DESCARTES™

Best Practices for Last Mile Delivery

Strategies, tactics and technological approaches to create an end-to-end delivery experience that makes a difference
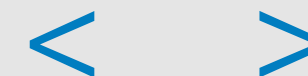
GET STARTED >

Best Practices for Last Mile Delivery

Delivery strategies, tactics and technologies have evolved rapidly for B2C and B2B companies. Industry leaders have proven that they can compete on the strength of their delivery capabilities. The myth that higher service levels result in increased costs has been dispelled and, in fact, when combined with value-added services, delivery becomes a significant revenue generator. What were considered leading edge delivery capabilities five years ago are now considered "table stakes" and companies that do not take a deep look at their delivery capabilities will quickly find themselves at a competitive disadvantage.

The lessons learned from delivery innovators across retail and distribution industries around the globe are that technology and a willingness to break from traditional logistics thinking are what separate their performance from the rest of the pack. The great news is that company size has nothing to do with the ability to transform home/last mile delivery performance— it all starts with a different perspective and vision to turn delivery into a competitive weapon. Technology is an incredibly important enabler of world class delivery performance as its impact spans from demand generation to the post-delivery experience. This ebook explains the strategies, tactics and technological approaches that create an end-to-end delivery experience that makes a difference.

CUSTOMER EXPERIENCE

DELIVERY PRODUCTIVITY

REVENUE

BEST IN CLASS DELIVERY COMPANIES ACCOMPLISH THESE THREE GOALS SIMULTANEOUSLY

DESCARTES

Customer Delivery Personas

There is a class of customers who are cash rich and time poor or have an urgent need. They want their delivery ASAP and wait all day for it. This can be, for example, high-value, impulse purchase goods, replacement items or even building materials. These customers are also most likely to pay for the privilege and it doesn't take too many of them to offset a lot of the overall delivery costs.
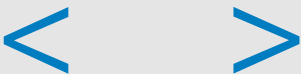
THERE ARE FOUR DELIVERY PERSONAS

Convenience Matters

Many large format items fit into this category. These customers don't value fast; they value a tight time window. For instance, a kitchen renovation might require five appliances to be purchased, but the customer won't want delivery the next day because they would consume the garage for weeks until the kitchen was ready for them. Instead, the appliances need to be delivered on a specific date and time in the future when the contractor is ready to install them.

Cost, Cost, Cost

This is a self-explanatory delivery choice. These customers are extremely cost-conscious and will take the slowest delivery service if it saves them money. They are willing to wait days for the product and care less when the delivery will arrive during the day.
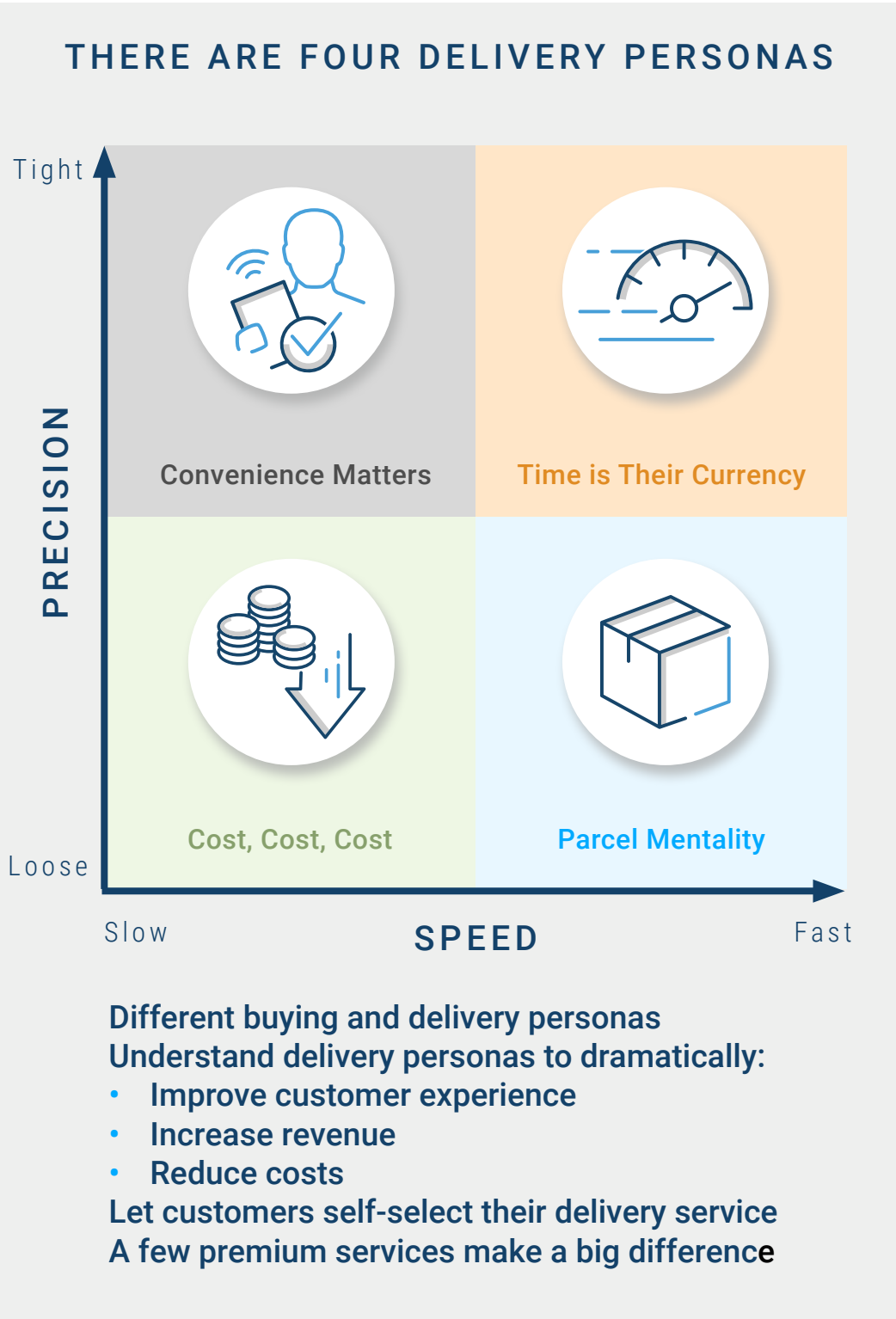
Time Is Their Currency

There is a class of customers who are cash rich and time poor or have an urgent need. They want their delivery ASAP and wait all day for it. This can be, for example, high-value, impulse purchase goods, replacement items or even building materials. These customers are also most likely to pay for the privilege and it doesn't take too many of them to offset a lot of the overall delivery costs.

Parcel Mentality

Typical parcel deliveries are fast, but not necessarily time definite at the point of purchase. Most goods such as apparel and other smaller items are delivered this way. These customers are happy with the fast delivery cycle and don't care if the package is left at the door sometime during the day.

Quadrant chart (PRECISION vs SPEED)

- Tight / Loose (PRECISION axis)
- Slow / Fast (SPEED axis)

Convenience Matters	Time is Their Currency
Cost, Cost, Cost	Parcel Mentality

Different buying and delivery personas
Understand delivery personas to dramatically:
- Improve customer experience
- Increase revenue
- Reduce costs

Let customers self-select their delivery service
A few premium services make a big difference

DESCARTES™

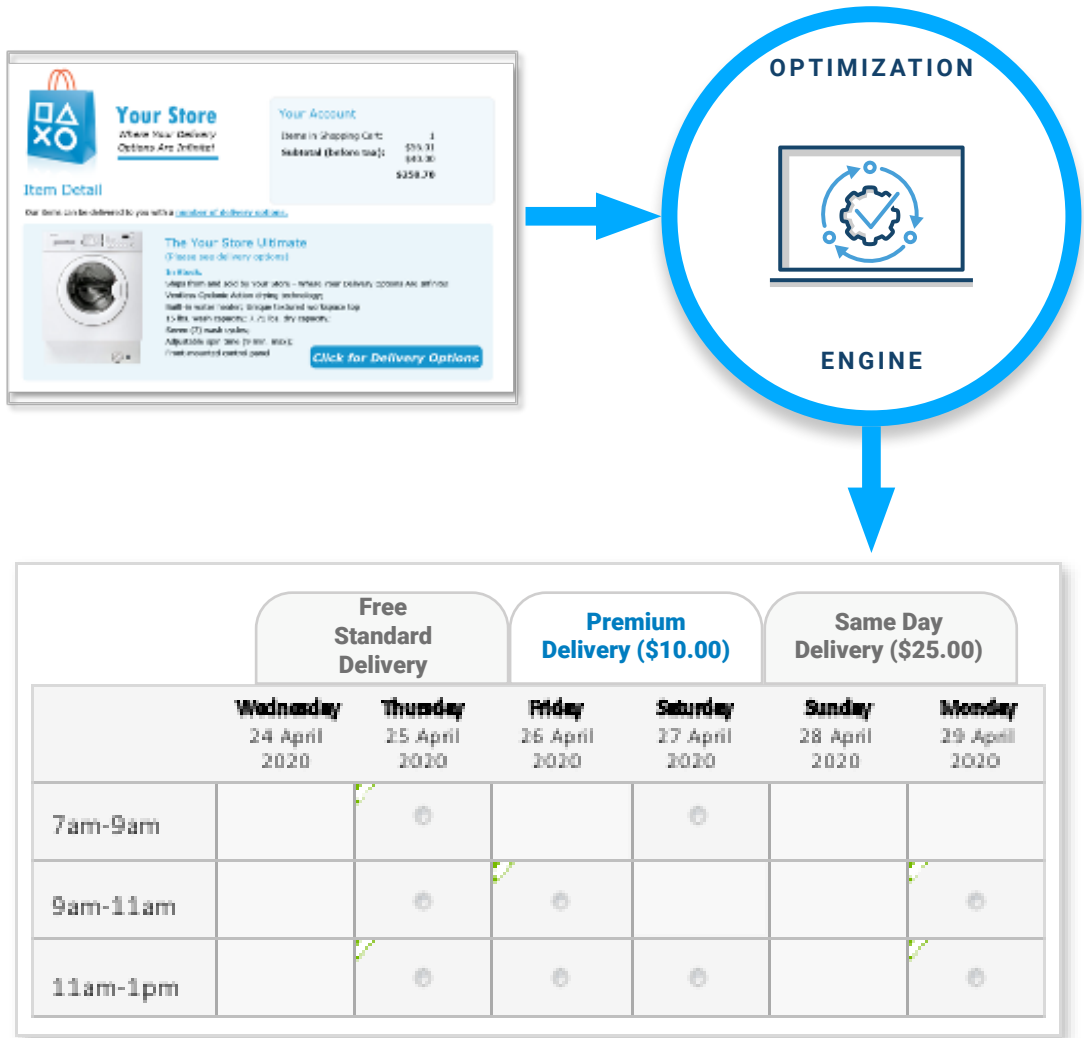# Dynamic Delivery Appointment Scheduling

< >

Success starts during the ordering process where there is the greatest opportunity to influence the customer to take delivery appointment options that benefit the seller. Every delivery appointment booking is unique and depends not only on the customer's order, but also all of the existing orders. Providing delivery options to fit the delivery personas is critical to creating a differentiated customer experience and increasing revenue. There is no reason, however, that the options presented cannot also benefit the seller, reducing costs and maximizing delivery capacity.

Dynamic delivery appointment scheduling provides multiple options simultaneously and allows the seller to present these during the buying process. Each delivery option is scored for best delivery performance for the seller, so the seller can determine in real-time which options to present to the customer. Because the options are dynamically generated, they can be unique to the customer type, size of sale, etc. and the seller can display the options that potentially meet the customer need and are the most economical for the seller—hence the concept of profitable choice.

Another benefit of dynamic delivery appointment scheduling is that it eliminates unscheduled or infeasible deliveries because the customer is only presented with viable options to select. To produce the most productive options, dynamic delivery appointment scheduling requires real-time optimization technology that considers the road network, vehicle type and capacity, operational rules, customer preference and existing orders.

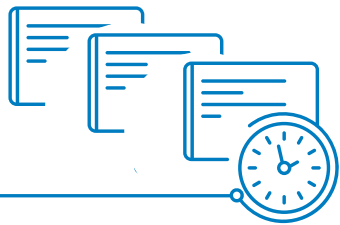## DYNAMIC DELIVERY APPOINTMENT SCHEDULING

WHAT:
- Dynamically generates delivery appointment options during the sale

WHY:
- Offer lower cost to deliver options
- Create delivery density
- Eliminate unscheduled/infeasible deliveries
- Sell premium delivery services
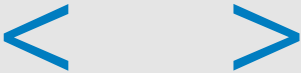
DESCARTES™

Multiple Time Windows

Part of the delivery persona strategy is to offer different delivery options and generate incremental revenue from the customers who are willing to take premium options. Typically, premium delivery options are those that are the fastest and/or have the greatest precision such as same-day or 1-hour time windows. It doesn't take a lot of customers to generate millions in incremental revenue. A review of companies who have used this technique indicates that 20% - 25% of their customers pick premium windows or expedited services.

MULTIPLE TIME WINDOWS
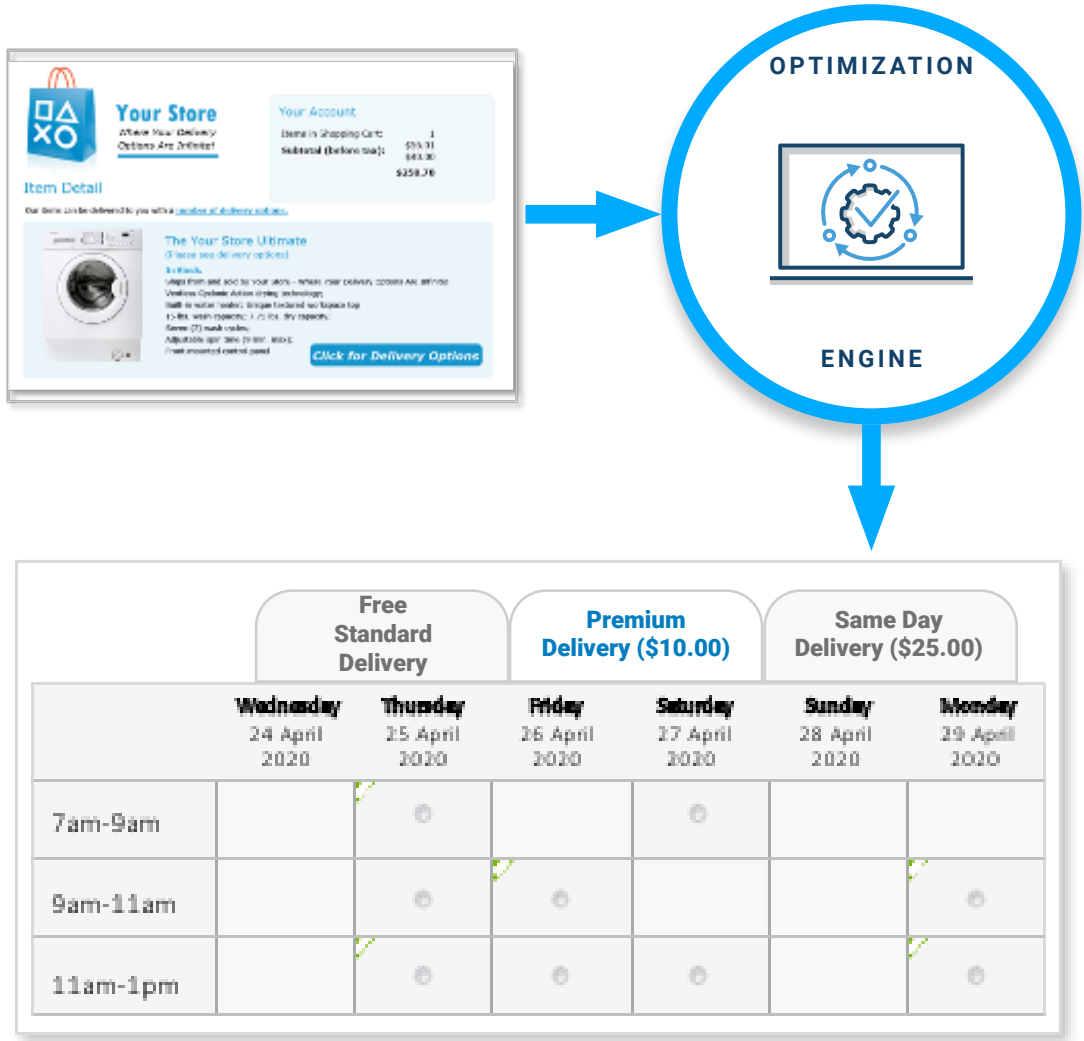
WHAT:
- Generates multiple delivery options that are based upon their perceived value to the customer

WHY:
- Provide choice to meet customer delivery persona needs
- Create opportunity to upsell value and drive revenue
- A 20% uptake may result in millions in incremental revenue
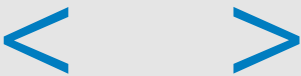
Customer Steering

< >

A customer's delivery choice can be influenced to the benefit of the seller. One steering approach is the "eco delivery". Many customers want to buy from sellers who want to help improve the environment. Eco delivery time windows are delivery options that are adjacent to existing delivery appointments and hence require less distance and fuel to execute. Less fuel means less carbon dioxide in the air and hence more ecologically friendly. The delivery options returned with the highest scores are the most economic and ecologically friendly. Because of the shorter distance to make the delivery—typically by ~20%—eco deliveries are the most cost-effective. Eco deliveries are a win/win choice for customers and sellers.

CUSTOMER STEERING

eco ECO DELIVERIES AVERAGE 20% LESS DISTANCE PER DELIVERY

	Free Standard Delivery	Premium Delivery ($10.00)	Same Day Delivery ($25.00)			
	Wednesday 24 April 2020	**Thursday** 25 April 2020	**Friday** 26 April 2020	**Saturday** 27 April 2020	**Sunday** 28 April 2020	**Monday** 29 April 2020
7am-9am		◎		◎		
9am-11am		◎	◎			◎
11am-1pm		◎	◎	◎		◎

WHAT:
Steer customers to delivery appointment options that benefit the company

Example: Eco delivery "We happen to already be delivering in the neighborhood; wouldn't you like to help the environment..."

WHY:
- Reduce delivery costs
- Feature premium services

DESCARTES™

Dynamic Pricing

< >

Dynamic pricing is a combination of customer steering and premium services where the cost of the delivery window is determined based upon the scores of each delivery slot. Dynamic pricing allows the seller to better reflect the cost of each delivery option to the customer, and factor in available capacity in a geography to sway the customer to or from that delivery option. For those customers who value a particular time window regardless of cost, dynamic pricing helps maximize the revenue opportunity.

DYNAMIC PRICING

WHAT:
Dynamically assign delivery prices based upon Descartes Reservations™ slot scoring

WHY:
• Correctly price delivery slot options
• Steer customers to improve delivery density
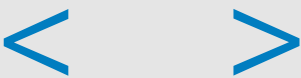
Value-added Services

< >

During the buying process there is an opportunity to upsell delivery-related services that can drive additional revenue and even increase product sales. Value-added services, for example, could be installation and removal. Value-added services can also make the related product buying decision much easier and, therefore, create an opportunity to sell more products. For example, value-added services like installation may remove a buying concern for something large and complicated like a 55" television that a customer would like wall mounted. With 1-click, a customer can include installation in their purchase and have the service automatically scheduled. Descartes Reservations™ makes incorporating and automating booking possible for value-added services because it has the ability to model the time required for the service at the customer location and include it in the matrix of delivery options returned. Value-added services can also be combined with premium time windows to maximize delivery-related revenue.

VALUE-ADDED SERVICES
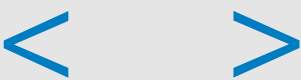

WHAT:
Incremental delivery-related services
Example: Tabletop versus wall mount TV installation

WHY:
- Increase delivery-related revenue
- Increase product sales

Demand Shaping

Ensuring that demand and delivery capacity are in sync is critical to providing a superior ecommerce customer experience. In many businesses, delivery capacity is capped as trained resources (e.g., installers) are finite and the work cannot be shared with others. In addition, the marketing costs associated with generating excess demand are wasted and unnecessary. Using delivery capacity utilization to tune online marketing programs like pay-per-click (PPC) can help ensure that demand does not exceed capacity or identify geographies that have underutilized capacity. Capacity utilization information over the planning horizon can be used as part of marketing demand generation algorithms to continually adjust marketing programs to maximize revenue, but not overrun delivery capacity.
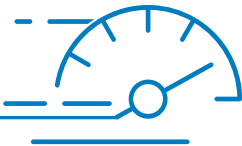
DEMAND SHAPING

PAY-PER-CLICK DEMAND GENERATION
TUNED VIA ROUTE CAPACITY UTILIZATION
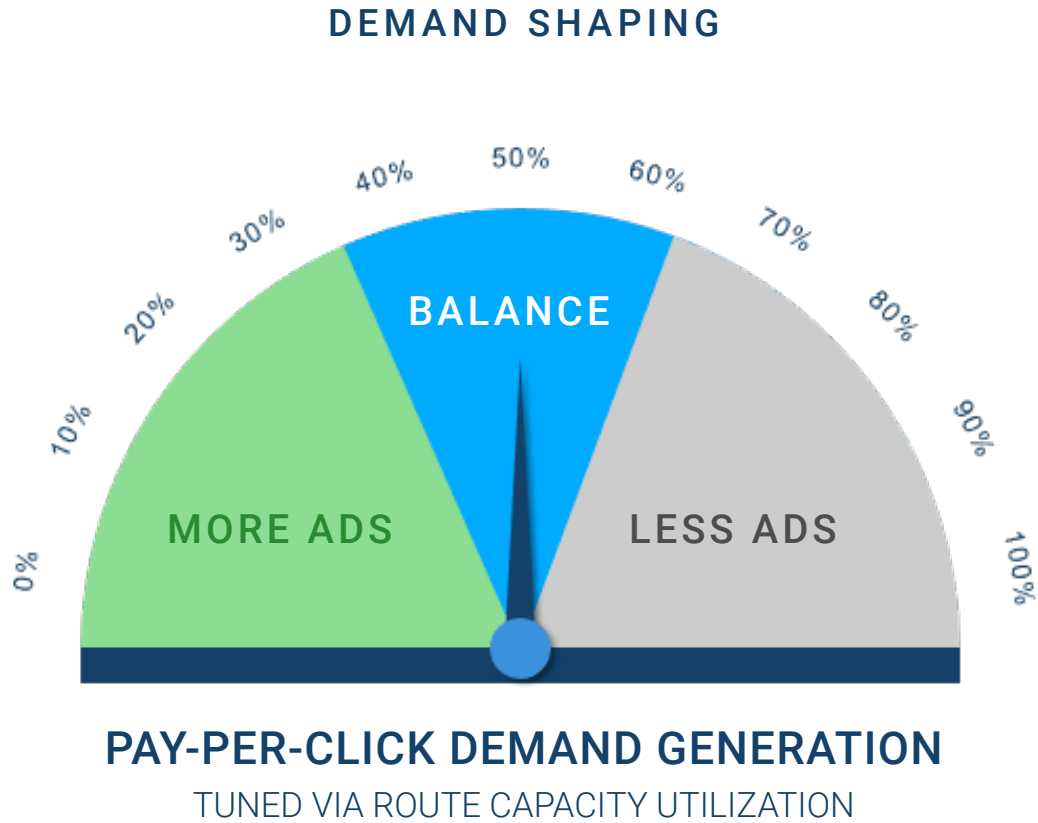
WHAT:
Use delivery information to influence demand generation

WHY:
- Optimize demand generation costs, minimize capacity overruns or entice customers to underutilized capacity
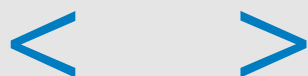
< >

DESCARTES™

Same-day Optimization

< >

In many industries, same-day delivery is a requirement or becoming the new differentiating point. It can, however, be very expensive and not precise. Same-day optimization combines dynamic delivery appointment scheduling with the real-time GPS-based status of vehicles in the field. It allows customers to offer time-definite same-day delivery in the most productive way. Same-day optimization lets fleets take in orders with later cut-off times and provide more dynamic or premium customer service options. It dynamically books delivery appointments on the live dispatch schedule and considers real-time GPS-based information to optimize fleet utilization in conjunction with the customer's delivery window requirements. All of the updates and changes to the route, stops, and service activities are available in real-time to the drivers on their handheld device to keep them in motion and as productive as possible.

SAME-DAY OPTIMIZATION

Delivery Appointment
Requests & Confirmations

Real-time GPS-based
Delivery Updates

DISPATCH SCHEDULE
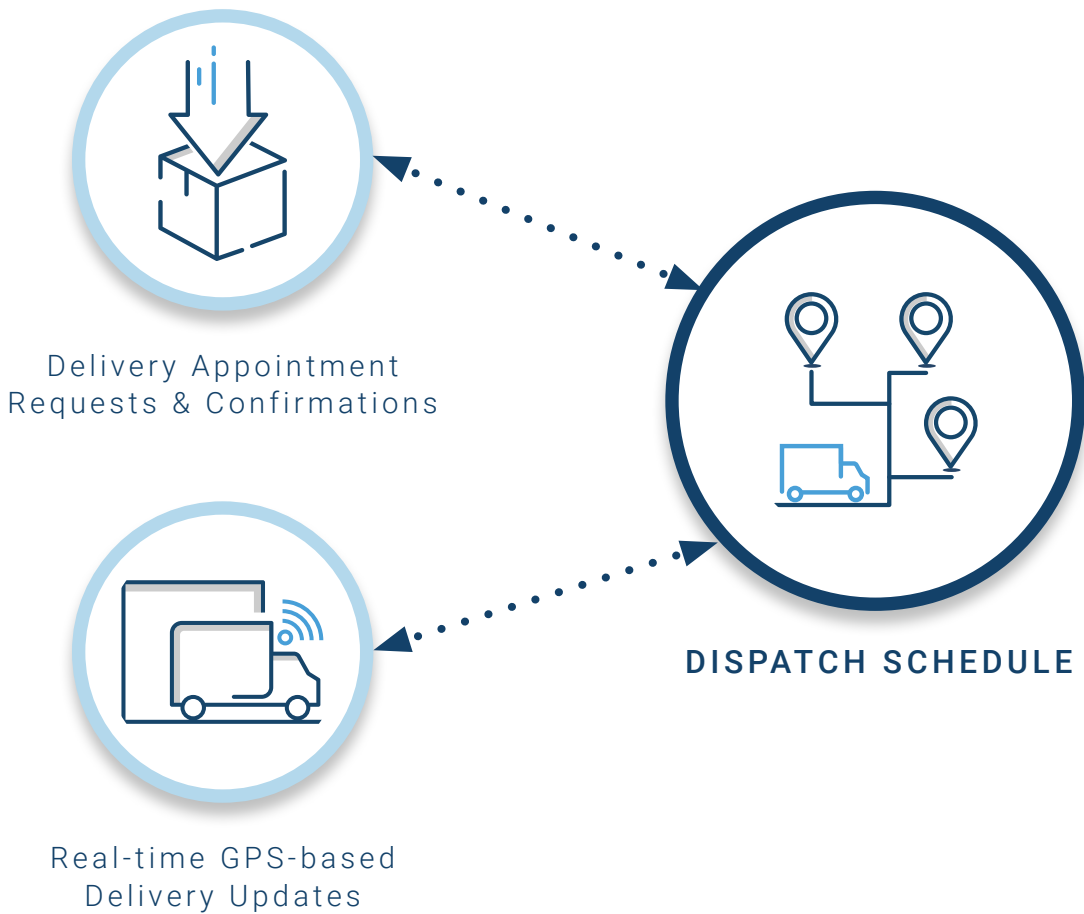
WHAT:
Time-definite same-day appointment scheduling based upon real-time fleet status

WHY:
- Maximize resource utilization
- Maximize customer service
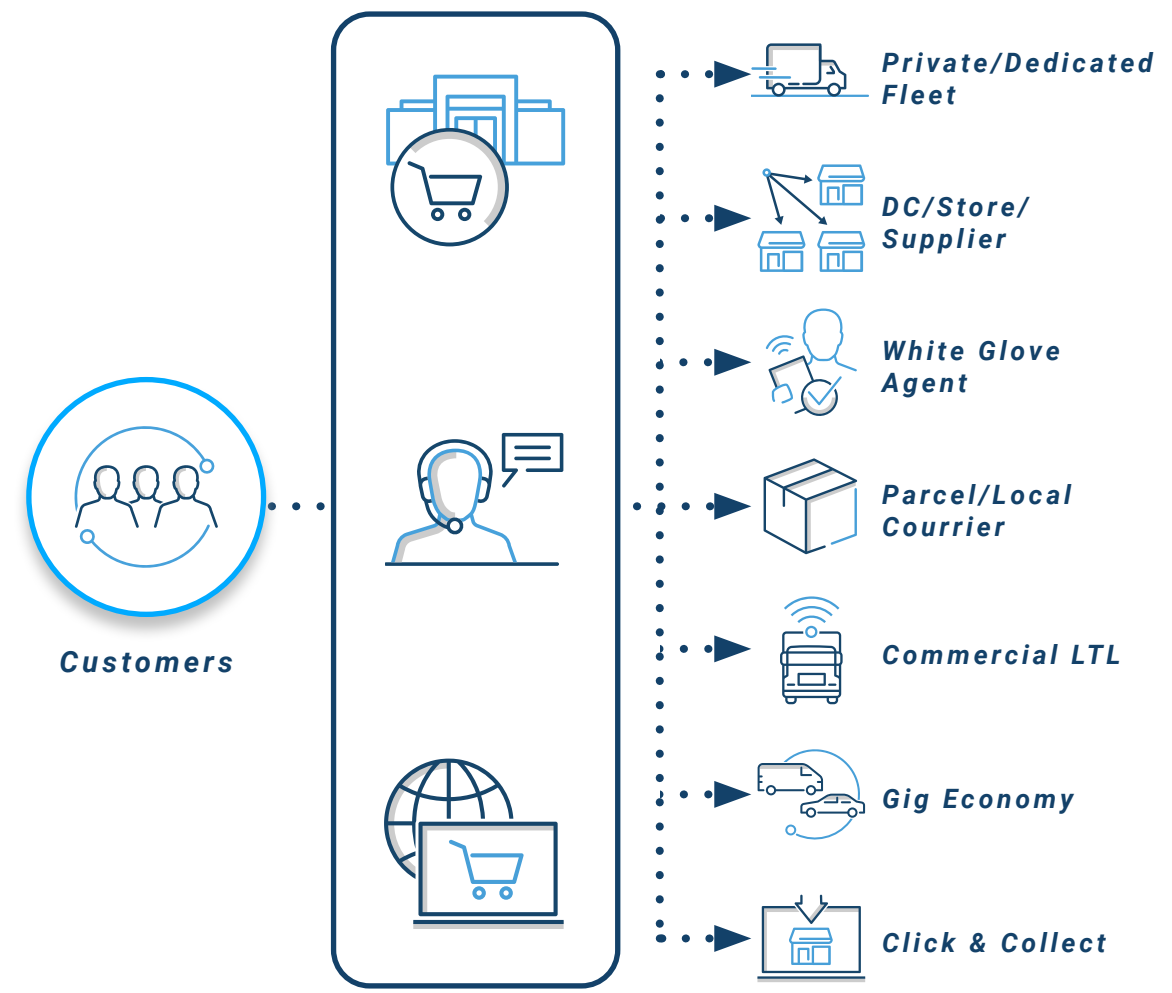- Provide a premium delivery service
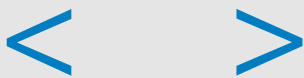
Omnichannel Delivery

Home and last mile delivery can be very complex as products, geography, sales volume and service levels drive the choice and number of delivery modes. Many companies make arbitrary delivery mode choices that appear disjointed to the customer and do not offer the best possible service or represent the lowest possible cost to the seller. Using Descartes Reservations as the delivery appointment booking scheduling solution for all modes unifies the delivery process for the customer, allows the seller to offer a superior customer experience, and minimizes delivery costs. Descartes Reservations can make complex multimodal delivery decisions in real-time during the buying process. The solution can orchestrate and communicate planned deliveries to the best mode to make the delivery. For example, a combination of fleet and gig economy delivery can be used to maximize the value of the fleet to deliver larger orders and use gig economy drivers to handle smaller orders or deliver to less dense geographies. Another example is to place smaller orders (e.g., parcel size) on the fleet when that order is either at or very close to an existing delivery, eliminating the parcel shipping cost.

OMNICHANNEL DELIVERY

Customers — Private/Dedicated Fleet, DC/Store/Supplier, White Glove Agent, Parcel/Local Courrier, Commercial LTL, Gig Economy, Click & Collect

WHAT:
Delivery appointment promising across multiple delivery modes

WHY:
- Provide a unified delivery booking experience to the customer
- Utilize specialized options to reduce costs and improve customer experience

DESCARTES™

Contactless Delivery

< >

The pandemic has changed how drivers interact with customers. Social distancing has eliminated paper-based receipt processes and even electronic signature capture is no longer an acceptable practice. While companies still need to collect critical information to document the delivery, they need to eliminate human contact in doing so. Contactless delivery addresses this challenge by combining picture capture and GPS technology to effectively document the delivery and keep the customer and driver safe.

CONTACTLESS DELIVERY

41.3176° N x 81.3454° W

6/22/20 10:47 EDT
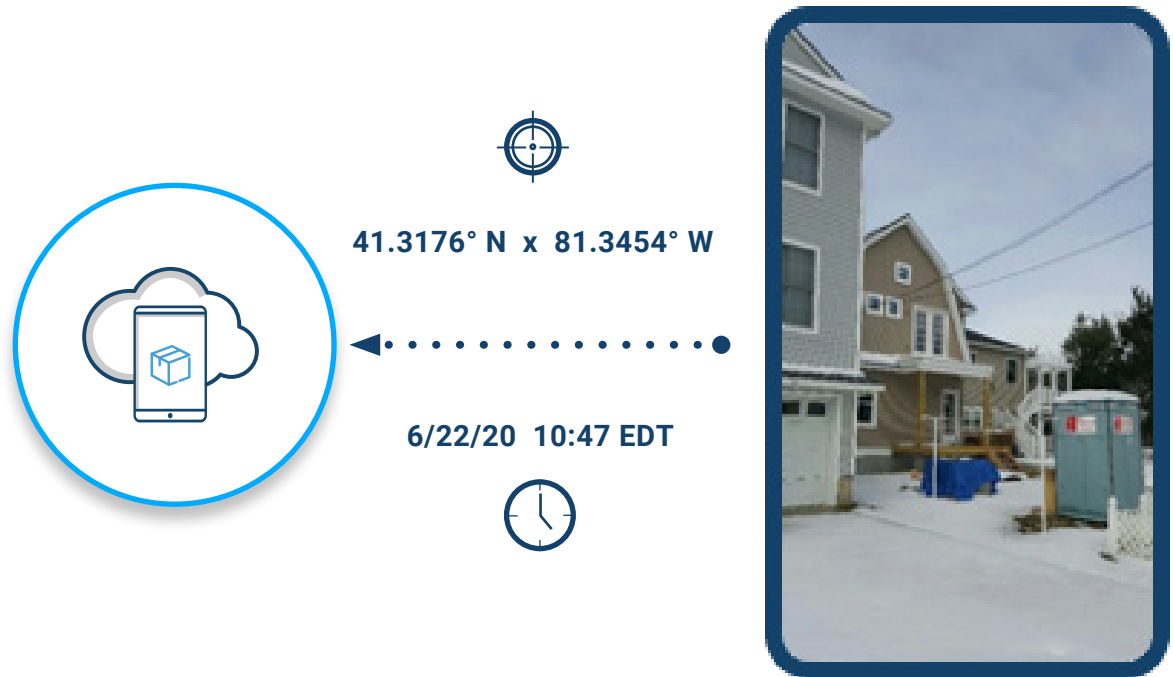
WHAT:
Proof-of-delivery information using picture capture and GPS coordinates

WHY:
- **Keep drivers safe**
- **Gather critical delivery information for customer updates**
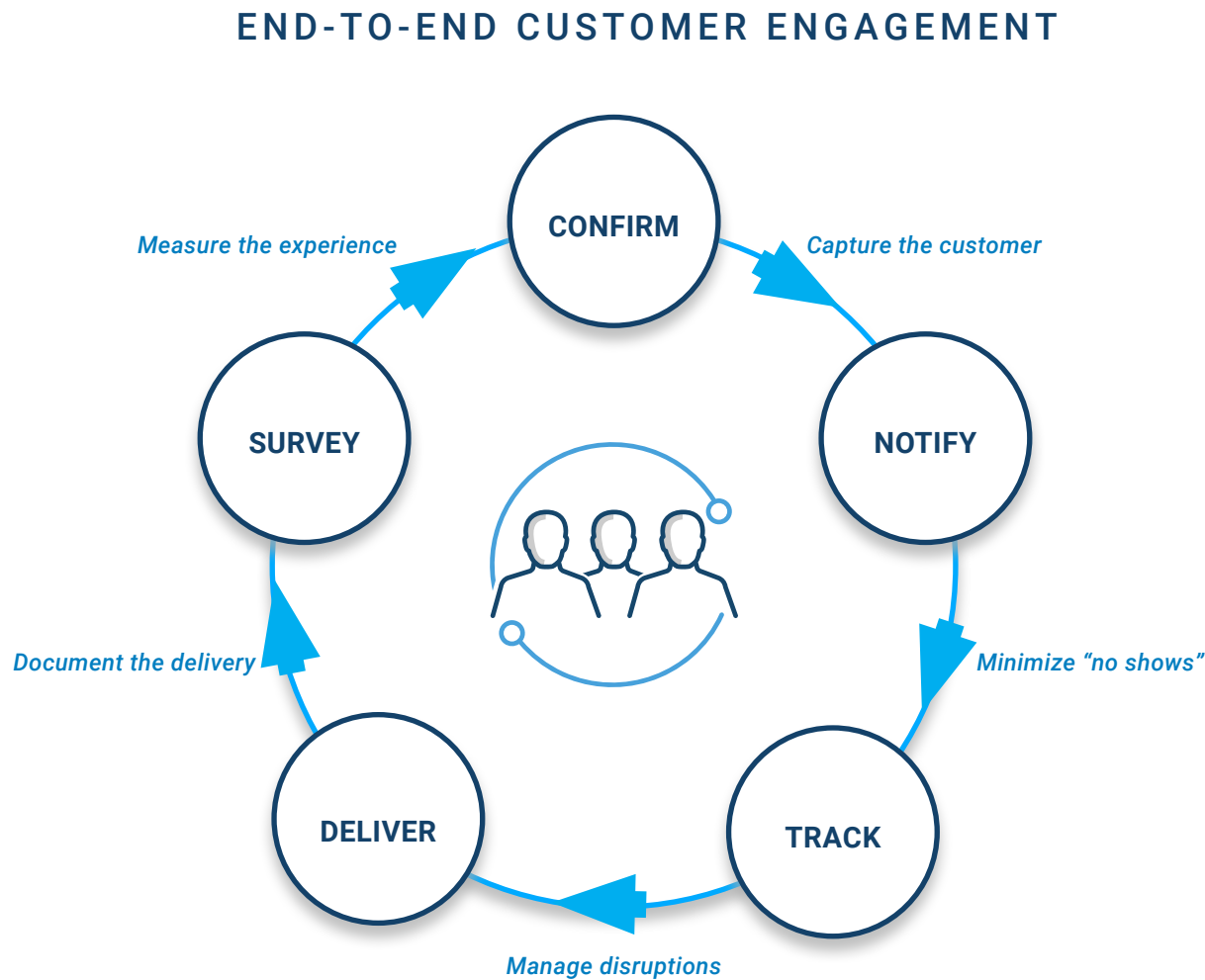- **Minimize disputes**
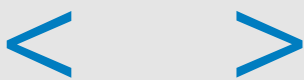
DESCARTES™

End-to-end Customer Engagement

< >

Engaging the customer from purchase to post-delivery enhances the customer experience, improves delivery success and reduces the cost to keep customers informed. Delivery information is the cornerstone of an end-to-end engagement strategy from confirming the delivery appointment, to notifying that the delivery is underway, tracking the delivery progress, documenting the delivery and measuring the delivery experience. Not only does it make customers happier when they know the exact status of their delivery, it can also be used to help ensure the customer is there when the delivery arrives or has unlocked the fence and put away the dog for unattended deliveries. The impact to customer service is also significant as the leading call from customers is "Where's my stuff?". Companies that have implemented a self-service notifications process have seen their call center volumes reduced by upwards of 50%.

END-TO-END CUSTOMER ENGAGEMENT

CONFIRM
Measure the experience
Capture the customer
SURVEY
NOTIFY
Document the delivery
Minimize "no shows"
DELIVER
TRACK
Manage disruptions

WHAT:
Delivery status and proof-of-delivery notifications and surveys during the delivery life cycle

WHY:
- Improve customer experience
- Reduce delivery failures
- Minimize disputes

DESCARTES™

Customer Facing Logistics

Using a combination of service and delivery information to create substantial value for the customer.

The ultimate delivery strategy is to use delivery information and capability to measurably improve the customer experience in some meaningful way that creates competitive differentiation. It is the combination of capability and information around the delivery that allows the customer to do something that enhances their business or experience. Two examples are US LBM and BC Sands.

US LBM, a building materials distributor, provides their contractor customers with an app that provides delivery status and other key information. The delivery information is critical to contractors because it allows them to have their crews positioned where the building material is or is about to arrive. Crew productivity is critical to contractors as it is the single biggest cost under their control. If they don't have the materials, they still have to pay their contractors. The app allows them to avoid that situation.

BC Sands is another building materials distributor and they offer time-definite same-day delivery appointment scheduling. For many contractors, their days are "fluid" and they do a lot of same-day ordering. As previously mentioned with US LBM, having the material at the right time is critical for crew productivity. Because BC Sands has the order flexibility and delivery precision, it can sell materials at a premium price.

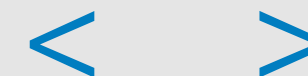**DELIVERY SERVICE + INFORMATION = DIFFERENTIATION**

Improve Contractor Crew Productivity

U.S. LBM

BC SANDS
BUILDING & LANDSCAPE SUPPLIES

CONTRACTOR APP

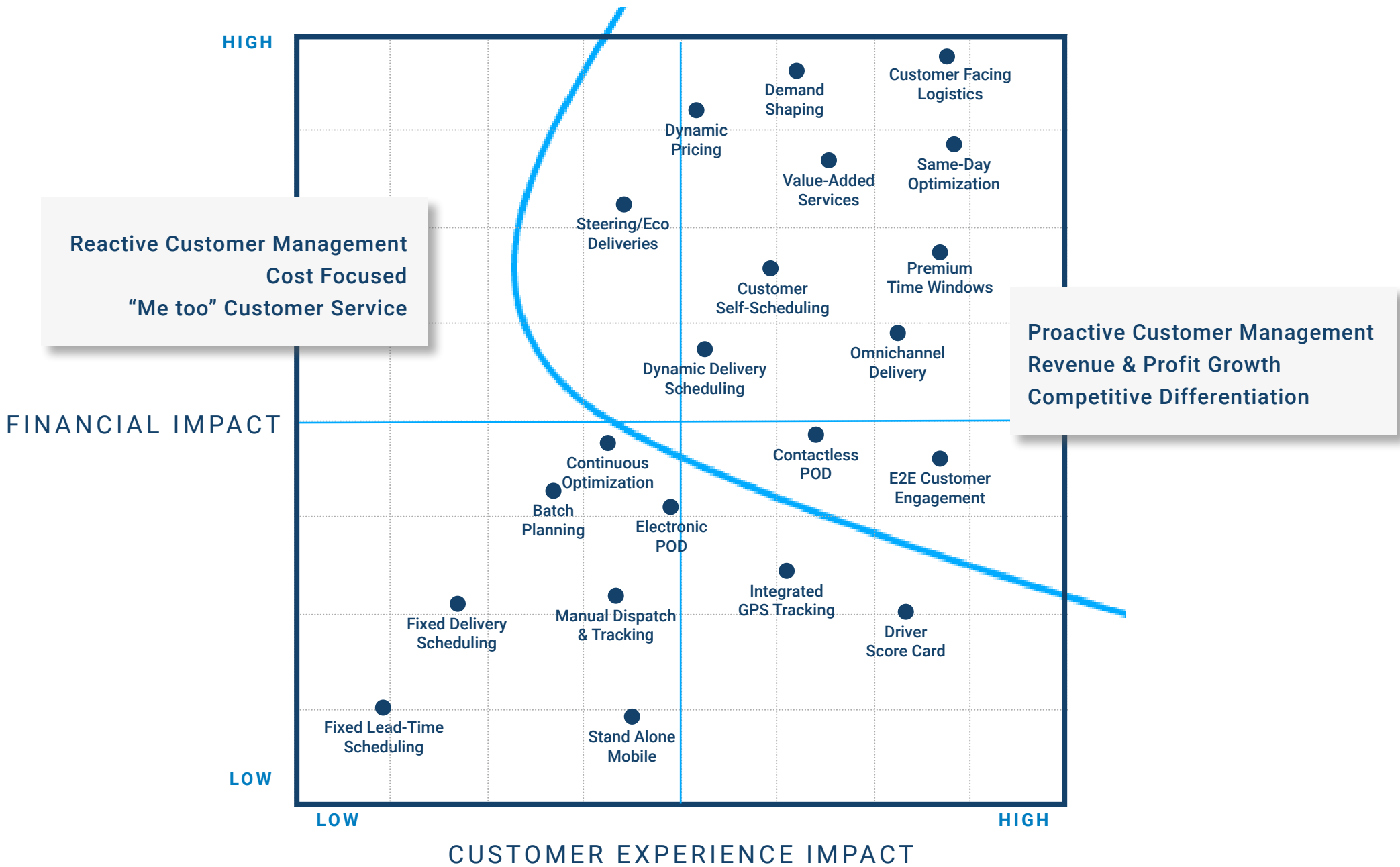**TIME-DEFINITE SAME-DAY DELIVERY**

DESCARTES

Last Mile Delivery Impact Model

< >

A number of delivery strategies can be employed, but some are significantly more impactful. The two biggest steps to move from a reactive approach to delivery to one that creates competitive differentiation are: 1) adopting a strategy that customers can influence during the delivery appointment booking process and 2) understanding that delivery information is a powerful way to engage the customer.
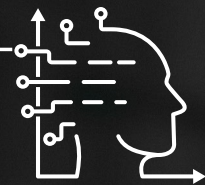
From here, there are a number of techniques to drive revenue, competitive differentiation and productivity. This chart contrasts the value of traditional approaches to last mile delivery with today's most advantageous strategies and tactics.

HIGH

Reactive Customer Management
Cost Focused
"Me too" Customer Service

Proactive Customer Management
Revenue & Profit Growth
Competitive Differentiation

Demand Shaping
Customer Facing Logistics
Dynamic Pricing
Value-Added Services
Same-Day Optimization
Steering/Eco Deliveries
Premium Time Windows
Customer Self-Scheduling
FINANCIAL IMPACT
Dynamic Delivery Scheduling
Omnichannel Delivery
Contactless POD
Continuous Optimization
E2E Customer Engagement
Batch Planning
Electronic POD
Fixed Delivery Scheduling
Manual Dispatch & Tracking
Integrated GPS Tracking
Driver Score Card
LOW
Fixed Lead-Time Scheduling
Stand Alone Mobile

LOW   HIGH

CUSTOMER EXPERIENCE IMPACT

DESCARTES

Changing the Conversation

Many logistics organizations struggle to implement advanced delivery strategies and tactics.

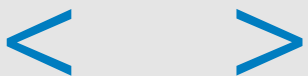The companies that have made the leap have innovated in four ways.

Enlist the commercial organization. They own the customer and revenue. Many of the advanced strategies and tactics are customer-facing and the customer owners need to understand and agree to change what may be very ingrained and dated delivery concepts. Once they start to see the difference, however, they become the biggest advocates for further advancement.

Move the discussion from "get it done" to "get more". Management often views delivery as a cost center and a vehicle to get what was sold to the customer. Changing the discussion to how delivery excellence can lead to increased revenue, a differentiated customer experience and brand enhancement elevates the delivery capability discussion to the "C" suite.

Link delivery to the broader set of business metrics, not just supply chain ones. If the only delivery metrics are cost and complete-and-on-time, then delivery's importance will never be understood. Instead, track delivery's contribution to revenue and how customers rate the overall buying experience.

Engage the customer. See how customers use your company's delivery capabilities and information to enhance their business or lives—or can't because of the limitations of your current operation.

DESC∕RTES™

Creating Opportunities

The rapid evolution of last mile delivery strategies, tactics and technologies provides companies with a wealth of opportunities that are required in today's delivery economy!

Dynamic delivery appointment scheduling changes the last mile delivery game

Delivery choice is the key to delighting customers and improving profit

There are numerous techniques to drive revenue, profit and competitive differentiation

Delivery information should be used from demand generation to post delivery

Dig deep to understand how delivery information can benefit your customers

Use omnichannel booking to synchronize delivery channels to improve agility and harmonize the customer experience

DESCARTES

About Descartes Systems Group

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.

DESCARTES™

The Descartes Systems Group Inc.
120 Randall Drive, Waterloo, Ontario, N2V 1C6, Canada
Toll Free 800.419.8495 | Int'l 519.746.8110
www.descartes.com | info@descartes.com

Uniting the People & Technology
That Move the World

Network.   Applications.   Content.   Community.