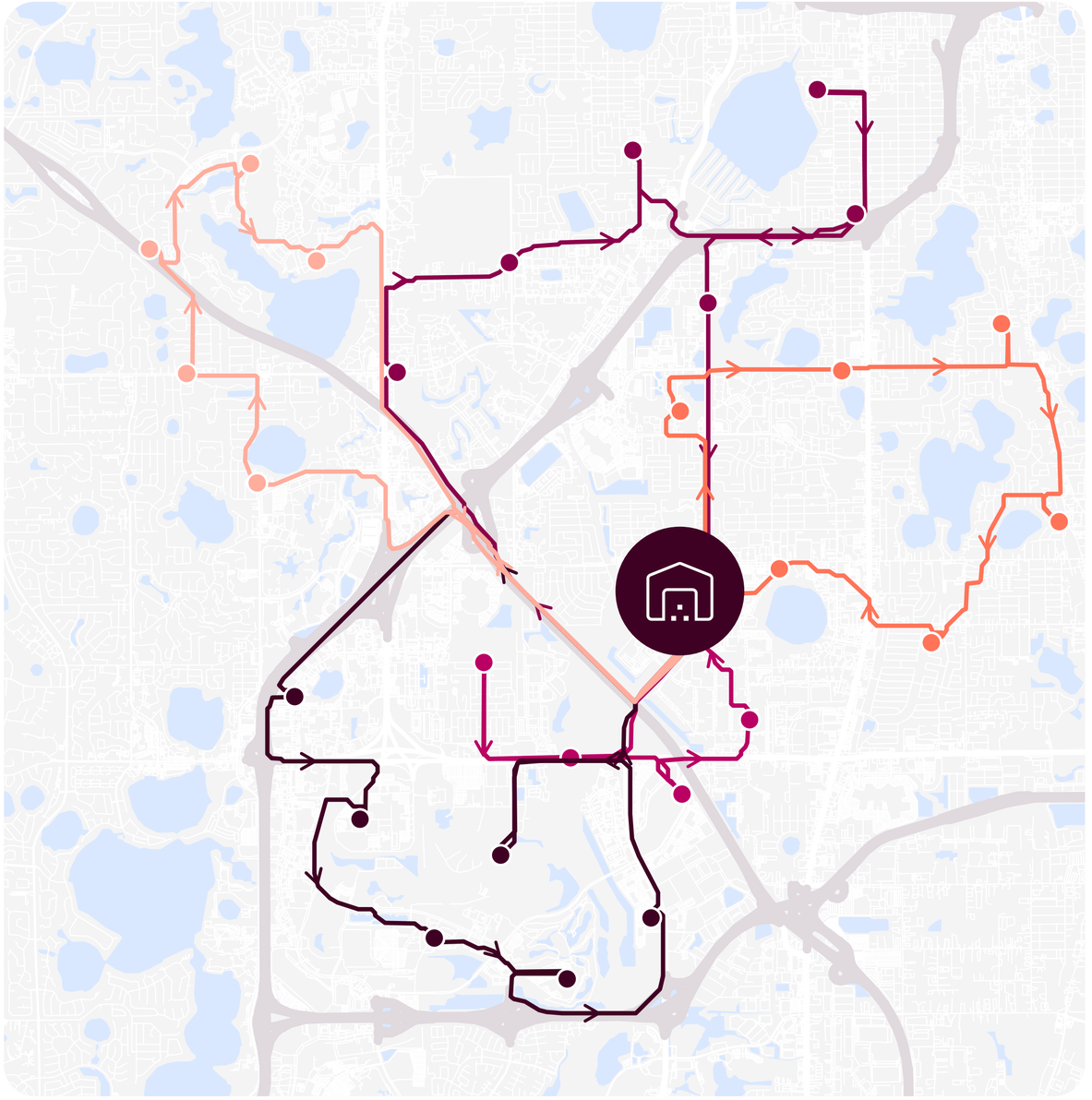
When volumes vary significantly, standard routes may create inefficiencies or make it harder to meet regulatory requirements. Dynamic routing allows planners to account for current demand and operating conditions when building each day's plan.



Advanced optimization builds routes around orders, delivery windows, fleet composition, vehicle characteristics, receiving constraints, driver qualifications and traffic conditions. This allows planners to improve efficiency while respecting the requirements that determine whether a route can be executed successfully. This might include more complex loading limitations, like considering flexible multi-compartment trailers to deal with different temperatures. This can also include co-loading at different warehouses to respect limitations on loading docks.

Advanced optimization reduces unnecessary mileage and improves fleet utilization, whether transportation is managed internally or outsourced. Better use of route and vehicle capacity lowers transportation costs and increases the number of deliveries completed with available resources.

Accurate time and distance calculations help planners account for regional conditions, expected congestion, and road restrictions. As conditions change, updated information supports more reliable plans and arrival estimates. In other words, optimizers help you improve accuracy, and this results in both service and efficiency improvements.



Step three

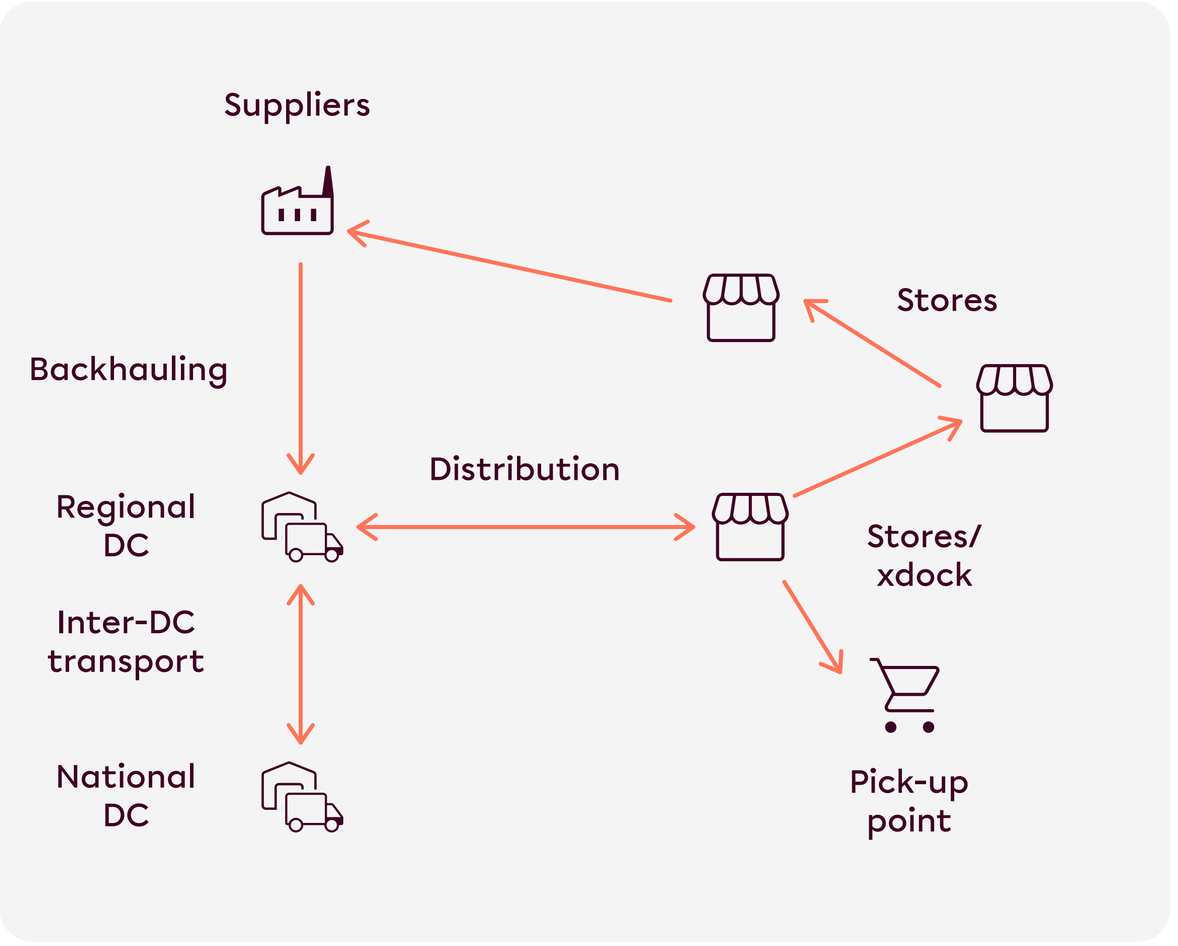
Extend planning beyond individual deliveries

Store delivery planning can also consider decisions beyond an individual route or distribution center. Coordinating truck and driver assignments at a broader level helps balance resources across the network. This broader view reduces resource shortages at one DC while available capacity goes unused at another.

The plan can create more productive driver shifts by connecting store deliveries with the next available route, a supplier backhaul or the return to the driver's home base. This method requires that you handle returns from stores (including packaging material) in an alternative way. For example, in those routes which return to their original DC directly.

Centralized resource planning also helps determine which routes should be outsourced based on capacity, subcontractor agreements and applicable rate structures. Historical information is available to monitor how a rented truck is used compared to the agreed mileage and hours for the given contract period.

When you apply these details to the optimizer, it balances the current usage and performance of rented resources against lease-contracts.



Broader transportation modeling also balances DC departures to reduce peaks in picking and loading. This improves workflow and reduces waiting time for drivers and warehouse teams. The same applies to stores replenished multiple times a day.

Advanced loading methods account for pallet configuration, compartment requirements, and axle-weight restrictions while improving vehicle capacity. Optimization can also split deliveries when doing so reduces overall costs, identify backhaul opportunities to minimize empty miles, and combine routes from multiple DCs into a single shift.

Vendor-managed inventory creates additional planning options. Instead of building routes only around confirmed orders, planners can evaluate when to replenish each location based on inventory, demand, available space, and delivery cost. This is particularly useful for promotions, where delivery timing and volume depend on available stock space and expected consumption. Optimization helps determine when and how much to deliver, controlling replenishment costs while maintaining product availability. Advanced forecasting further improves efficiency and service.





Step four

Connect planning, visibility, and execution with a control tower approach

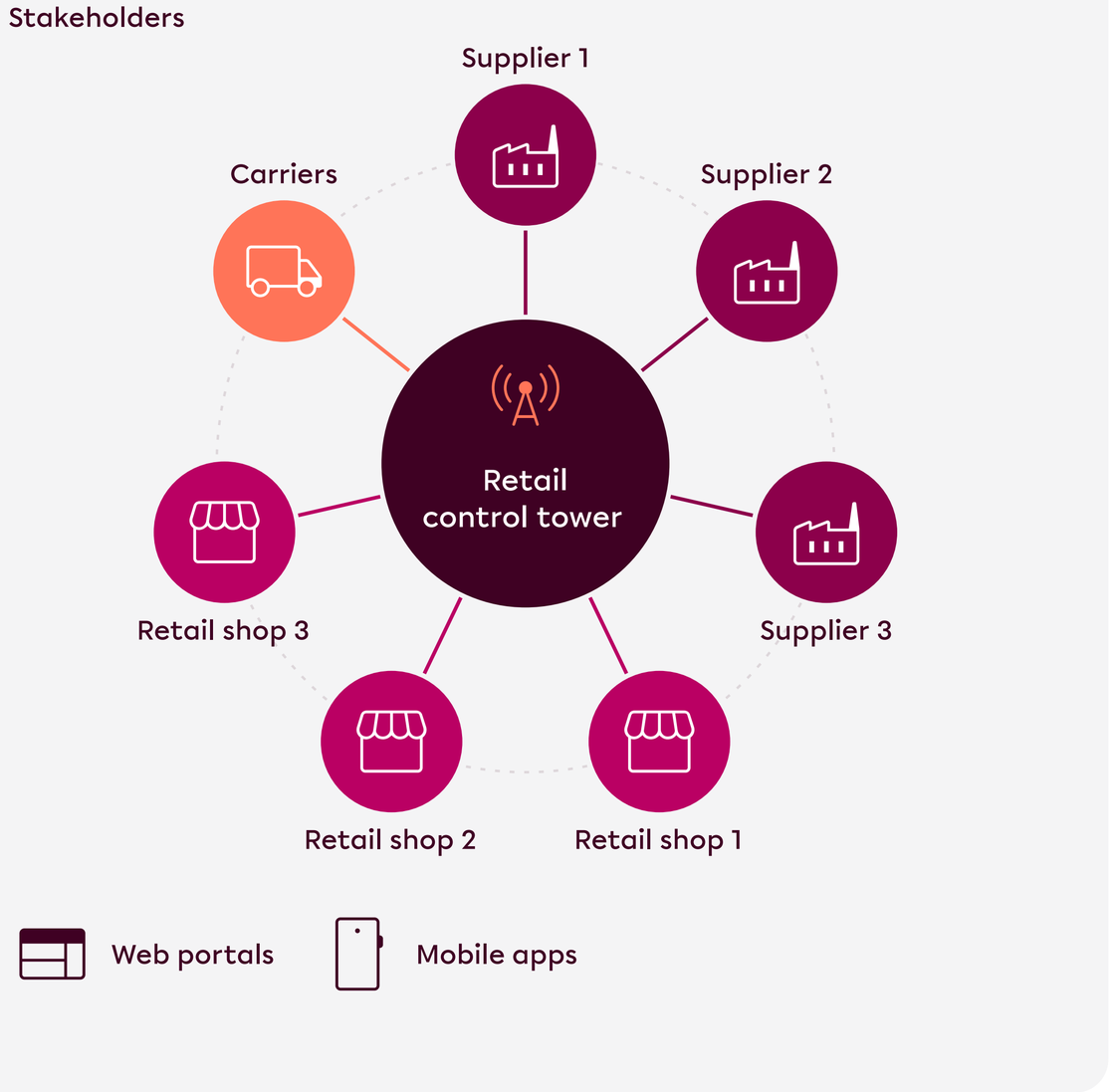
Effective transportation planning continues after the initial schedule is created. Teams need visibility into execution and the ability to adjust assignments when conditions change. Drivers, stores and distribution centers need access to current departure and arrival information.

Shared updates help each team prepare for what is coming and respond when the plan changes. Store managers can prepare employees and receiving areas before a delivery arrives, reducing disruption to customers and store operations. Distribution centers use the same visibility to coordinate docks, departures and returning vehicles, getting an overview of departures and arrivals, leveraging this information to work efficiently in the warehouse and assign arrivals and departures to the right docks.

During execution, planners assign urgent pickups to an appropriate vehicle, adjust routes around disruptions, and reconsider the next assignment when a driver returns earlier or later than expected. By contrast, if a driver arrives later or earlier than planned, their next assigned route may not be the best option anymore. You have the flexibility to adjust route assignments as conditions change.

Better visibility also supports timely communication. Arrival updates allow store managers to prepare for unloading, which reduces stop time and improves the delivery experience. Using consistent business logic and detailed maps during planning and execution improves reliability, robustness, and on-time arrival.

Connecting planning and dispatch gives teams a consistent view of operational priorities and constraints. It also helps planners evaluate trade-offs across multiple days, routes and delivery windows.



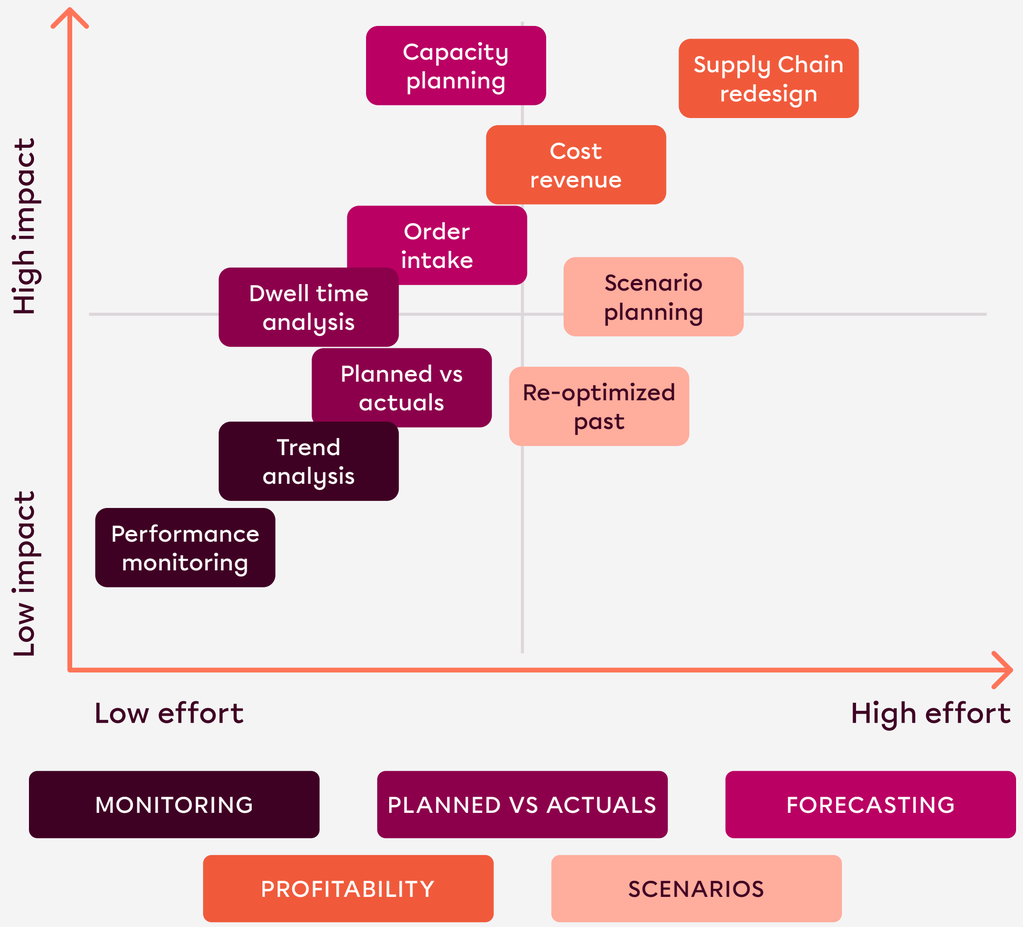
Step five

Leverage data-driven decisions to support continuous improvement

Planning and execution generate operational data that can be used to improve future decisions.

Let's start with a simple use case: compare the plan with actual execution. Differences in driving time, store turnaround time and other activities reveal where planning assumptions need to be adjusted. These updates improve future plans and forecasts.

A more advanced application is to allocate route costs to individual orders or stores using an agreed cost model. The model automatically accounts for store specific characteristics to arrive at a fair distribution of costs over stores, the so-called Cost-to-Serve.



These insights inform decisions about new locations, delivery frequency, direct service, and outsourced transportation. They also help teams investigate why certain stores are more expensive to serve.

Delivery history reveals opportunities to combine nearby stores on the same route or adjust delivery days, frequencies and time windows. This insight supports opportunities to change frequency, delivery days, and time windows.

Retailers can also analyze ordering patterns, driving performance and the effects of promotions on delivery cost. Combining operational data with relevant external information, such as weather, provides additional context for planning and performance analysis.



Historical cost-to-serve information can help retailers estimate delivery cost by unit and store. When considered alongside revenue and other operating costs, this information contributes to a clearer view of store-level profitability.

Conclusion

Reliable store delivery helps retailers maintain product availability, control transportation costs, and support efficient store operations. Achieving those outcomes requires coordinated decisions across scheduling, routing, execution, and performance management. The steps in this guide provide a practical framework for improving those decisions:

- Review delivery frequency, days, and time windows to balance workload while respecting store requirements and operating constraints.
- Use advanced optimization to create efficient schedules and evaluate the effect of transportation decisions across the wider supply chain.
- Connect planning and dispatch so teams can respond during execution, then use planned and actual performance data to improve future decisions.

Store delivery performance depends on a series of connected decisions. The strongest results come when scheduling, routing, execution, and performance management work together rather than as separate activities. A more connected approach helps retailers improve service, use resources more effectively, and adapt more confidently as operating conditions change.





About ORTEC

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Working across industries including Foodservice and Beverage Distribution, Manufacturing and CPG companies, Retail and Home Delivery, and Transportation organizations, we help companies make better decisions, improve resource utilization, reduce costs, and support sustainability goals.

Trusted by some of the world's largest and most complex supply chains, ORTEC combines operational expertise with data-driven technology to help teams simplify complex planning challenges and improve execution across their logistics and delivery operations.

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