

Using Supply Chain Design to Support an Efficient, Scalable E-commerce Fulfillment Operation



Background

Jumbo is a family-owned business and is the Netherlands 2nd largest supermarket retailer with around 600 stores. 60% of their stores are franchised.

Launched in 2014, Jumbo has invested heavily in growing its e-commerce offering as it strives to become the Netherlands' No. 1 digital supermarket.

Challenge

Historically, Jumbo has operated a single e-fulfillment center (EFC) in Den Bosch where e-commerce orders were picked for delivery to its stores, which were then responsible for home deliveries. Customers were required to select a store to execute the last mile delivery before shopping online.

With 250 stores fulfilling orders from a single EFC, Jumbo was at times forced to deliver to all 250 stores once or even twice a day. As a result, a significant share of the costs in Jumbo's end-to-end e-commerce supply chain were generated between the EFC and the store.

Allowing customers to select any store also meant that different stores could be delivering to different customers, on the same street on the same day.

In order to improve efficiency and establish an e-commerce fulfillment operation that can scale in line with its ambitious growth plans, Jumbo selected LLamasoft's powerful supply chain design platform to identify the best network structure.

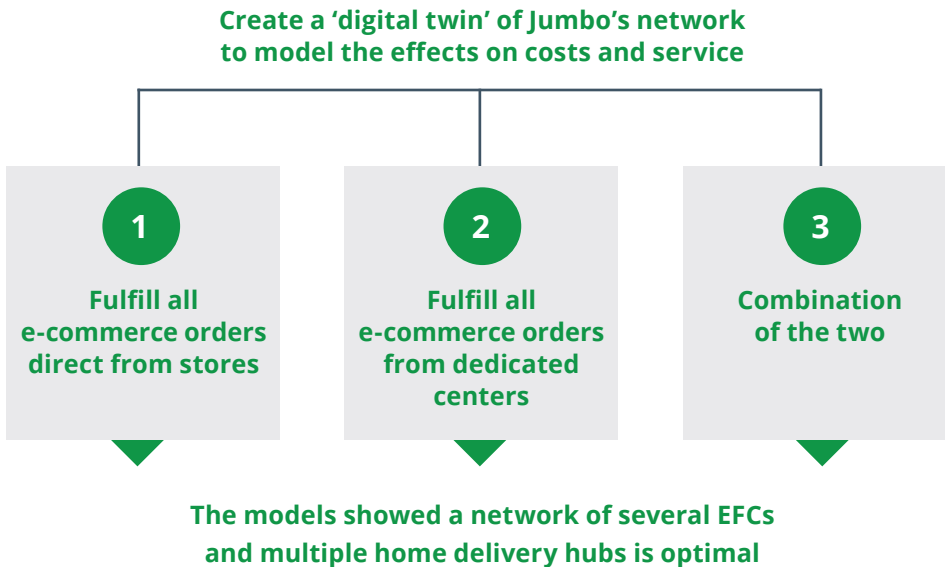
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Merijn van Loo
Supply Chain Developer, Jumbo

Solution

LLamasoft used its sophisticated design and decisioning technology to create a 'digital twin' of Jumbo's 'as-was' network, in order to determine the total cost of the e-commerce fulfillment operation and the distribution of these costs across the supply chain.

Jumbo modeled three potential scenarios to find the optimal cost and service level trade-offs of fulfilling all e-commerce orders direct from stores, fulfilling all e-commerce orders from dedicated centers or a combination of the two.



The project identified that a network of several EFCs and multiple home delivery hubs is optimal to support Jumbo's expected volumes and order profile by 2022. Jumbo has subsequently opened a second EFC and will open additional facilities as its e-commerce volumes continue to increase. To help Jumbo build its own internal supply chain design capability, LLamasoft is also coaching Jumbo's in-house modeler on a project to find the optimal network strategy to 2025 for the distribution of fresh, i.e., temperature controlled and short shelf life, products to Jumbo's stores.

In addition, LLamasoft's customer success team has worked with Jumbo to identify a roadmap of additional projects including a frozen network study and optimizing the handling of returns, ensuring that their investment in LLamasoft technology delivers long term value. With this end in mind, Jumbo is also enlarging its internal supply chain design team.

Jumbo's Supply Chain Developer, Merijn van Loo, said: "LLamasoft's technology and expertise have given us complete clarity about what we need to do and the confidence that the changes we make will deliver the expected outcomes.

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