

# Challenge's Mission

## Context

Understanding **supply chain operations** and **sales performance** is crucial for businesses to optimize operations and drive revenue growth. Analyzing key metrics such as **revenue**, **profitability**, **delivery times**, **return rates**, and **customer behavior** enables businesses to make accurate strategic decisions.

In this challenge, you will work with **real-world data** on **orders**, **customers**, **products**, and **sales regions** to uncover insights and create **interactive reports** using Power BI.

---

## Requirements

You are required to use **Power BI** to:

- Analyze **revenue**, **profitability**, and **sales performance** over time and across different regions.
- Identify key factors affecting **delivery times** and **product return rates**.
- Develop **interactive dashboards** to help businesses monitor **supply chain efficiency**.
- Provide **business recommendations** for optimizing operations and increasing revenue.

---

## Dataset Description

### Overview

- The dataset provides **detailed information** on supply chain operations and sales performance for a retail company. It is designed to help businesses analyze **order processing**, **logistics**, **delivery performance**, **return rates**, and **customer management**, enabling them to optimize supply chain efficiency and improve strategic planning.
- The dataset is ideal for analyzing **inventory flow**, **transportation efficiency**, **product demand**, and **revenue distribution across regions**, giving business leaders a **comprehensive view** of supply chain operations.

### Dataset Structure

This dataset consists of **29 columns**, each representing a key aspect supply chain operations:

- **Columns:**
  - Retail Order ID → Unique retail order identifier
  - Order ID → General order identifier
  - Order Date → Date the order was placed
  - Ship Date → Actual shipping date

## Unlock Operation Insights – Analyze Supply Chain Data!

- Ship Mode → Shipping method (Standard, Express, Same-Day)
- Customer ID → Unique customer identifier
- Customer Name → Full name of the customer
- Segment → Customer segment (Consumer, Corporate, Home Office)
- Postal Code → Zip/Postal code
- Country → Country of the customer
- City → City where the order was placed
- State → State/Province of the customer
- Region → Sales region
- Latitude → Geographical latitude
- Longitude → Geographical longitude
- Retail Sales People → Retail sales representatives
- Product ID → Unique product identifier
- Category → Product category
- Sub-Category → Product sub-category
- Product Name → Full product name
- Returned → Return status (Yes/No)
- Sales → Revenue generated from the order
- Quantity → Number of units sold
- Discount → Discount applied to the order
- Profit → Profit from the order
- Cost → Original cost of the order
- Unit CP → Cost price per unit
- Unit SP → Selling price per unit
- Days → Actual delivery days

---

## Key Analytical Questions

1. What is the **average delivery time**, and which region has the **slowest deliveries**?
2. How does **delivery time** impact **profitability**?
3. Which region has the **highest return rate**?
4. Which product has the **highest return rate**, and what are the key causes?
5. What are the **revenue and profit trends** over time (yearly, quarterly, monthly)?
6. Which **top 5 regions** have the **highest and lowest revenue**?
7. Which products have the **highest and lowest sales**?

## Unlock Operation Insights – Analyze Supply Chain Data!

8. Which **customer segment** contributes the most to total revenue?
9. How does **seasonality impact sales**? Identify peak and low sales periods.
10. Forecast **next quarter's revenue** based on current data

💡 You must **visualize the data** and provide insights using appropriate **Power BI charts**!

---

## Submission Format

### Required Deliverables:

- Power BI (.pbix) file and a PDF.
- SNS post link (Mandatory – to confirm challenge completion).
- Early Submission Deadline: [02/04/2025 - 23:59 PM]
- Submission Deadline: [08/04/2025 - 23:59 PM]

🚀 Are you ready to take on the challenge?

👉 Download the dataset & start now! 😊