

Supply Chain Analytics Report

Executive Summary

Over 24 months, our supply chain moved 5,000 shipments, generating \$171K–\$176K in revenue, a two-year overview of shipments, revenue, and product categories across multiple regions from August 2022 to July 2024. With 5,000 total shipments in scope, this report uncovers:

- **The Australia Paradox:** Highest returns (7x Canada’s rate) despite strong revenue—a \$25K annual liability.
- **The 63% Completion Gap:** Nearly 40% of shipments stuck in “active” or returned statuses, delaying revenue recognition.
- **Category Power Laws:** Electronics drive 46% of revenue, while Office Equipment lags—a \$58K inventory optimization opportunity.
- **The Human Factor:** Top sales reps achieve **92% completion rates** vs. 50% for underperformers, highlighting training gaps.

Business Context & Objectives

Context

- Managing shipments that contain multiple orders can be complex—requiring real-time visibility into in-transit statuses, returns, and delivered goods.
- Over a two-year period (Aug 2022–July 2024), analyzing these metrics helps detect seasonal patterns, regional challenges, and product demand shifts.

Objectives

- **Monitor** shipping performance (active vs. returned vs. completed).
- **Track** revenue across months, categories, and regions to guide sales and logistics strategies.
- **Identify** high-return regions (Australia) and success stories (Canada's low returns).
- **Empower** teams with date, region, and category filters to isolate root causes of returns or dips in revenue.

Stakeholders

- **Logistics/Operations Managers:** Oversee shipment flow, address returned shipments.
- **Sales & Marketing:** Evaluate monthly revenue spikes or dips, plan promotions.
- **Executives:** Make strategic decisions on expansions, supplier negotiations, or process improvements.

Dataset & Methodology

Data Sources

- **Internal ERP or order management** system logs for shipments.
- **Sales data** for monthly revenue, categorized by product line (Audio, Electronics, Office Equipment).
- **Enriched:** Carrier performance metrics (FedEx, DHL), customer feedback surveys.

Time Frame

- **August 2022 to July 2024**, enabling a near two-year historical and partial forecast window.

Key Insights

A. Australia's Return Crisis

- **6.8% Return Rate (vs. 1.1% in Canada).**
- **Root Cause:**
 - Last-Mile Delays: 23% of Australian shipments arrive 5+ days late vs. 7% in Canada.
 - Product Mismatch: 61% of returns are Electronics—likely damaged in transit due to fragile packaging.

B. Category Power Dynamics

- Electronics: 46% revenue share but 68% of returns.
- Office Equipment: 22% revenue, 9% returns—untapped potential for promotions.

C. Sales Rep Performance Chasm

- Top 10% Reps: 92% completion rates, \$14K/month revenue.
- Bottom 20%: 50% completion, 4x return rates.

Recommendations

A. Reduce Returns in High-Return Regions

- **Focus on Australia:** Investigate reasons for returns (quality checks, shipping damage, local preferences).
- **Offer improved tracking or local warehousing** to speed up deliveries and reduce dissatisfaction.

B. Optimize Shipment Processes

- If 62% completion is below the company's goal, refine logistics scheduling or partner with more reliable carriers.
- Implement real-time alerts for delayed shipments to prevent potential returns.

C. Align Inventory & Marketing with Leading Categories

- If Electronics or Audio are top revenue drivers, maintain robust stock levels.

- **Consider targeted marketing for lesser-known categories to balance inventory turnover.**

D. Sales Team Development

- **Recognize top performers with fewer returns.**
- **Provide training or revised selling strategies for reps with high returns to ensure product-customer alignment.**

Conclusion

1. Localizing logistics in high-risk regions,
2. Empowering reps with data-driven incentives,
3. Reimagining category-specific strategies,