Project 2: Lean Warehouse Optimization for a Retailer

📍 Industry: Retail & Warehousing

💰 Project Cost: $3,800

⏳ Project Duration: 8 Weeks

📌 Project Overview

A mid-sized retailer was struggling with **warehouse inefficiencies**, leading to **excessive storage costs** and **shipment delays**. **Inventory tracking** was manual, which led to misplaced stock and **inefficient picking routes**.

⚠️ Challenges Faced

- **40% of picking time was wasted** due to poor warehouse layout.
- High inventory levels caused **20% more storage costs** than necessary.

🔍 Lean Six Sigma Approach

- Conducted a **warehouse audit using Value Stream Mapping (VSM)**.
- Implemented **5S methodology** to improve workplace organization.
- Designed an optimized **warehouse layout for efficient picking and replenishment**.

🚀 Implementation Details

- Redesigned the **warehouse layout for optimized flow**.
- Introduced **Just-In-Time (JIT) replenishment** to reduce excess inventory.
- Implemented **barcode scanning systems** for real-time stock tracking.

📊 Key Results & Business Impact

✅ **Picking efficiency improved by 30%**, reducing order fulfillment time.
✅ **Storage costs reduced by 20%** through better space utilization.
✅ **Picking errors decreased by 35%**, improving accuracy.
✅ **Shipment accuracy improved to 99%**, enhancing customer satisfaction.