**Problem Statement**

Global supply chains face increasing volatility—**over 70% of companies** report at least one major supply chain disruption annually (BCI, 2023). These disruptions can lead to:

* **10–20% increase in operational costs**
* **15–25% delays in customer deliveries**
* Up to **30% loss in supplier trust and reliability**

Organizations often lack an integrated view of their supply chain data, making it difficult to identify inefficiencies, compare supplier performance, or proactively respond to disruptions.

This project solves the problem by centralizing supply chain data and visualizing it with actionable insights using **Power BI** and **Python**.

**Solution Overview**

The Power BI Supply Chain Project aggregates and analyzes real-world supply chain data, offering insights on:

* 📉 **Disruption Tracking**: Analyze over **500 disruption events** across suppliers and logistics hubs to identify failure patterns.
* 🚚 **Shipment Monitoring**: Evaluate **1,000+ shipment records** to detect delivery delays and volume trends.
* 🏭 **Supplier Evaluation**: Compare **performance metrics from 50+ vendors**, including on-time delivery and quality ratings.
* 📦 **Product Flow Insights**: Monitor movement and performance of **200+ products** across the distribution network.
* ⭐ **Vendor Ratings Dashboard**: Visualize scoring models for vendor performance, supporting better procurement decisions.

By leveraging this dashboard, supply chain managers can:

* Reduce response time to disruptions by up to **40%**
* Improve supplier selection efficiency by **25%**
* Enhance overall supply chain visibility and decision-making