DESCARTES™

Uniting the People and
Technology that Move the World.

Network. Applications. Community.
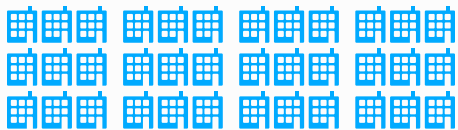
Improve your performance with Dynamic Reservations

Global Logistics Solutions Leader

10,500+
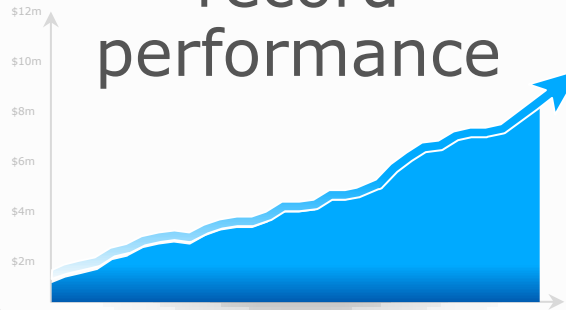customers worldwide

Global reach

$~150m
annual revenue

42% in the EU

800+
logistics-focused employees

30+ quarters
record performance

$12m
$10m
$8m
$6m
$4m
$2m

~18%
revenue for R&D

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Enabling the Global Logistics Community

172,000+
connected parties

160+
countries

50+
industry verticals

4.5 billion
messages processed/year

70 million
fiscal & security filings
processed/year

31.2 million
routes managed/year

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Customer Success – Driving Our Success

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Industry-Leading Customers *(EMEA-based)*

Air	virgin atlantic · Lufthansa · AIRFRANCE · swissair · BRITISH AIRWAYS · ETIHAD AIRWAYS
Ocean	MAERSK · CMA CGM · ODFJELL · Hapag-Lloyd · HAMBURG SÜD
Truck	TURNERS (SOHAM) LTD · Gist · BAKKER GROEP · TNT · RHENUS LOGISTICS
Intermediaries	DHL · KUEHNE+NAGEL · PANALPINA on 6 continents · DB SCHENKER · DSV
Retailers	LEEN BAKKER! · John Lewis · colruyt · DELHAIZE · hubo Overtref jezelf · IKEA · THE HOME DEPOT
Manufacturers	BASF The Chemical Company · Coca-Cola · 3M · ALCOA · ROYAL CANIN · AkzoNobel · ABB · Barilla
Distributers	BRINKS · BUNZL · BUTAGAZ · CERP · DeliXL First for Foodservice

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Proven End-to-End Solution Footprint

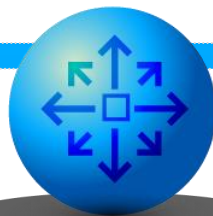| Routing, Mobile & Telematics	Transportation Management	Network Services	Customs & Regulatory Compliance	Forwarder & Broker Enterprise Solutions
1000+	**1000+**	**2300+**	**750+**	**1000+**

Leading **European** Provider of **B2B Supply Chain** Solutions

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Descartes Advanced Solution for Route Management

Stores
- Online slot selection
- Address Verification

Customers
- Online slot selection
- Address Verification

Planners
- Monitoring route execution
- Amending routes
- Adding expedite orders
- Achieve KPI's

Call Center
- Proactive interaction with customers
- Online slot selection
- Address Verification
- Order Confirmation & Alternative Day Confirmation

MRM 2.0

Dispatchers
- Monitoring route execution
- Amending routes
- Adding expedite orders
- Achieve KPI's

Managers
- Manage KPI's
- Managing exceptions

Drivers
- Route sequence
- Route status
- Commercial transactions
- Compliance reporting

Mobile Workers
- Visit sequence
- Stop status
- Commercial transactions
- Compliance reporting

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Differentiator #2: Incremental Optimization

- ## General Optimization:

  - Complex math problem

  - The longer it runs (more swaps), the better the results will be

- ## Batch Optimization

  - Executed the night before (ie 4:00 PM) route execution on 1 processor

  - Challenge of Time vs. Quality

  - Challenging in processing intensive scenarios:

    - Large order sets with a tight cut-off

    - Tight time windows (2 hours)

    - Multi-depot fulfillment

    - Selection of day of delivery

Ultimate question is how to get more horsepower to get a better result?

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Differentiator #2: Incremental Optimization

Dispatchers

Planners

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Descartes Background Optimizer continually adjusts route plans as new orders come in.

BGO Worker 1

BGO Worker 2

BGO Worker 3

BGO Worker 4

Orders, Resources & Territories

Live Route-Planner schedules

Rapidly-changing data

Dynamically-accessed and modified routes

Lights out, continuously-optimized routes

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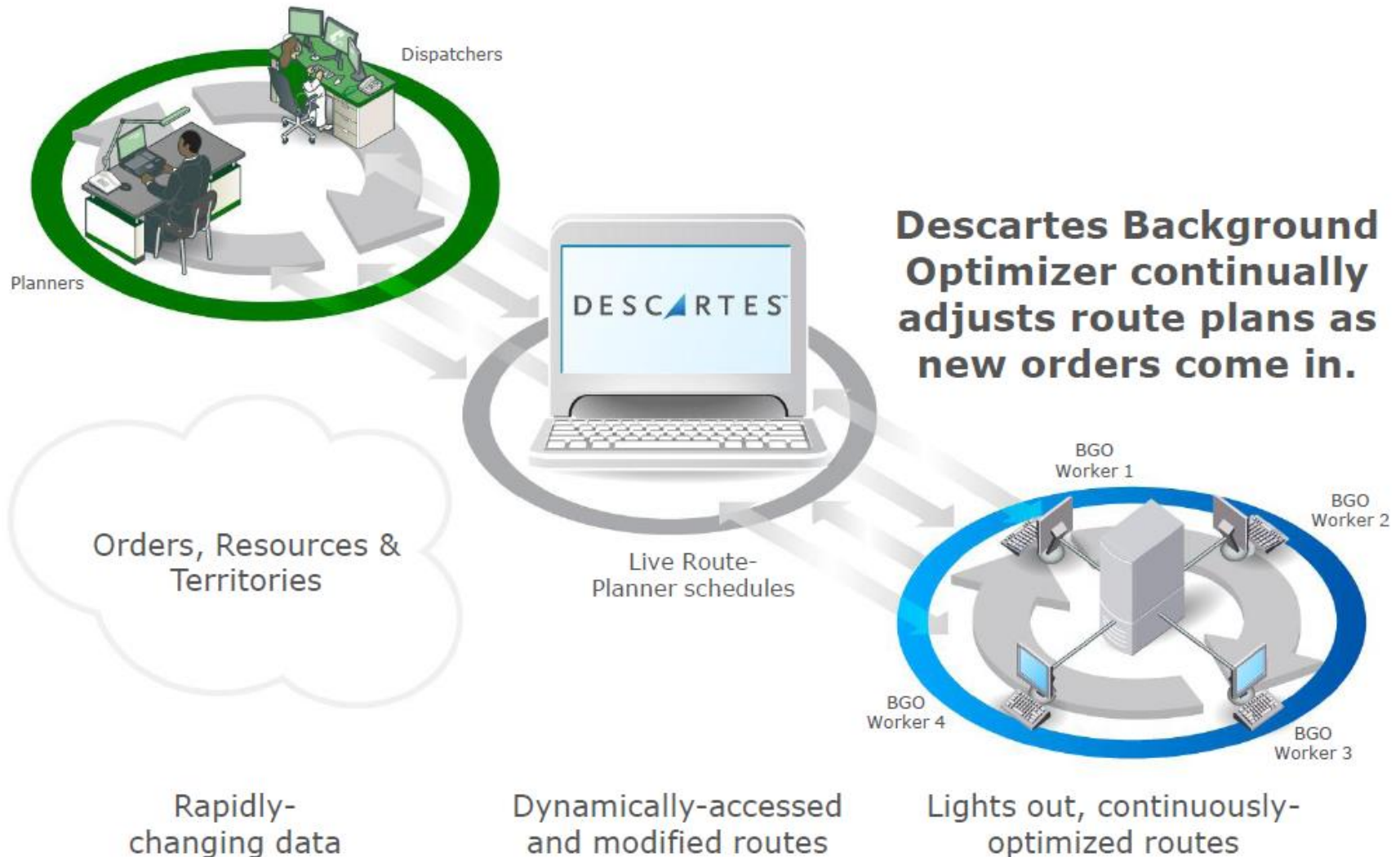
Differentiator #2: Incremental Optimization

- Completely re-designed optimization architecture

  - Optimization servers are constantly running during the planning window(s)

  - Optimization runs *incrementally*

  - Optimization is distributed across *multiple CPUs*

  - *Solve across 4 CPUs for 12 hours vs. 1 CPU for 30 minutes*

- Key value points

  - Increased horsepower   → 7-9% reduced mileage

  - Ideal for short routing horizons → Quick route release

  - Usability & Exception Mgmt   → Proactive mgmt

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Differentiator #3: Dynamic Reservations

Reservation Challenges:

- How can we assign timeslots or limit capacity before the routing has taken place?

- Akin to putting a jigsaw puzzle together without knowing what it is supposed to look like

- Two approaches to solve this problem
  - Static reservations
  - Dynamic reservations

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Trends for B2C delivery
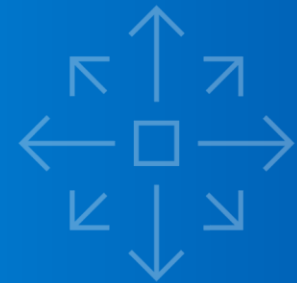
Trends for home delivery

Increase

The increase in home delivery comes from:

- Technological developments
- The transformation of the supply chain
- Changes in the channel retailer / wholesaler
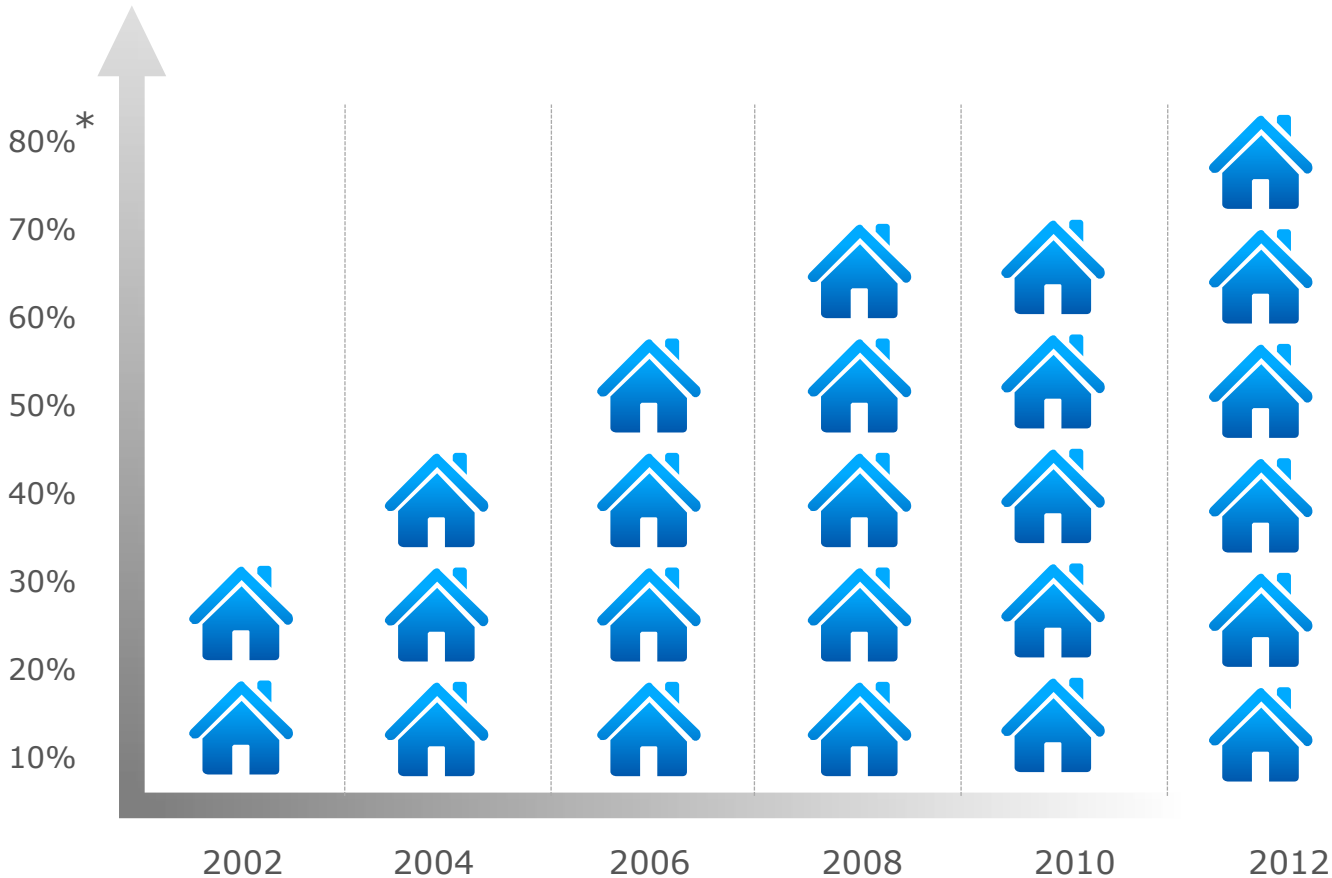
Source: Price Waterhouse Coopers, LLP, 2012

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Home Delivery: Challenges

The top 3 requirements

1 The client wants service

2 The client wants choice

3 The retailer wants to control his costs

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Breaking the Myth

Home delivery: The Myth

- Home delivery has high cost and low value

- Making client appointments at the moment of sale increases transport costs

High cost

Low value
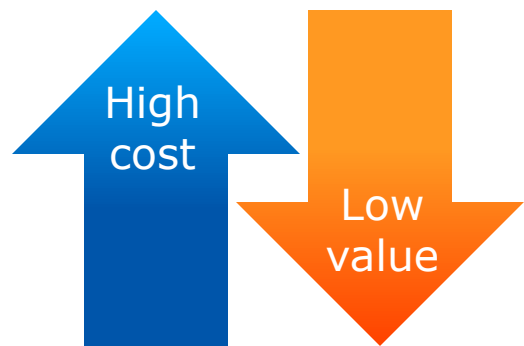
Home delivery: The Facts

- Home delivery can become a profit center instead of a source of costs

- Allows the retailer to differentiate to retain customers

Low cost

High value

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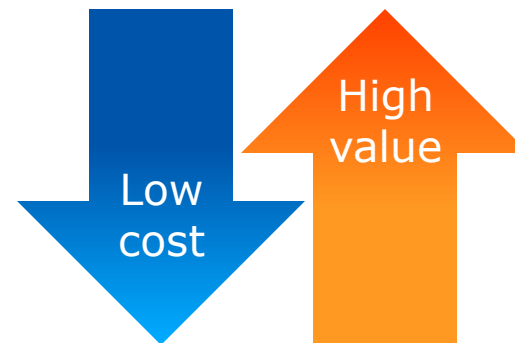
Next Generation Solution

They made it! John Lewis
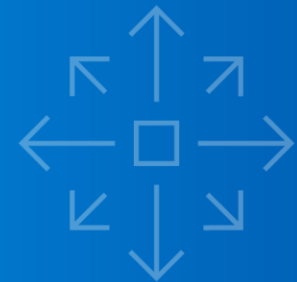
A profitable Home Delivery Appointment System!?

A revealing example

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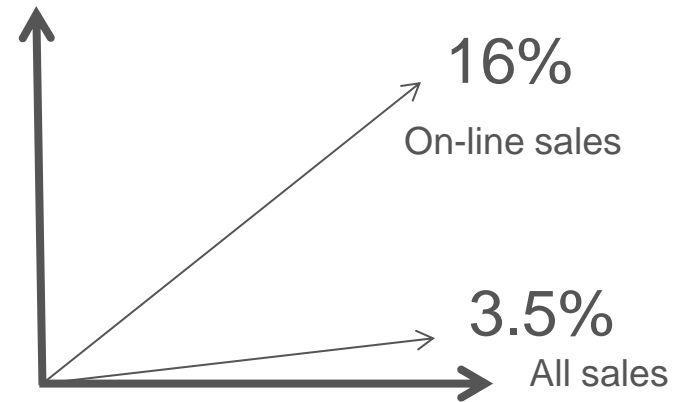# Market in England

The most developed European online market

Legend:
- 2014 Online sales (£ bn)
- 2013 Online sales (£ bn)

Categories: UK, Germany, France, Spain, Italy, Netherlands, Sweden, Poland

Y-axis: £90,00 / £80,00 / £70,00 / £60,00 / £50,00 / £40,00 / £30,00 / £20,00 / £10,00 / £-
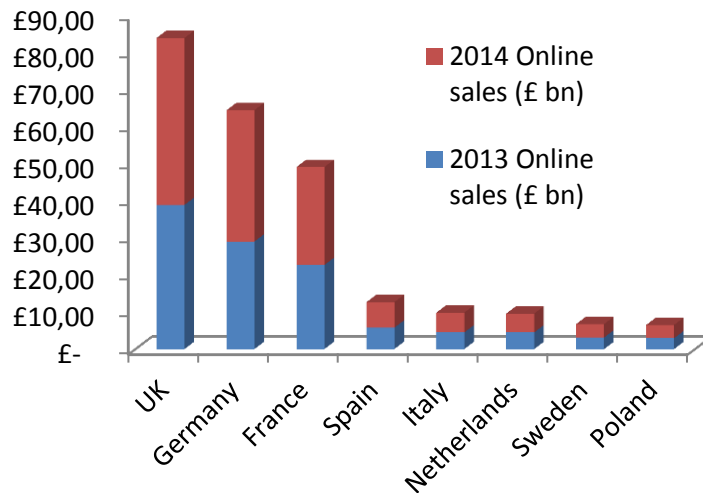
Rapid transformation of the sales model

2013 & 2014 UK Retail Growth

16% On-line sales

3.5% All sales

> *"The leading provider of home delivery services is leaving the UK market !"* Dino Rocco - JLP

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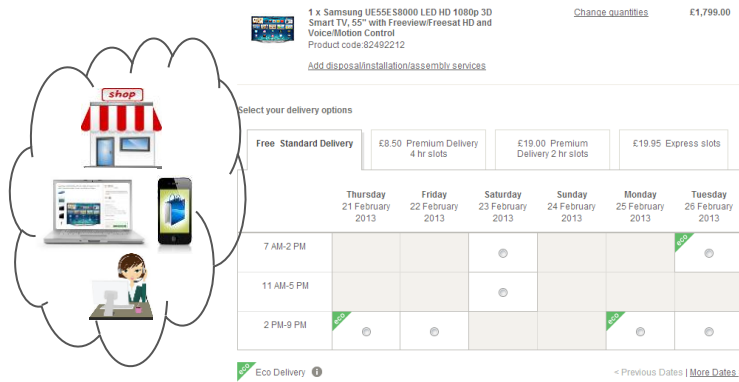
For many retailers, selling multi channel brings erosion of profits

Sales Channel	Net Margin	Today			5 Years' Time		
		Channel Mix	Sales (£ m)	Margin (£ m)	Channel Mix	Sales (£ m)	Margin (£ m)
In Store	10%	80%	400	40	50%	250	25
Click & Collect	7%	10%	50	3.5	25%	125	8.75
Home Delivery	5%	10%	50	2.5	25%	125	6.25
			500	9.2%		500	8.0%

Source: LCP Consulting 2013

Marketers must redefine their strategy to integrate their Omni-Channel delivery; otherwise they will be in a deadlock

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John Lewis: Excellence at Omni-Channel

- ✓ 5 billions € revenue: 30 % on-line
- ✓ 41 shops
- ✓ 1,5 million deliveries per year
- ✓ Present on-line for 12 years
- ✓ Delivery fleet: 300 vehicles, crew of 2 persons each

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1 x Sony Bravia KDL55W955 LED HD 1080p 3D
Smart Wedge TV, 55" with Freeview HD with 2x 3D
Glasses
Product code:82450140

Change quantities   £1,599.00

Select your delivery options

	Free Standard Delivery	**£8.50 Premium Delivery 4 hr slots**	**£19.00 Premium Delivery 2 hr slots**	**£19.95 Express slots**

	Tuesday 08 April 2014	Wednesday 09 April 2014	Thursday 10 April 2014	Friday 11 April 2014	Saturday 12 April 2014	Sunday 13 April 2014
7 AM-2 PM	eco ○	eco ○	eco ○	eco ○	eco ○	
11 AM-5 PM					eco ○	
2 PM-9 PM	eco ○	eco ○	○	eco ○		

eco Eco Delivery ⓘ

< Previous Dates | More Dates >

Proposal of free or "Premium" time slots

Proposal of additional services

John Lewis: The myth Service / Cost is broken

Reliability
96% of appointment times

2011 - 2014
Increase revenues and services VA:
0 to € 28 million

Range of complex additional services proposed

Improved profitability of tours:
- Ratio km / delivery reduced by 13%
- Ratio conduct tps / amplitude > 10%
- Usage rate > 90%

Effectiveness:
- Same process traditional and online store
- Peak sales (Christmas and OG) are easily absorbed

Increase generated by sales products with service proposal:
10s M €

Source:
M Dino Roco –
Operations Manager
John Lewis

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Descartes Dynamic Appointments

Reliability: kept appointments

Revenue generated by the service

Differentiation by the sevice

Flexibility: peaks and level of service

Improved profitability of routes
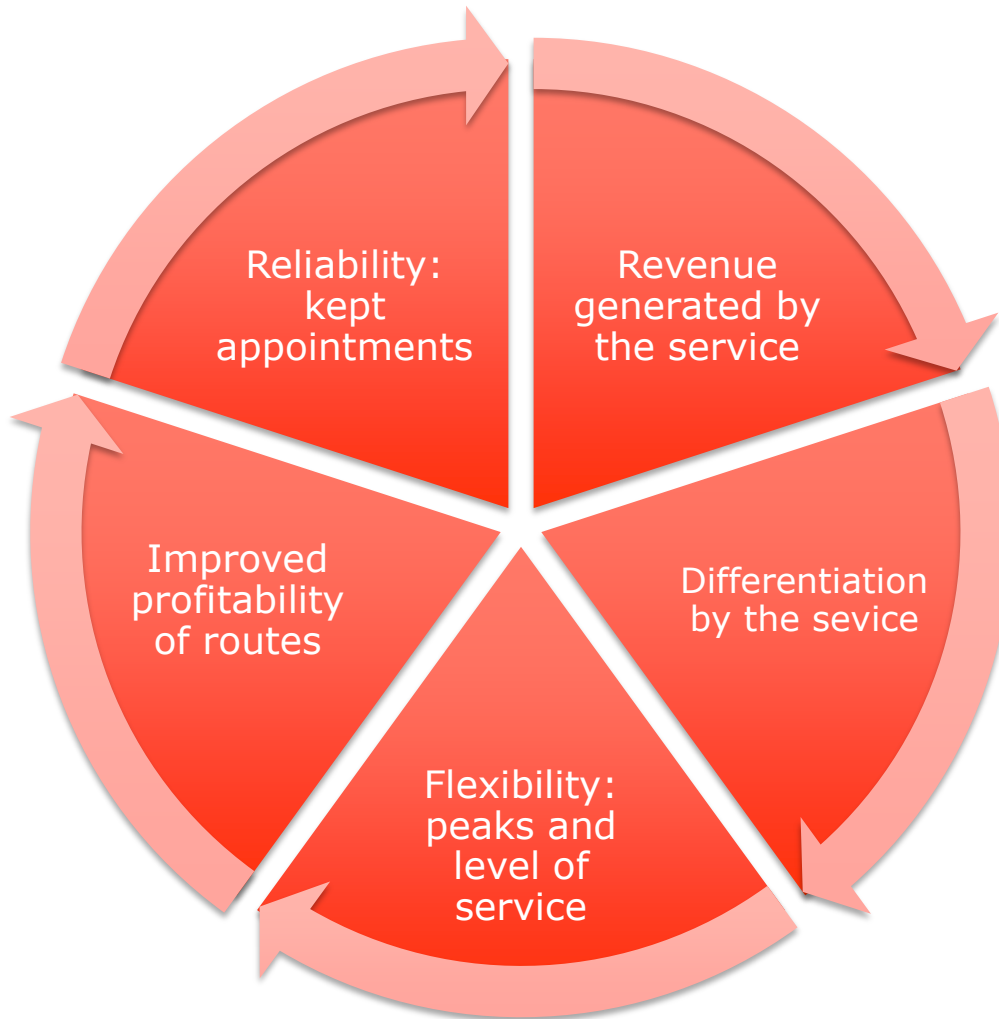
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