



# —AMAZON'S INNOVATIVE TACTICS TO BEAT SUPPLY CHAIN CHAOS

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# Case Background

- In the Christmas season in 2022, 79 cargo ships were trapped in Los Angeles ports for an average of 45 days shipping goods in from Asia.
- In contrast, Amazon waited an average of 2 days in the harbor.

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**How was Amazon able to achieve this?**

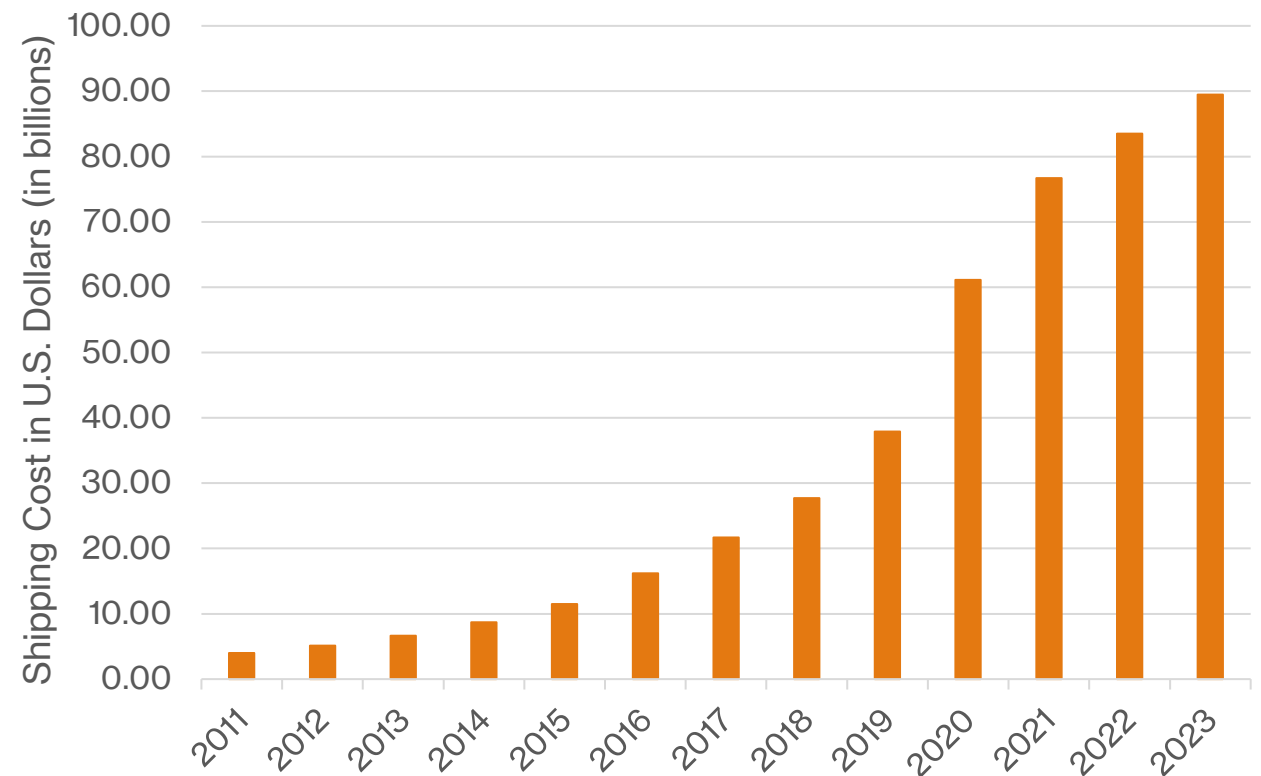




# AMAZON'S INVESTMENT IN SUPPLY CHAIN CONTROL

- Since 2020, Amazon has proactively addressed potential challenges faced by other retailers by taking control of every aspect of its supply chain.
- By increasing its control over the process, Amazon reduces its reliance on third-party carriers like UPS and the U.S. Postal Service for shipping its products.
- Amazon has invested over **\$61 billion** and now handles the shipping for **72% of its own packages** – up from 47% in 2019

Amazon's shipping costs from 2011 to 2023

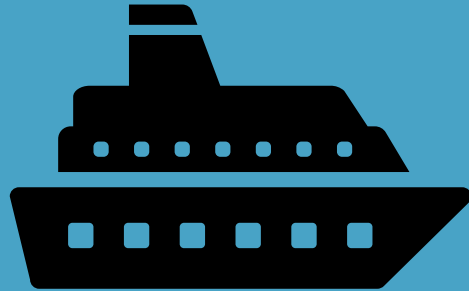


# Typical Supply Chain Shipping Journey

## Bulk Shipping



## Transit Times



## Port Delays



## Trucks



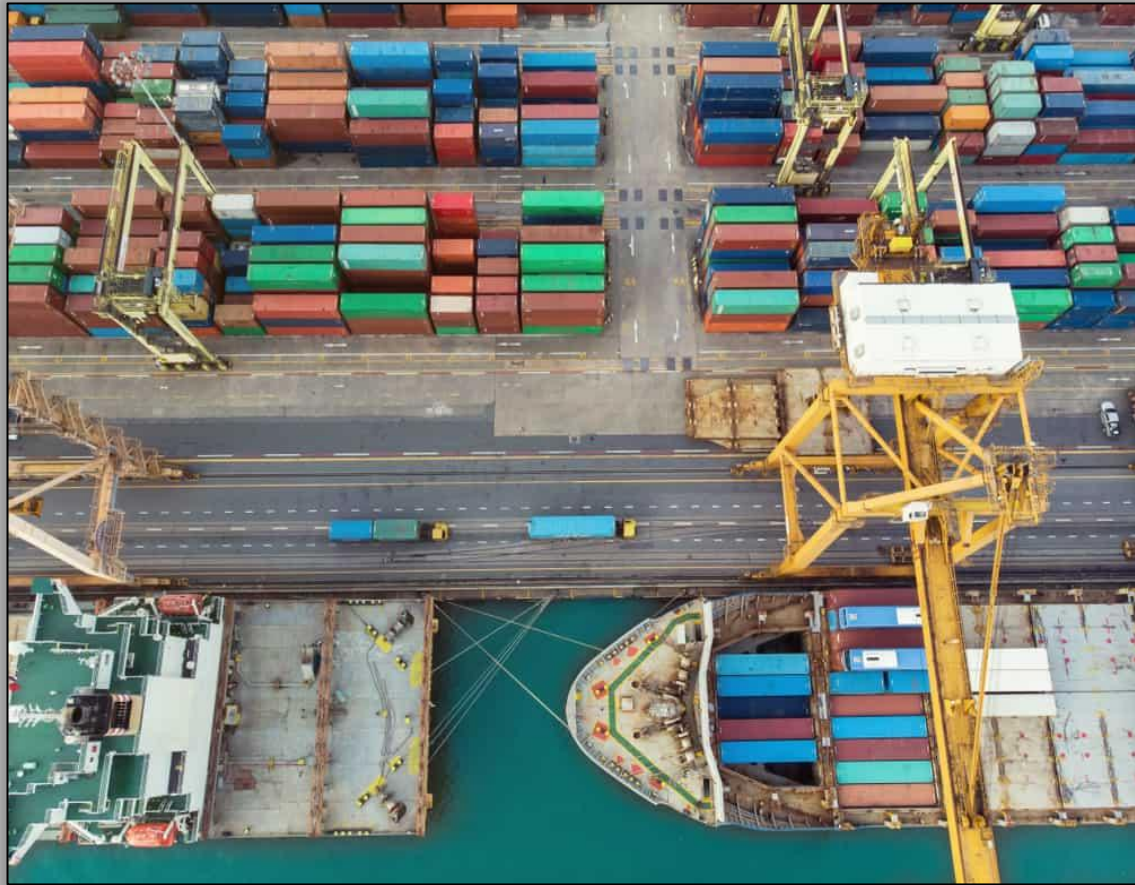
Goods are shipped in **massive cargo vessels**, often shared by companies to maximize capacity and reduce cost

Shipping routes from overseas (e.g., China to Los Angeles) can take anywhere from **25 – 40 days** depending on conditions

Upon arrival, ships potentially wait **months** for available dock space to unload due to congestion.

This delay can be increased further by a **shortage of trucks** to transport goods onward due to congestion

# Container Shortage and Increased Costs



## Short Supply & Rising Costs

- Pre-COVID Shipping Cost: **\$1,200** per container
- Holiday Season 2022 Cost: **\$20,000** per container

## Causes of Shortage

- Trade imbalance – More to USA Orders than to China
- High costs of returning empty containers back to China to be refilled

# Amazon's First Solution: In-House Cargo Containers

- Amazon has **manufactured 10,000 cargo containers** in China through **CMIC**.
- Containers can be loaded onto trucks or rails without unloading other companies' goods
- By owning their containers, Amazon can **reuse them domestically**, avoiding the need to ship them back to Asia like other companies.





# Amazon's Second Solution: **Project Dragonboat**

- Amazon chartered its own **small to medium-sized ships**, each carrying over **10,000 containers**.
- These ships can dock at **smaller ports** (e.g., Washington, Houston, New Jersey).
- With their own **domestic infrastructure** and containers, Amazon can efficiently transport goods to high-density distribution areas via **railroad or trucks**.



Picture of Washington's Port



## Amazon's Third Solution: **Prime Air**

### **Current Domestic Fleet:**

- **85** aircrafts (leased and owned)
- Operating from **42** airports
- **164** daily flights

### **Expansion Plans:**

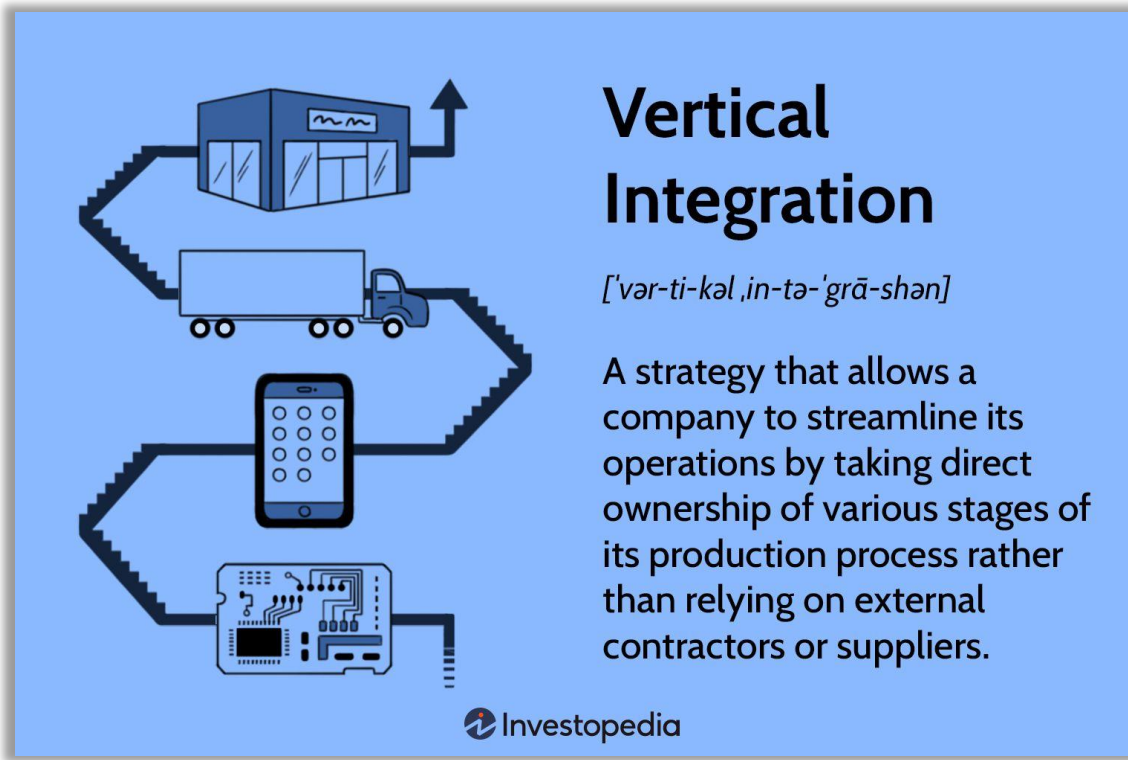
- Leasing long-range cargo jets (Boeing 777s)
- Focus on routes from China to meet global demand

### **Boeing 777 Cargo Capacity:**

- 220,000 lbs per flight (equivalent to 5.5 fully loaded 20-ft containers)
- Ideal for high-demand, expensive goods



# How this applies to class



- Prime example of Vertical Integration
- By investing in its logistics operations, Amazon improves coordination and lead times and overall optimizes its supply chain process.
- Amazon has greater control over scheduling shipments, which will reduce delays and allow more accurate information to customers.

# Key Takeaways

## **Vertical Integration**

By owning its own trucks, containers, ships and planes Amazon gains greater control over its supply chain.

## **Logistics-Production Synergy**

By using its own logistical infrastructure, Amazon can mitigate typical supply chain disruptions ensuring smoother operations during global supply chain chaos.

## **Optimization and efficiency**

By controlling transportation assets, Amazon improves production scheduling, inventory management, and delivery times which sets it apart from its competitors.

**The most efficient and optimized solutions are often unconventional. They require creative, out-of-the-box thinking to identify innovative approaches that may not be immediately obvious.**



# Questions?

## Thank you