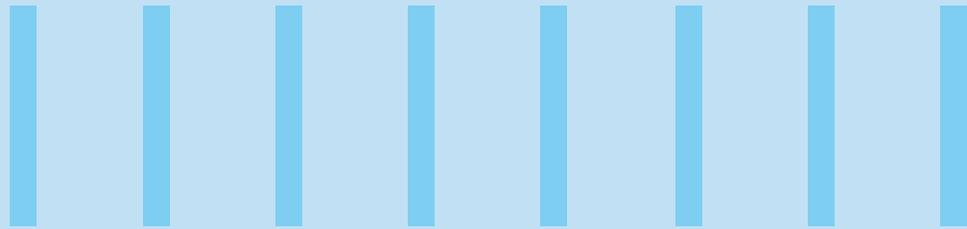


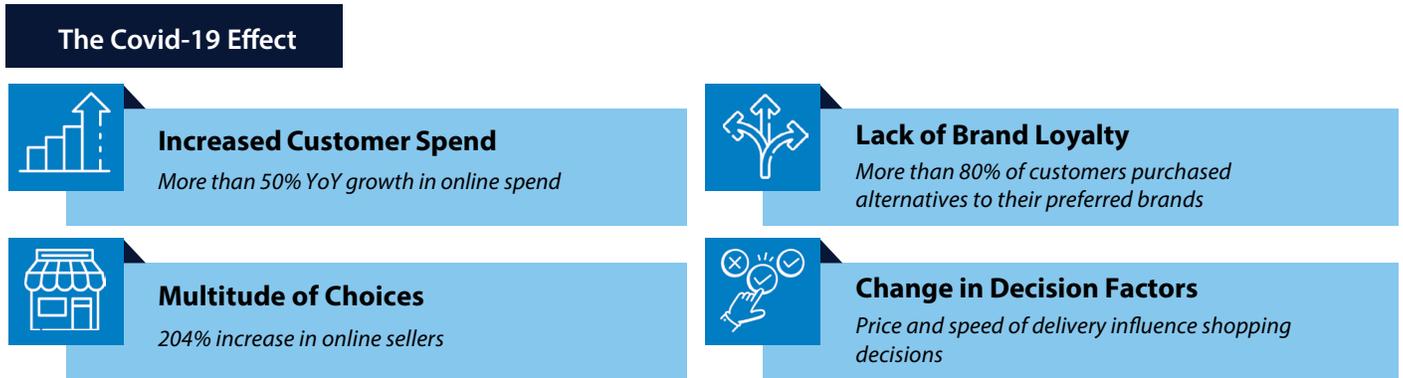


## 8 SUCCESS FACTORS TO TRANSCEND TO AN AGILE, DIGITAL-FIRST ORDER FULFILMENT OPERATION



The Covid-19 pandemic was an inflection point in online retail. Customers compelled to shop from home also experienced the sheer convenience of online shopping. The online retail industry grew exponentially and the momentum may continue in the near future. However, the dynamics of global e-Commerce industry changed during this period (Figure 1).

## e-Commerce Industry – Quick Facts



Source: Forbes, Insider Intelligence & Markinblog



Figure 1: Dynamics of the e-Commerce Industry

Several e-Commerce platforms were launched to address the growing demand. Customer expectations transcended defect-free products. Intense competition between e-Commerce platforms and online sellers led to new business models to attract and retain customers.

In this landscape, an efficient last mile fulfilment model offers a significant advantage to retailers. Yet, challenges in last mile delivery are a reality for hybrid retailers and third-party logistics service providers (Figure 2).



Figure 2: Challenges in last mile delivery

Retailers should redesign the supply chain and logistics network to address challenges and boost last mile fulfilment service. Redesigning the last mile fulfilment process requires a nuanced understanding of customer requirements and market segments. It also needs to be built on the basic tenets of seamless delivery (Figure 3).

## 8Cs for an Effective Order Fulfilment Service Design

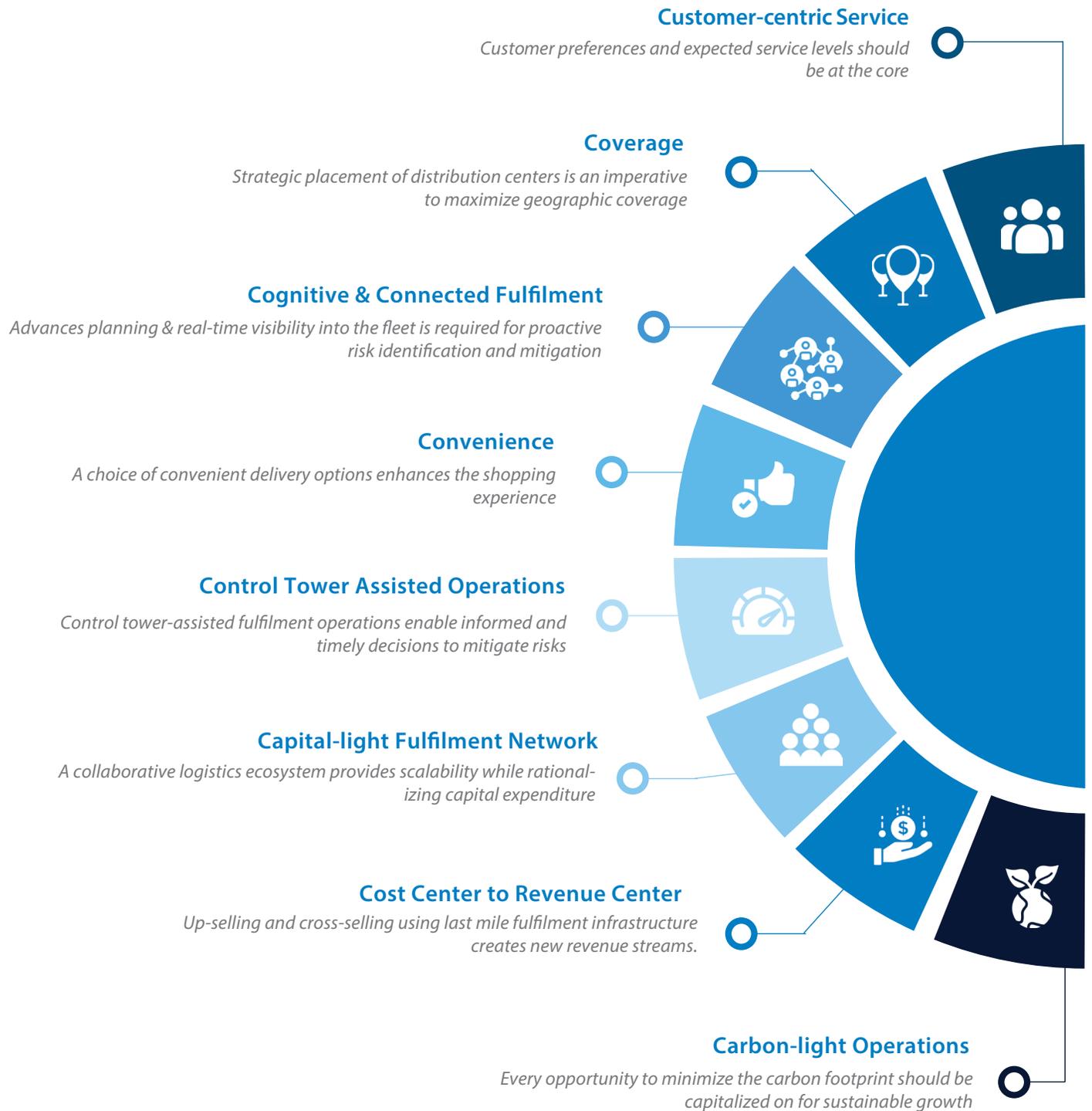


Figure 3: Service design elements

Advanced technologies, such as artificial intelligence (AI), machine learning (ML), automation, and predictive analytics, help retailers identify inefficiencies, optimize planning and streamline operations. Further, technology solutions support each foundational element of an efficient last mile fulfilment model.

## Customer-centric Service

Fulfilment services should be mapped to customer preferences and expectations to maximize its effectiveness. This requires an intimate understanding of each customer cohort, which can be gained by identifying microsegments and segment motivators. Big data analytics and deep

learning tools enable dynamic micro-segmentation (Figure 4). These systems continuously update the universe of customer microsegments based on real-time data, thereby enabling retailers to design and deliver personalized last mile fulfilment service experiences.

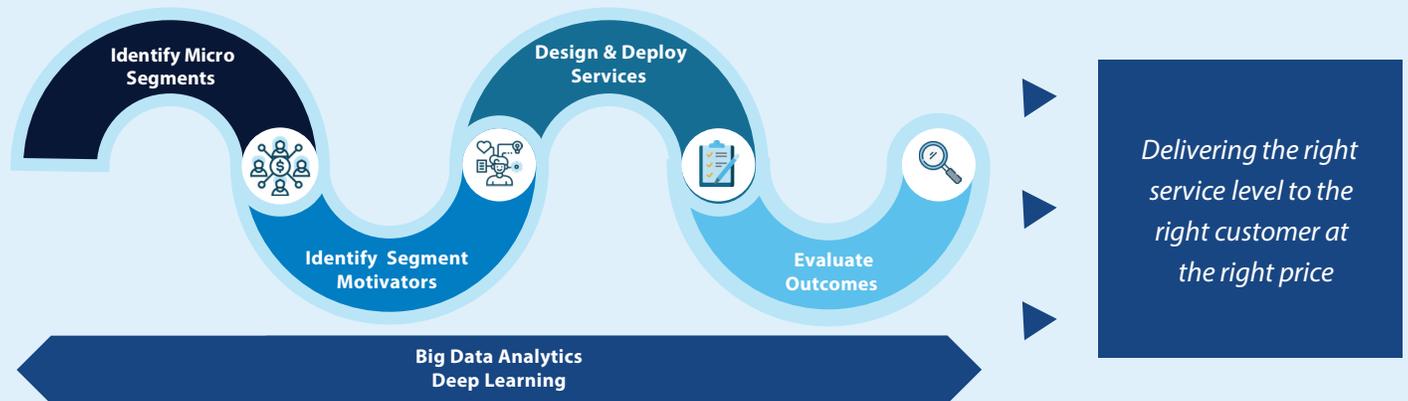


Figure 4: Personalized service



## Coverage

Since retail products are often priced competitively, speed of delivery is a critical service differentiator. A last mile network designed for extensive geographic coverage enables online retailers and brands to fulfil orders at the speed expected by consumers. Simulation models evaluate diverse delivery scenarios and realign the last mile network for same day / next day delivery.

Predictive and prescriptive analytical solutions provide insights to optimize the location of distribution centers, which helps accelerate delivery and meet stringent service level commitments (Figure 5). Algorithms also recommend a mix of dark warehouses, city distribution centers, and micro-warehouses based on macro-variables such as geographic layout and order density.



Figure 5: Wide fulfilment network

## Cognitive & Connected Fulfilment

Technology-aided planning & workflow-based task orchestration ensures the resilience of the last mile fulfilment process. Further, an IoT-driven connected fleet offers real-time visibility into every trip. AI-based route planning and optimization tools generate route plans by combining macro-variables such as weather conditions and traffic forecasts with micro-variables such as fleet capacity

and driver attitude (Figure 6). The route plan can be pushed to the digital console of the vehicle or the mobile device of the driver. A dynamic route planning system can also incorporate real-time feeds from onboard sensors as well as last-minute updates from customers to optimize the route even after the trip has commenced.

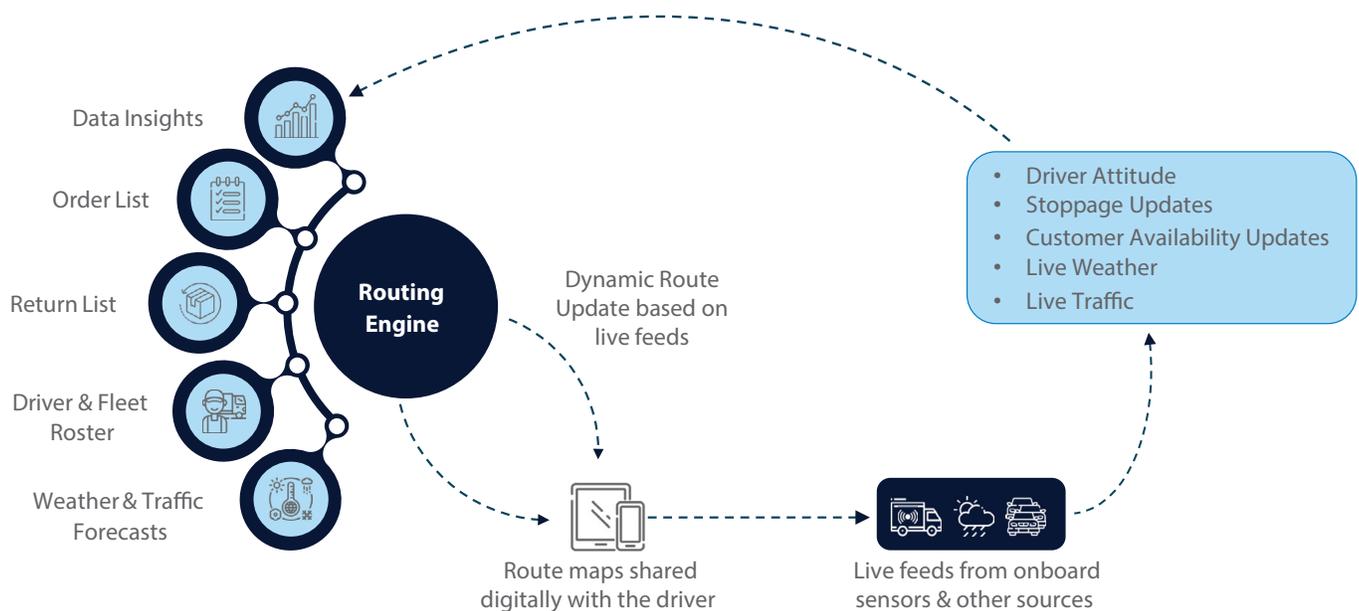


Figure 6: Dynamic route planning

# A leading Belgian food service enterprise reported a 50% decline in incomplete deliveries after implementing a dynamic route planning solution

## Convenience

Online shoppers not only expect their shipments to be delivered at the time and place of their choice, but also seek flexibility to change delivery instructions even at the last minute. Delivery formats that are aligned with product offerings and the geographic spread, and a robust platform for order fulfilment help retailers address logistical and financial challenges in maximizing the flexibility of delivery (Figure 7).

Further, automation helps in establishing process KPIs for each delivery format, which enables e-Commerce enterprises to offer a seamless fulfilment experience irrespective of the delivery option selected by the customer. Moreover, automated solutions replace resource-intensive practices of the conventional order fulfilment process, such as physical proof of delivery (POD), to augment delivery models.

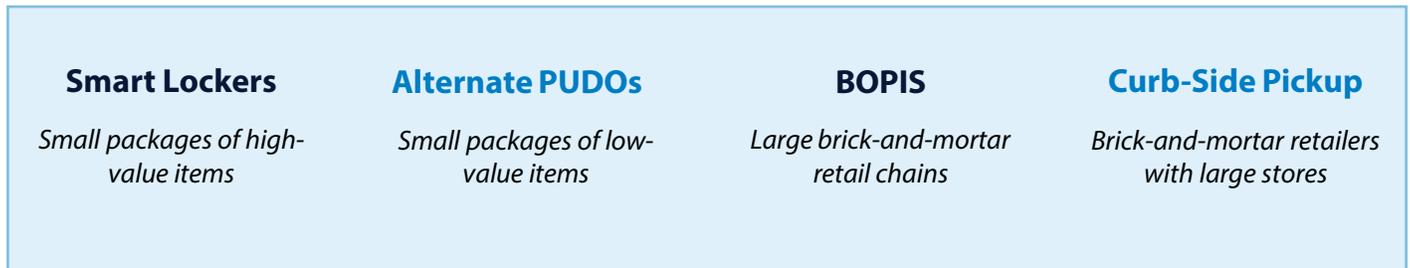


Figure 7: Delivery models

## Control Tower Assisted Operations

Control tower applications offer real-time, end-to-end visibility into supply chain operations by consolidating data from different processes and systems (Figure 8). Continuous monitoring and actionable insights enable informed decision-making to optimize fulfilment operations. Improved visibility into inter-dependent procedures help identify bottlenecks in

the fulfilment process, which facilitates targeted improvement actions. Advanced data analytics and predictive models allow control towers to predict incidents even before they happen and resolve them automatically or with minimal supervision. Significantly, it rationalizes IT investments for tracking and resolving issues in last mile delivery.

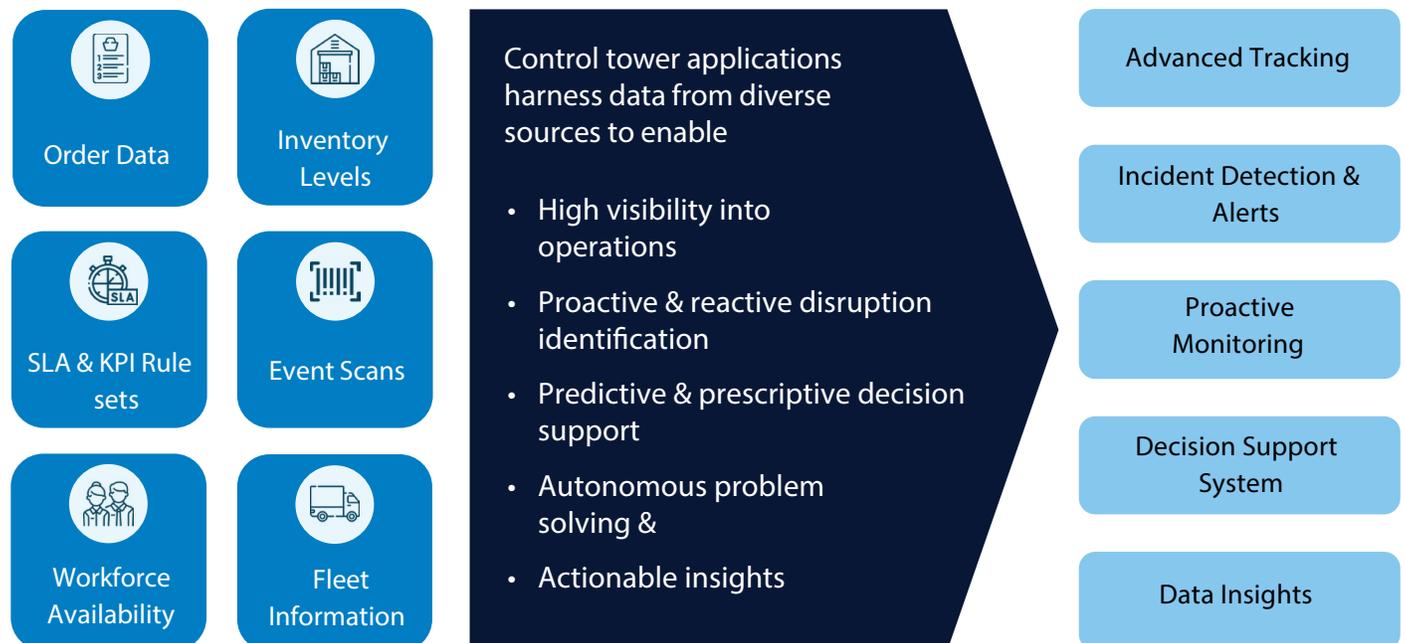


Figure 8: Dynamic process optimization

## Capital-light Fulfilment Network

While an efficient order fulfilment mechanism is critical in online retailing, delivery logistics may not be an area of expertise for several retailers. Such retailers can build and maintain a robust order fulfilment network by sharing the delivery infrastructure. Shared infrastructure instantly expands the delivery footprint, while minimizing the cost of operations. Retailers can combine their capabilities to form a single delivery organization, maintain separate delivery structures and offer exclusive access to each other's infrastructure, or avail of fulfilment services provided by leading retailers, such as Amazon Seller Service and Walmart GoLocal.

Crowdsourcing is a new trend in last mile fulfilment. It enables retailers to have an asset-light, and scalable fulfilment model. Retailers can select the partner and level of engagement based on their process maturity and strategic vision. Notably, the crowdsourcing model requires systems and process-level integration between participating retailers.

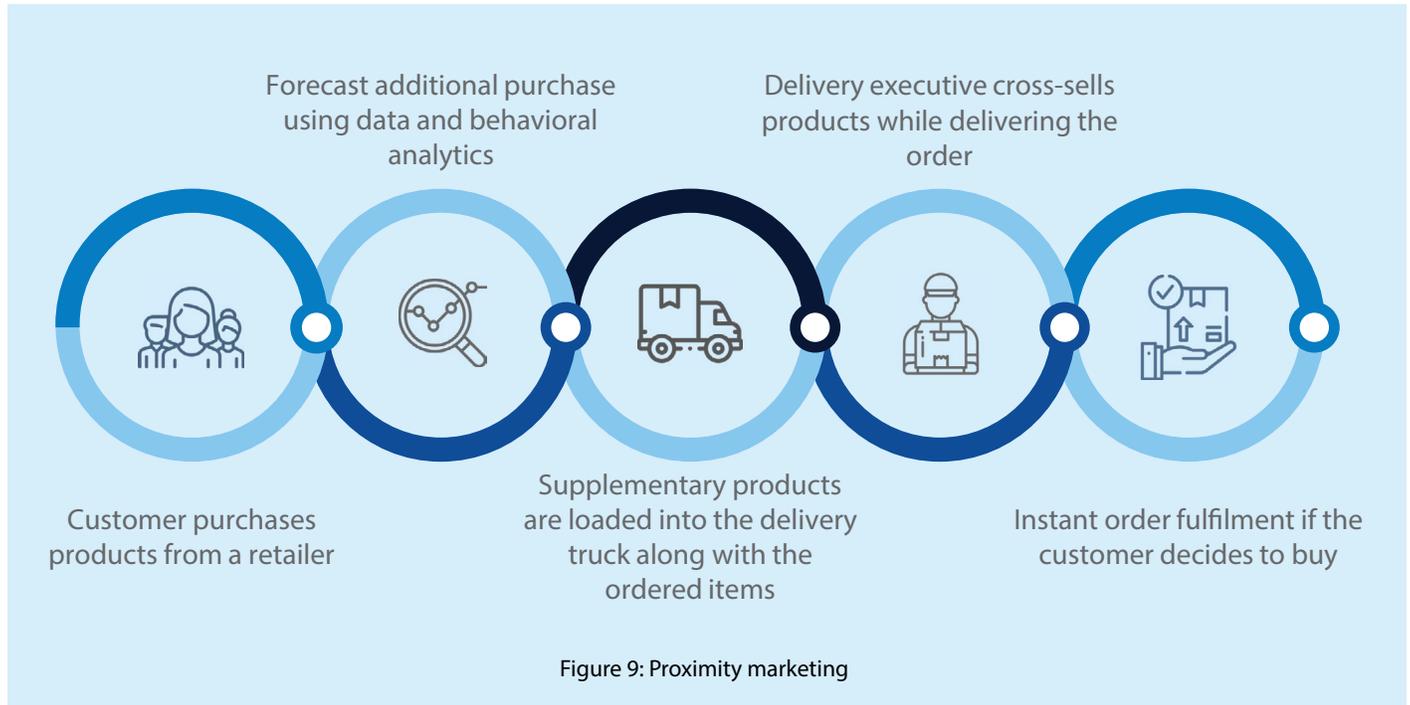
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*In 2020, a leading agriculture supplies and home improvement retailer in the US implemented crowdsourced delivery by partnering with a leading crowdsourcing platform. The model allowed them to offer same-day and next-day delivery for all orders, across stores.*



## Cost Center to Revenue Center

Smart technologies pivot the last mile delivery infrastructure from a cost center to a revenue center. Data mining solutions accurately identify opportunities to up-sell / cross-sell the fulfilment network, at the point of delivery (Figure 9). This method leverages proximity warehousing, and is especially effective for low-value, fast-moving products.



Account mining offers another opportunity for retailers to generate additional revenue, especially in the consumables category. In this model, a customer's historical purchase data is analyzed to gauge the potential for reordering. In addition, customers in the proximity of a delivery route are notified of the delivery for purchase planning. Data analytics also provides rich insights for persuasive marketing techniques. While some customers may find it intrusive and opt-out of it, any conversion generates additional revenue at no additional cost.

““

*A leading water sales company in the Middle East replaced drivers with travelling salesmen for their milk-run. The driver salesmen generated additional revenue via new orders from other customers in the proximity and upselling orders by pitching complementary products.*



## Carbon-light Operations

Cognitive fulfilment models reduce the carbon footprint by providing actionable insights to eliminate emissions and identify pathways to promote sustainability (Figure 10).

Carbon-light fulfilment models integrate sustainability into the end-to-end delivery pipeline – from warehousing to returns management.

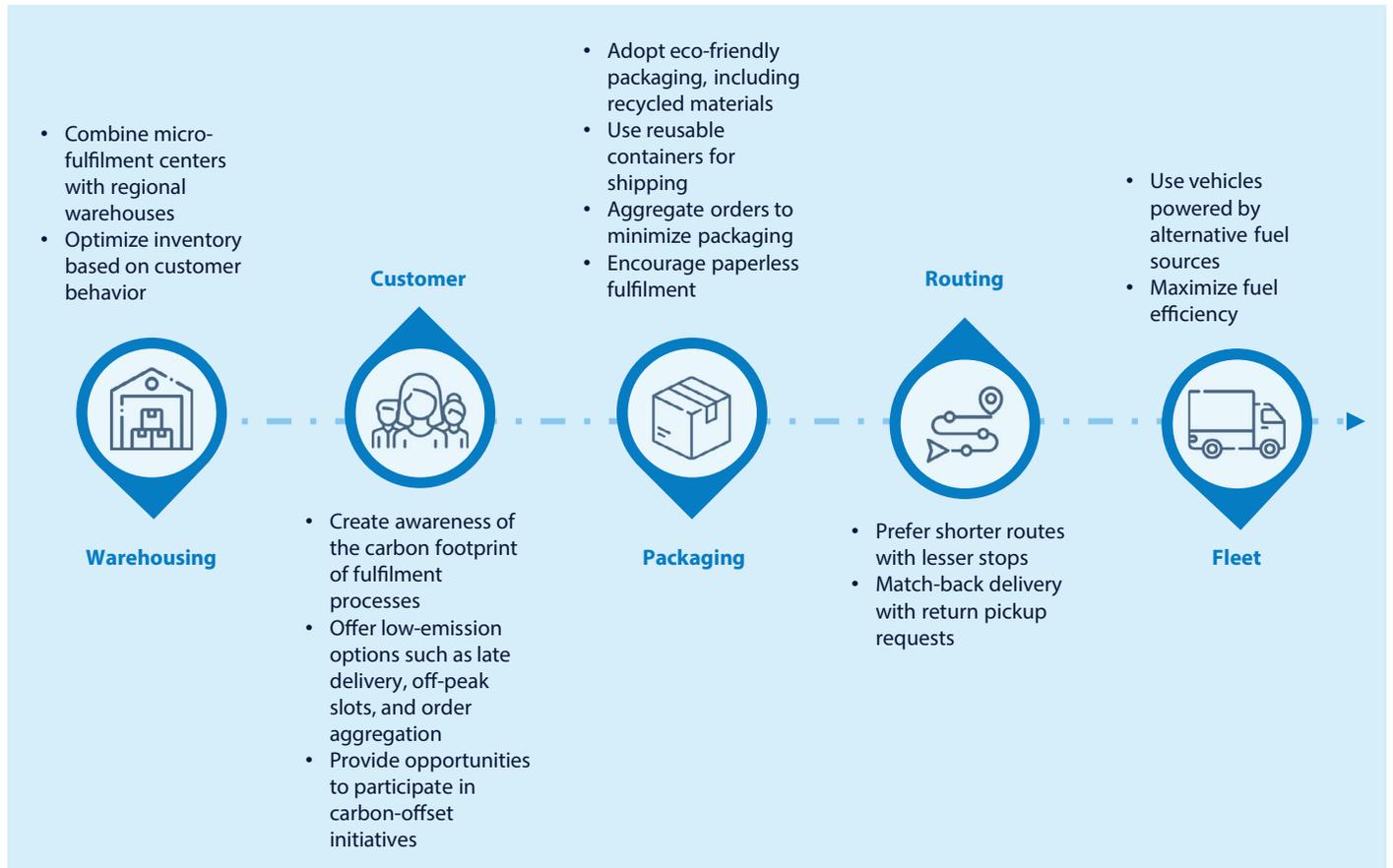


Figure 10: Carbon-light operations

To Conclude, an efficient last mile fulfilment model is imperative to compete effectively in online retail. Retailers should combine strategy frameworks and technology platforms to ensure 'first time right' delivery and boost order fulfilment.



## About Us

Infosys, a global leader in Technology and Business Consulting helps retailers, brands and consumer goods companies to transform omnichannel and order fulfilment processes as part of our larger D2C initiatives. We drive end-to-end transformations and deliver successful outcomes through our integrated approach which includes

- Industry thought leaders & domain experts that define the strategy, vision and roadmap

- A global design studios network that helps reimagine and deliver a superlative experience
- Infosys Innovation Network to deliver innovative use-cases and next-gen digital solutions
- A de-risked scale out of the enterprise solution through our well-established global delivery model

To see our ideas in action, please visit [InfosysConsultingInsights.com](https://InfosysConsultingInsights.com).

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