

STRATEGIC ROUTE PLANNING: BLUEPRINT FOR PROFITABILITY



*Understanding the Value of Continuous
Delivery Network Re-routing*



CHAPTERS

Strategic Route Planning Best Practice

Distribution Challenges Drive Needs

Capitalizing on Opportunities

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Best Practices for Distribution Optimization and Competitive Differentiation

In the current climate of intensifying customer expectations and competitive pressure to differentiate service offerings, distribution-oriented companies are faced with the challenge of executing deliveries at unprecedented levels of efficiency and services.

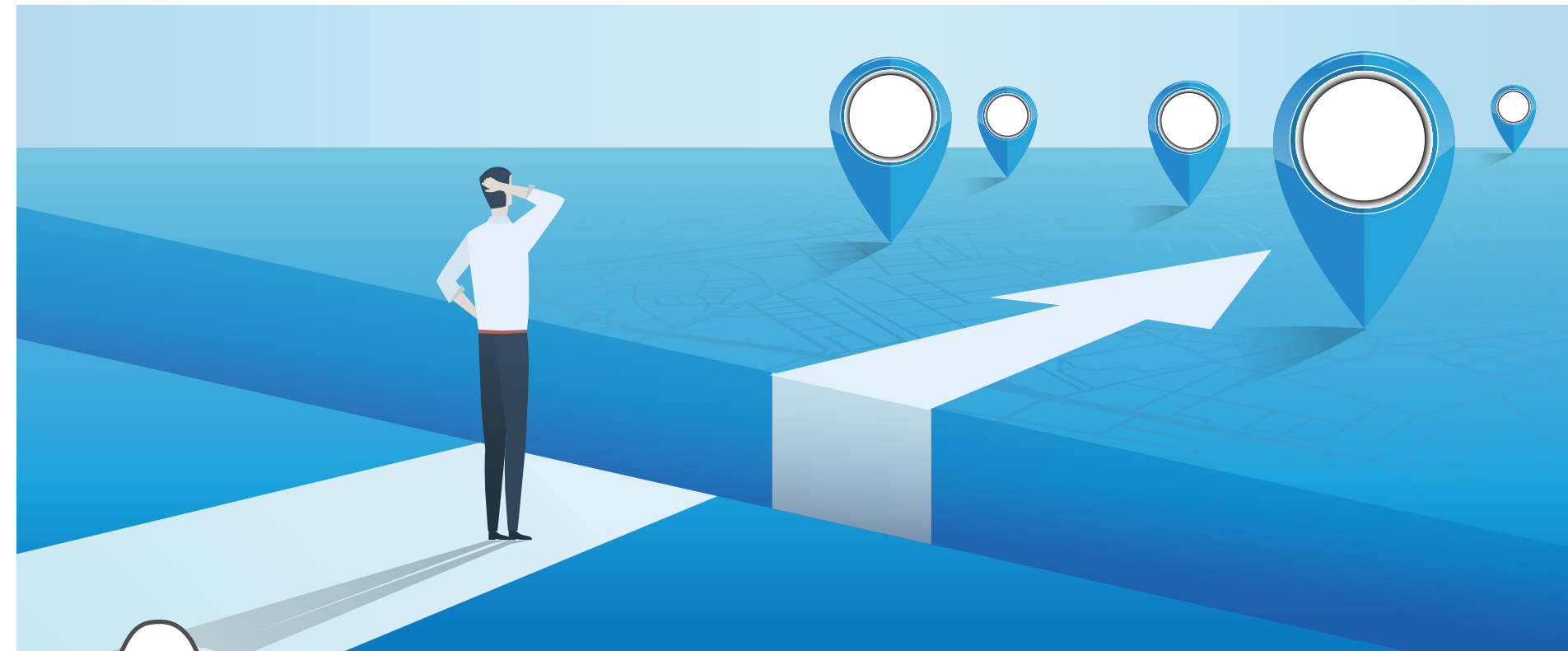
While the world is getting more dynamic, many distribution-oriented companies are struggling to keep up with the change and continue to bleed profits and deliver inferior customer service through the use of obsolete and inefficient master or static routes.

MANUAL ROUTING

Planning master routes manually is a very complex and time-consuming undertaking. As a result, re-planning of routes does not happen as often as it should, compromising efficiency and customer service.

HOW DO YOU KNOW WHEN MASTER ROUTE DELAYS ARE OCCURRING?

We'll explore how best practices of an ongoing strategic routing process and regular delivery network re-routes can boost distribution efficiency and reduce costs, while keeping your customers and drivers happy.



RE-ROUTING FEASIBILITY

Is your organization failing its customers with inefficient master routes that haven't been updated in years? When is the last time you performed a delivery network re-route?

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Distribution Challenges Driving the Need for Delivery Network Re-routes

RE-ROUTES HELP COMPANIES ADAPT TO INDUSTRY CHALLENGES, ENSURING EFFICIENT USE OF RESOURCES AND ECONOMICAL ROUTING

Today's business environment, rife with shifts and upheavals across the distribution ecosystem, demand regular delivery network re-routes to help companies adapt to industry challenges and ensure the most efficient use of resources and the most economical routes. Even minor changes can undermine the efficiency and viability of a master route plan.

[Click here to learn more about our fully-integrated Routing, Mobile & Telematics capabilities for fleet operations](#)



Shifting Customer Base

The customer pool inevitably changes over time, impacted both by attrition and new client acquisitions. Customer requirements also shift, e.g., increasing/decreasing order volumes or requests for an alternate regular delivery day. These changes impact delivery strategies, prompting questions about the cost-effectiveness and efficiency of existing master route plans, distribution center (DC) locations and service policies.



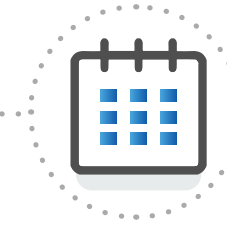
Merger Implications

With sizable private equity in the current market, mergers and acquisitions are occurring with regularity; many distribution-oriented businesses are transitioning from small private firms to larger equity-backed companies. As a result, companies must adapt their distribution strategies and routing plans to address expanded territories, increased delivery volumes, and the logistics of combining delivery operations.



Changing Customer Service Policies

In response to competitive pressures, companies must continually seek ways to elevate customer service by adapting to evolving customer needs and expectations. Evaluating delivery frequency for high-volume vs. low-volume customers to optimize service, for example, can drive changes in customer service policies. Revenue growth strategies and cost pressures also impel policy reforms that impact routing. Revenue growth strategies and cost pressures also impel policy reforms that impact routing.



Significant Volume Swings

Many businesses experience substantial seasonal fluctuations in demand, especially during the fall and winter holiday season. Companies must develop distribution and staffing strategies to handle surging delivery volumes during peak seasons without compromising customer service, while maintaining profitability throughout the entire year.

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Capitalizing on Opportunities

Performing regular delivery network re-routes enables companies to quickly and easily assess the impact of growth opportunities, new delivery scenarios and potential business or industry changes on route efficiency, cost-effectiveness and customer service.

DC Location and Capability Changes

As businesses grow and expand, distribution strategies must evolve. Are your DCs situated in the optimal location to minimize costs and maximize delivery efficiency? Do you need to add another DC to continue to deliver the level of service your customers expect? How would offering new services out of the existing DC impact the bottom line? A delivery network re-route provides insight into the impact and economic viability of potential scenarios.

Driver Schedules and Compensation Plan Changes

In a competitive environment, understanding how driver schedules and compensation structures affect efficiency and operational costs can set your organization apart. What would be the impact of changing start and finish times or modifying driver compensation plans to increase productivity? Should you spread out overtime to balance the distribution? Without the tools to assess the impact of potential changes to driver schedules and remuneration on master routes, companies are operating blindly.

New Business Models and Delivery Services

In order to respond swiftly and effectively to market changes, companies may implement new business models or offer additional services, causing a ripple effect across existing distribution strategies and routing plans. Performing a network redesign enables businesses to understand the impact on cost of offering new services out of existing DCs, for example, or to evaluate the financial validity of routes if delivery frequency was increased.

New Delivery Asset Options

How would larger trucks that can accommodate additional pallets affect productivity and route efficiency? Can some territories now be covered efficiently with fewer vehicles? An ongoing strategic routing process enables companies to evaluate scenarios with various delivery assets to determine the most efficient route plans.

Potential Acquisitions

Companies planning an acquisition need to affirm their financial assumptions and fully understand the economies of scale derived from combining delivery operations. How will the addition of new territories and a larger customer base affect efficiency? How much money can be saved by merging fleets and depots? As part of a company's strategy assessment process, delivery re-routes inform acquisition decisions by offering insight into the impact of merging assets on route efficiency and delivery service levels.

Leveraging strategic route planning can boost productivity and minimize operational expenses when a company modifies its delivery model and adds new delivery services.

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Strategic Routing Process Drives Efficiency & Cost Savings

Strategic Routing in Action: Taking Service Levels to New Heights

A major wholesale distributor of automotive, electrical and industrial products and services—with 30 branch locations and a delivery fleet of more than 100 vehicles—leveraged strategic route planning to boost productivity and minimize operational expenses when the company modified its delivery model and added new delivery services.

THE CHALLENGE



The wholesale distributor services a large, mostly rural territory in which the cost of inefficient routes and missed connections is significantly higher than in an urban area. In response to rising customer expectations, the company wanted to shift its distribution model to offer multiple waves of delivery and add same-day delivery services—without compromising efficiency or customer service. With inefficient manual routing processes, the distributor had limited visibility into how to optimize routes to best accommodate the desired business changes, plus no real-time visibility into driver location or performance.


THE SOLUTION





With an ongoing strategic routing process in place, the wholesaler was able to understand the distribution impact of offering customers a same-day delivery option and shifting its model to multiple waves of delivery. Using automated route planning tools, the company optimized its master routes to boost efficiency, increase driver productivity and reduce costs. Plus, real-time visibility guarantees accurate, timely data about order status and driver location to improve the customer experience.

THE RESULTS



 With efficient, optimized routes, the wholesaler can deliver between 100 and 300 more orders every day—making between 2,100 and 2,200 deliveries daily in an 8,700 square mile area.

 Optimized route planning and disciplined approach to delivery operations reduced fuel costs by as much as 28%.

 More agile distribution operations ensure customers now receive their orders within a maximum of half a day from order inception to delivery.

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Benefits of an Ongoing Strategic Routing Process

Competitive Differentiator

- Respond swiftly and intelligently to market or business changes
- Easily and efficiently adapt distribution strategy to handle seasonal peaks in demand
- Understand potential impact of mergers and acquisitions on route efficiency and operational costs
- Elevate customer service by adapting quickly and strategically to evolving customer expectations

Save Time

- Time-consuming manual processes
- Refine distribution processes to boost productivity
- Optimize internal resources
- Benchmark driver performance in comparison with industry standards to increase productivity

Control Transportation Costs

- Reduce delivery costs by continually improving efficiency through benchmarking, optimization and field data analysis
- Minimize the number of miles/kilometers driven to reduce fuel costs
- Decrease driver hours by comparing actual performance against engineered plan
- Minimize the number of delivery vehicles required

Improve Customer Service

- Boost delivery service with optimized route planning
- Incorporate both your constraints and client specifications (e.g., delivery time windows) to optimize routes
- Narrow customer delivery windows and increase on-time deliveries
- Leverage real-time visibility into driver location with GPS-based mobile tracking
- Draw on real-time field data capture to inform distribution strategy

Executing a delivery network re-route on a regular basis can be a highly valuable process that can cut costs from the business, fine-tune the network to better serve customers and help you thoroughly understand the implications of potential changes to the distribution network before they are implemented.

Barriers to Strategic Route Planning Success

The Real and Perceived Barriers That Deter Companies

Given the widespread benefits of an ongoing strategic routing process, why don't companies perform regular delivery network re-routes? What is hindering distribution-focused organizations from implementing ongoing strategic routing processes?

Multiple real and perceived barriers deter well-intentioned companies from achieving the consistent delivery efficiency and service levels that continuous delivery re-routes afford due to:

- Lack of expertise
- Data is a mess
- Tools are too complicated
- Spreadsheets fall short
- Painful and time-consuming exercise
- Can't afford dedicated personnel
- A network that quickly adapts to capture market opportunities



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Manual planning of master routes is a complex, expertise-driven and time-consuming task, leaving many distribution-based companies feeling overwhelmed. As a result, master and static routes are left untouched for years, with drivers adjusting routes in the field as they see fit.

When is the last time your organization performed a delivery network re-route? Are your customers paying the price of inefficient, outdated routes?

To remain competitive in today's rapidly changing marketplace, strategic route planning needs to be deployed on a regular basis and as an integral part of the overall business strategy development process. New technologies and tools can alleviate the struggle of manual route planning and help your organization perform continuous delivery network redesigns to ensure consistent route efficiency, cost control and superior customer service.

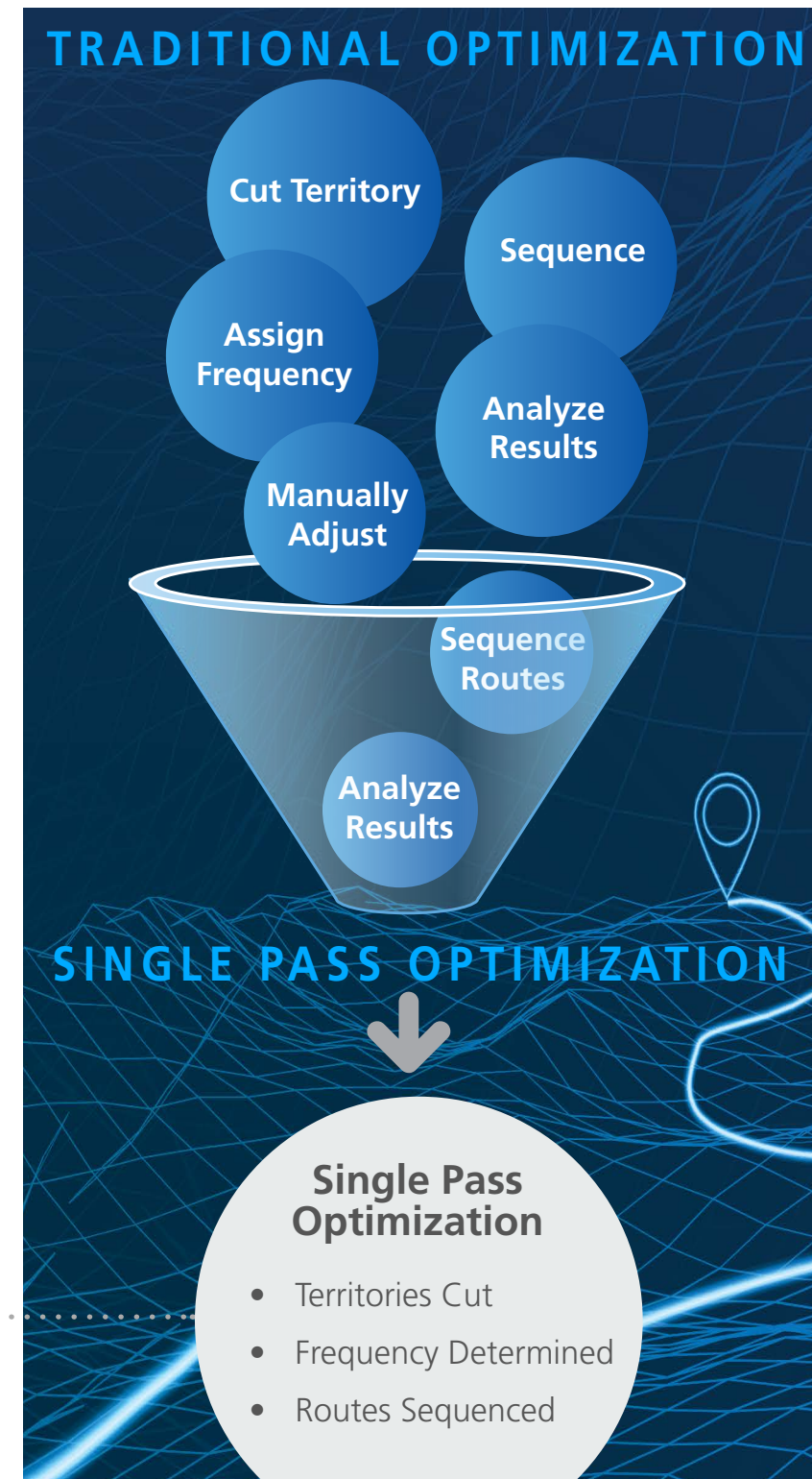
Two key technology changes are making strategic route planning easier to execute and more dynamic.

1. GPS-based mobile tracking

Mobile tracking is critical to obtain accurate route data and fully understand how your fleet is operating. As your business has evolved, your dispatchers and drivers are no longer executing the original master routes as planned and, as a result, you are unable to validate route assumptions. GPS tracking provides accurate, real-time data to populate a strategic route planning solution and better understand how routes are run, stop times, delivery times, etc.

2. Single pass optimization

Traditional optimization technology limitations forced strategic route planners to take a tedious multi-step approach that was more of an art than a science.



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Guidelines for Implementing an Ongoing Strategic Route Planning Process



1 Set Up Your Game Plan

After determining how you want to serve your customers, build a solid distribution foundation by optimizing your territories and establishing efficient master routes using automated routing tools and technologies to control cost of service and elevate customer service levels.

2 Commit to Regular Delivery Network Re-routes

Best practice dictates companies continuously analyze and refine their distribution strategies and processes in order to improve operational performance and customer service. Leverage your initial master route and validate proposed changes based on shifts in the business.

3 Leverage GPS Field Data to Inform Distribution Strategy

Strategic route planning is more than a fleet management tool; it is a strategic business tool that significantly enhances both service and margins through data-based decision-making that reduces transportation costs, increases operational efficiency and improves delivery performance.

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About Descartes

Descartes (Nasdaq:DSGX) (TSX:DSG) is the global leader in providing on-demand, software-as-a-service solutions focused on improving the productivity, performance and security of logistics-intensive businesses.

Customers use our modular, software-as-a-service solutions to route, schedule, track and measure delivery resources; plan, allocate and execute shipments; rate, audit and pay transportation invoices; access global trade data; file customs and security documents for imports and exports; and complete numerous other logistics processes by participating in the world's largest, collaborative multimodal logistics community.

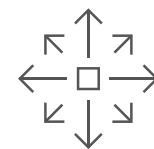
Our headquarters are in Waterloo, Ontario, Canada and we have offices and partners around the world.

Learn more at www.descartes.com, and connect with us on [LinkedIn](#) and [Twitter](#).



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