

## CASE STUDY #1 : AMAZON.COM

A big part of Amazon's success lies in its expert warehousing strategy, which ensures products are easily accessible from pretty much everywhere in the world. This strategy suffers several changes along the years until it achieves its current form.

All the company's warehouses are strategically placed near big metros and population hubs, and inventory is spread amongst them to ensure supply can meet demand. There are even minor warehouses in smaller areas to ensure orders can be sent and delivered fast, no matter what is being purchased. Warehouses are also optimized internally. Each with five unique storage areas, the organization strategy allows team members and pick-and-pack robots to pull products almost instantly and move them toward delivery. Amazon manages a lot of land and much of this land consists of warehouse space. Amazon doesn't approach warehouse management in a traditional manner.

One disruptive decision made by Amazon was divided its distribution network into 5 types of facilities. The more typical are (i) Cross-dock centres, where packages from foreign vendors remain here until more stock is required by the fulfilment centres; and (ii) fulfilment centres, that can be seen as typical warehouses, where Amazon stores its goods, and the workers pick and pack products for customers. Globally, the company operates more than 175. In 2014, Amazon introduced (iii) Sortation centres meant to improve "last mile delivery." No product is held at these locations. Instead, prepared customer packages move through conveyor belts while Amazon associates and robots' sort and route the packages by zip code before they are sent to a carrier for final delivery. During 2020, Amazon opens several (iv) delivery stations, the way that the company found to own "last mile delivery" in its distribution system. These stations give Amazon flexibility in areas with a high volume of orders.

Nowadays, Amazon are also investing in (v) Amazon Prime Now hubs, the Amazon system for time-sensitive items, like groceries, relies on Prime Now hubs. These hubs manage items that are typically delivered within 2 hours of purchase.

When shoppers in COVID-19 lockdown flooded the company with more orders than Amazon could handle, Amazon couldn't fulfil its two-day delivery pledge. While delivery times have improved thanks to the hiring of 175,000 new workers, Amazon is now consumed with honouring a pre-pandemic pledge to get many products to Prime subscribers on the same day.

Amazon.com Inc. plans to open 1,000 small delivery hubs in cities and suburbs all over the U.S. The facilities, which will eventually number about 1,500, will bring products closer to customers, making shopping online about as fast as a quick run to the store. It will also help the world's largest e-commerce company take on a resurgent Walmart Inc.

A recently opened warehouse in Holyoke, Massachusetts, exemplifies Amazon's answer to this existential challenge. Located not far from a once vibrant mall, it's just a short drive from more than 600,000 people. The goal is to creep closer to almost everyone in the U.S.

1. Correlate the information in the text with network planning contents that you have studied in the theoretical classes (including its steps).
2. Discuss the warehousing strategy currently followed by Amazon.
3. As shown in the theoretical classes, the network design influences the inventory's integration. Do you think that the aggregation of inventory at one location could be effective when a company such as Amazon.com sells books? Explain by considering demand variability and SKU volume.