

# GlobalChain Solutions – Supply Chain Case Study



## ABOUT US

GlobalChain Solutions is a leading global retail supply chain business revolutionizing the way products are sourced and delivered across the world. With our unwavering commitment to excellence, innovation, and sustainability, we provide end-to-end supply chain solutions that empower retailers, manufacturers, and suppliers to thrive in an ever-evolving marketplace.

Our global reach spans across continents, connecting diverse markets and bridging the gap between suppliers and retailers. We leverage our extensive network to source the highest quality products, and deliver them to our clients' doorsteps in a timely manner. We take care of the entire supply chain process, allowing our clients to focus on their core business objectives.



# PROBLEM OVERVIEW

In today's fast-paced retail industry, efficient supply chain management is crucial for meeting customer demands and ensuring optimal inventory control.

GlobalChain seeks to leverage their data resources to uncover patterns and trends by conducting an analysis of their supply chain operations; encompassing historical orders and shipment data, warehouse logs and inventory costs.

As a data scientist at GlobalChain Solutions, you have been entrusted with the critical task of creating a shipments dashboard that provides a comprehensive overview of the company's operations while also incorporating forecasts for the coming months.

This dashboard will serve as a powerful tool for the executive team, enabling them to make data driven decisions and devise effective strategies to implement process improvements and proactively address potential issues before they impact the company's performance.



# DATA DICTIONARY

Customer ID – Unique Customer identification

Customer Market- Geographic grouping of customer countries

Customer Region – Geographic grouping of customer countries

Customer Country- Customer's country

Order ID – Unique Order Identification. Order groups one or multiple Order Items

Order Item ID – Unique Order Item Identification

Order Year – Year of the order

Order Month – Month of the Order

Order Day – Day of the Order

Order Quantity – The amount of items that were ordered within a given Order Item

Product Category – Product grouping into categories such as Women's Apparel, etc

Product Name – The name of the purchased product

Shipment Year – Year of the Shipment

Shipment Month – Month of the Shipment

Shipment Day – Day of the Shipment

Shipment Mode – How the Shipment was dispatched (First Class, Same Day, etc)

Shipment Days – Scheduled – Typical amount of days needed to dispatch the goods

Warehouse Country – Country of warehouse that fulfilled the order

Warehouse Inventory – Monthly inventory level of a product

Inventory cost per unit – Monthly storage cost per unit of inventory

Warehouse Order fulfillment (days) – The average amount of days it takes to refill stock if inventory drops below zero



## TAILORED ANALYSIS

1. What is the total number of orders processed during the period?
2. Visualize monthly level of orders.
3. What shipment mode is most commonly used?
4. Does the business suffer from delayed shipments? Categorize Shipment delays for orders into 4 categories:
  - Before Schedule
  - On Schedule
  - Delay up to 5 days
  - Delay more than 5 days
5. What is the % of orders that are delayed?
6. On Average, what is the delay (in days) experienced during shipping?
7. Does the average shipment delay increase or decrease over time?
8. Predict what the shipment delay would be in the next couple of months.

