

Logistics Performance Dashboard – Project Documentation

Project Overview

This project focuses on analysing logistics performance using a dataset of shipments. The goal was to evaluate courier efficiency, shipment delays, return rates, and SLA compliance, then present the findings through an interactive and easy-to-read Excel dashboard.

The final dashboard provides decision-makers with a single view of key KPIs, detailed breakdowns, and actionable insights that highlight performance gaps and risks in the logistics process.

Objectives

1. Measure **On-Time-In-Full (OTIF) %** for courier performance.
 2. Track **average delay days** and visualize monthly trends.
 3. Calculate **return rates by region** and compare against targets.
 4. Monitor **SLA breaches** as a risk indicator for customer satisfaction.
 5. Identify the **Top 5 most delayed shipments** for operational visibility.
 6. Present all KPIs in a structured dashboard with insights and benchmarks.
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Steps Taken

1. Dataset Preparation

- Imported shipment dataset into Excel.
- Cleaned the data and verified key fields: Courier, Region, Delivery Date, and Delay Days.
- Created supporting PivotTables to aggregate courier OTIF performance, return rates, and SLA breaches.
- Built a **helper table approach** to add benchmark lines (since PivotTables do not allow fixed benchmarks like “80% OTIF target”).

2. KPI Calculations

- **OTIF %**: Calculated based on the proportion of shipments delivered on time.
- **Average Delay Days**: Averaged delay days across all late shipments.
- **Return Rate %**: Calculated by dividing returned shipments by total shipments per region.
- **SLA Breach %**: Tracked the share of shipments breaching SLA agreements.
- **Top 5 Delays**: Extracted using a filter on “Max Delay Days” (Z–A sort) to highlight the worst performers.

3. Visualizations

- **KPI Cards:** Designed bold, color-coded cards (red, yellow, amber) for quick reference of headline KPIs.
- **Courier OTIF %:** Bar chart with an **80% target line** added via helper table for benchmark comparison.
- **Average Delay by Month:** Line chart to show seasonal and monthly variation in delivery delays.
- **Top 5 Delayed Shipments:** Horizontal bar chart with courier and region labels for clarity.
- **Return Rate by Region:** Bar chart with benchmark line to show performance gaps between APAC, EMEA, and NA.

4. Insights and Notes

Each visualization was paired with a short “**insight box**” to explain the meaning of the results. For example:

- **OTIF %:** All couriers are below the 80% target; FedEx is lowest at 56.1%. This shows systemic courier delays.
- **Average Delay by Month:** Delays rose steadily from January (0.5 days) to July (1.5 days), with a seasonal spike likely due to peak demand.
- **Return Rate by Region:** EMEA has the highest return rate (42.9%), a red flag for accuracy and customer satisfaction.
- **SLA Breach %:** 42.5% of shipments breached SLA, a critical issue for compliance and customer trust.
- **Top 5 Delays:** All 5 critical delays spanned different couriers and regions, showing the issue isn’t isolated to one vendor.

Helper table notes were also added to explain why benchmarks required additional tables (transparency for reproducibility).

5. Dashboard Design

- Title: “**Logistics Performance Dashboard**” with subtitle (“KPI Overview: OTIF, Delays, Returns, SLA”).
- Structured into three layers:
 1. **Headline KPIs** (cards at the top).
 2. **Detailed Performance Charts** (Courier OTIF, Delay Trend).
 3. **Critical Metrics** (Top 5 Delays, Return Rate by Region).
- Clear, minimal formatting to keep focus on results.
- Color-coded visuals to highlight risks (red = urgent, yellow = warning).

Challenges and Solutions

- **Adding Target Lines:** Pivot Charts don't allow static benchmarks. Solved by creating helper tables (e.g., OTIF 80% target column) and overlaying them on the charts.
- **Top 5 Delays Extraction:** Original dataset showed all delays. Used filter + new sheet to isolate the top 5 and highlight them separately.
- **Balancing Clarity vs. Detail:** Added short insights directly on the dashboard to avoid overwhelming users with raw numbers.

Key Findings

- Courier performance is **well below target** (all under 60%, far from 80%).
- Delays are **increasing month-on-month**, with July being the worst.
- **EMEA region** has serious return issues (42.9% return rate).
- SLA compliance is **poor (42.5% breach rate)**, which risks customer trust.
- Performance issues are **systemic across couriers**, not tied to one vendor.

Final Deliverable

The **Excel Dashboard** provides:

- A high-level overview of logistics performance.
- Benchmark comparisons against targets.
- Easy-to-read KPI cards.
- Actionable insights for managers to address courier and regional performance gaps.

This dashboard is designed for use in logistics teams, operations meetings, or as a portfolio project showcasing Excel-based analytics and reporting skills.