



BUSINESS WHITE PAPER

## Optimizing Home Delivery

Winning Market Share Through Efficient Home Delivery Programs

It's often said that the "last mile" of the supply chain is the toughest. Nowhere is this truer than in retail home delivery, the final step in the supply chain. Stiff competition drives demands for higher levels of customer service combined with pressures to cut or maintain operating costs. Meanwhile, the service demands involved in delivering to the customer's home contribute to higher costs that must be effectively managed. To win market share, the home delivery service provider must win on customer service. To remain profitable, the home delivery service provider must deliver that service efficiently.

## Key Attributes to Winning Customer Service

### Convenience

Customer convenience means having a choice: does the customer have multiple options from which to choose a delivery appointment that best conforms to their schedule? The more options, the more likely the customer can select a convenient delivery appointment. Customer service includes consideration of delivery appointment windows. The smaller the appointment window, the less time the customer must spend waiting for delivery, so smaller time windows are more convenient.

### Speed

How long is the turnaround time between initial order placement and actual delivery? For most consumers, the shorter the time between order and delivery, the better.

### Reliability

Can the customer expect to receive the correct items ordered, at the right time and in the promised delivery manner? Typically this is interpreted as "Don't be late!" However, it actually means ensuring the delivery of the correct inventory items, in proper working order and, in some instances, with the appropriately skilled delivery personnel who can perform the installation.

### Predictability

While reliability means performing in a consistent way, predictability means when things go wrong, notify the customer. Exceptions are a fact of life. The sooner a customer is notified of an exception and offered a proposed remedy, the better. Every consumer has experienced the late delivery of goods or services to his or her home. The earlier a late delivery or no-show is predicted and communicated to the customer, the less inconvenient the exception becomes. The most damaging service violations occur when customers are not notified and communication only happens (at the customer's initiative) after the appointment window.

In other words, from the consumer's perspective, "Deliver what I ordered when I want it delivered at a time convenient to my busy schedule, requiring minimal waiting on my part, as quickly as possible. Make sure that you reliably deliver what I ordered when you promised, and, if circumstances prevent you from delivering on time - notify me as early as possible."

Upholding core values, including convenience, speed, reliability and predictability, can help ensure happy customers, build customer loyalty, generate positive word of mouth and, ultimately, drive market share. The challenge to a retailer is to balance this type of service level and profitability.

### How to Deliver Customer Service Efficiently and Profitably

- **Route Productivity.** Control and reduce transportation costs by maximizing the number of revenue-producing stops a driver makes and minimizing the non-revenue producing time the driver spends (driving, obtaining directions, etc.). Route efficiency is often obtained by clustering customer stops geographically (to reduce drive time) with little regard to customer convenience. The challenge for retailers is to achieve high levels of customer service while maintaining route productivity and efficiency.
- **Minimizing Missed Deliveries.** Missed deliveries are much more than a customer service problem. A missed delivery (customer no-show, wrong or damaged inventory, missed time window) wastes driver time and usually requires rescheduling a second trip. It may also involve unloading and reloading inventory.
- **Managing Driver Performance.** The best plans are only as effective as their execution. Best practices in delivery fleet management enable management to monitor, measure, and ultimately manage driver compliance with the plan.
- **Yield Management.** Not all customers are equal. The ability to differentiate customers by their revenue, profitability and long-term value, plus the ability to provide differentiated delivery service levels based on those values helps delivery service providers maximize revenue yield and promote customer loyalty - promoting profitability.
- **Efficient Delivery and Route Planning.** Streamlining the efforts required to plan and execute the delivery schedule can help yield efficiency improvements. This includes tasks such as:
  - Scheduling delivery appointments
  - Finding and validating customer locations
  - Assigning delivery orders to drivers and trucks
  - Sequencing stops in accordance with delivery appointment commitments
  - Providing driving directions from stop to stop

The Descartes Routing, Mobile and Telematics solution suite can facilitate addressing the specific needs of home delivery retailers and service providers by reducing transportation costs, improving productivity and providing high levels of customer service. Descartes' solutions can help by adding value to three key steps in the home delivery business process.

### Step 1: Point of Sale/Point of Order

Descartes Reservations™ solution enables optimized (profitable/least cost) delivery appointment scheduling in real time.

- **How it Works:** When a customer places an order, the Descartes Reservations solution checks the existing delivery schedule and offers configurable delivery day/time options. Options can be limited based upon feasibility, profitability and other factors. These delivery appointment window options are presented to the sales or customer service representative, or, over the Internet, to the customer. Address verification checks the customer's address and ensures that it can be found and validated in the road network.
- **Benefits:**
  - **Customer Convenience.** The customer can choose a convenient delivery window from among the viable options available.
  - **Speed.** Turnaround is accelerated due to:
    - The delivery appointment being established and assigned more quickly (at the point of sale/point of order); and
    - In real time, the application is able to determine the next available viable appointment slots. In contrast with estimates produced by less sophisticated segmenting systems, Descartes Reservations enables users to see which slots are actually available.
  - **Reliability.** Since Descartes Reservations provides visibility to the actual schedule and filters out slots that are not feasible, delivery appointment promises are more reliable. No commitments need to be made that cannot be fulfilled.
  - **Productivity.** Descartes Reservations enables retailers to offer their customers convenient delivery appointment options within the parameters of operational efficiency. The sales or customer service rep (or retailer's website) can make better decisions in scheduling delivery appointments that promote, not hinder, operational efficiency. Up-front address verification avoids more costly consequences of routing to bad addresses later.
  - **Deliveries.** Intelligence to prohibit appointment commitments that are not feasible, reducing missed deliveries due to missed time windows.

- **Yield Management.** Configurable to support different levels of service based on different customer or order attributes, enabling retailers to provide premium service levels to highly valued customers.

## Step 2: Delivery Service Planning

The Descartes Route Planner™ solution helps build the least-cost delivery service schedules, route assignments and sequences so companies can execute delivery appointment commitments in accordance with business rules.

- **How it works:** After a delivery appointment is scheduled (see previous section), it is added to the schedule repository. Route planners and dispatchers can see the entire schedule, review route assignments and stop sequences, and make any warranted changes to the schedule. The solution generates route sheets, manifests, turn-by-turn driving directions and other reports.
- **Benefits:**
  - **Productivity.** Descartes' profit-based route optimization engine and visual tools let schedule planners and dispatchers create productive and profitable delivery schedules to minimize transportation labor, fuel and equipment costs.
  - **Efficient Planning.** Descartes Route Planner helps automate many time-consuming planning and execution tasks, including customer address geocoding and verification, route assignment and stop sequencing and turn-by-turn driving directions. Companies can use it to generate pick lists that conform to route assignments and stop sequences.
  - **Deliveries.** The forward predictability provided by the Descartes solution enables planners to see the downstream consequences of schedule changes. It highlights stops that may be in jeopardy of schedule violations, enabling planners to create realistic schedules that maximize on-time performance.
  - **Customer Communications.** After customers make a delivery appointment commitment, they often want to confirm the appointment and verify that their orders are scheduled for on-time delivery. In addition, home delivery service providers want to ensure that the customer is aware of the appointment and will be available to accept delivery. Integrated Interactive Voice Response (IVR) functionality can alert customers to pending deliveries and help customers cancel or reschedule a delivery.

- **How it Works:**

- Once a delivery appointment order is confirmed and assigned, the order information can be exported to IVR, which automatically places an outbound call to the customer to confirm to remind him of the appointment. Alternatively, customer service representatives can call the customer.

- **Benefits:**

- **Customer Convenience, Confidence, Reliability and Predictability.** Proactive notification to the customer builds confidence in the service provider and enables the customer to plan accordingly. Dynamic use of IVR also promotes predictability, providing the customer with an updated and accurate prediction of arrival time.
- **Deliveries.** Automated IVR follow-up can confirm the appointment and enable the customer to reschedule if necessary - reducing the probability of customer no-shows.

### Step 3: Managing the Delivery Service - Execution

Once plans are created, routes assigned, and customers notified, the rubber hits the road. The Descartes Mobile solutions can help home delivery service providers ensure that drivers execute the schedule according to plan, and assist drivers in meeting service commitments when real world events get in the way.

- **How it Works:** After the plan is created and routes are assigned, drivers log into the Descartes Mobile solution via PDA, smartphone or in-vehicle unit. The driver's route assignments, stop details and audible turn-by-turn driving directions are available on the device. Automatic global positioning system (GPS)-generated status updates from the field report on the driver's position and progress. The Descartes solution, also reports customer stop arrivals, departures and exceptions. These updates from the field are displayed for the dispatcher, customer service representative or supervisor in both a map view and a chronological text view. As status updates are received, "downstream" estimated time of arrivals (ETAs) automatically recalculate. The dispatcher is alerted to any predicted schedule exceptions and has the ability to proactively change schedule assignments. Dispatchers can react to real-world events and predicted violations by changing assignments or sequences.

- **Benefits:**

- **Reliability and Predictability.** Real-time schedule visibility helps improve on-time performance by enabling dispatchers and supervisors to predict potential violations and take action to assist drivers to meet service commitments. If an exception is unavoidable, this "forward predictability" enables the service provider to alert the customer in advance. Based upon the customer's

preference, the order may be delivered late, or the dispatcher can cancel the stop and reschedule for another day.

- **Productivity.** With the ability to view schedule events in real time and track assets, service providers can better manage compliance with the plan. Industry studies indicate that driver performance and productivity improve with the deployment of such tools. Access to actual driver “breadcrumbs” and key performance indicator (KPI) comparisons of planned versus actual performance (mileage, time, customer service, etc.) also helps identify areas for driver or dispatcher improvement and can prevent driver fraud.
- **Reports.** Descartes’ robust reporting tools extract relevant logistics data including schedule plans and actual performance to help managers measure performance from service and operational efficiency criteria for continuous improvement.

## Summary

To stay competitive while maintaining profitability, successful home delivery requires personalized and effective customer service and highly efficient transportation operations. Home delivery technology solutions usually focus either on the customer-facing aspect (customer relationship management tools for call centers, sales reps, etc.) or on operational efficiency (fleet management or routing systems for managing drivers and trucks). Addressing half the problem runs the risk of either providing great customer service at unprofitable or unsustainable costs, or running an efficient operation that fails to provide differentiated service.

Descartes provides complete logistics technology solutions for the retail home delivery service provider by integrating customer-facing solutions, such as appointment booking with fleet management tools, including route optimization and advanced tracking, mobile, and telematics functionality.

## Descartes Routing, Mobile and Telematics Solutions Offer:

- Reservations for real-time appointment scheduling.
- Address verification for real-time address verification.
- Route planning to easily and efficiently create productive and profitable schedules.
- Interactive Voice Response (IVR) Integration to export delivery status information to an IVR system to automatically communicate with the customer.
- Real-time data communications with the driver for status updates.
- Monitoring for real-time schedule visibility and asset tracking.
- Dispatch for on-the-fly schedule changes, dynamic assignments and re-sequencing.
- Reports to measure key performance indicators and compare actual performance against the plan.

By deploying these customer-centric solutions designed to promote operational efficiency, Descartes helps home delivery service providers achieve the highest levels of customer service while controlling and minimizing transportation costs. Thus, home delivery providers can transform the delivery service from a costly liability to a customer service asset.

### About Descartes

Descartes (TSX:DSG) (Nasdaq:DSGX) is the global leader in logistics technology. If logistics is critical to your business, Descartes connects the people and technology to put your organization in motion. We extend the command of logistics operations, helping the world's largest and most connected logistics community to quickly reduce costs, improve service and comply with customs and transportation regulations. Descartes' cloud-based Logistics Technology Platform uniquely combines the power of The Global Logistics Network, the world's most extensive multi-modal network, with the industry's broadest array of modular and interoperable web and wireless logistics applications. At our core, Descartes' team of industry-leading logistics experts is dedicated to delivering innovative solutions while working closely with our customers to help ensure their success. Descartes is headquartered in Waterloo, Ontario, Canada and has offices and partners around the world. Learn more at [www.descartes.com](http://www.descartes.com).