Case Study

Of my work at a previous employer

Ocean freight containers, set sail on a technological evolution from limited visibility to high-tech insights.

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Introduction

This case study is an example of what analytics from limited freight data can do for you, i.e., help you reduce your operating costs and improve service to your customers. Even without a TMS, visibility into your inbound supply is possible. If state-of-the-art technology for ocean freight is what you need, then we can help you select an ocean freight partner that best fits your business.

Context

An evolution of business processes and visibility that I implemented at a previous employer highlights this case study. The evolution led to a large-scale project, for which I was the business lead for onboarding a new ocean freight business partner. As for the onboarding project, I provided all supply chain-related data.

Problem

The company relied upon supplier-provided delivery dates for my Buyers to maintain ETAs on Open Purchase Orders (POs). Limited TMS-like data existed, and there were gaps in that data.

Purpose & Scope

At a macro level, how to improve visibility of inbound ocean freight.

Importance

Businesses are under pressure to reduce costs while navigating economic uncertainties (i.e., inflation and tariffs). Supply chain and operations are critical competitive advantages for transforming a company's top- and bottom-line results.

Roadmap

The overview, problem, solutions, and results sections in this case study should prove to be a quick read, informative, and easy to translate to your business needs.

Overview

In 2021, visibility became mission-critical for inbound supply via ocean freight, including details by shipping lane and throughput cycle times (in days) at the origin and destination ports. Additionally, SKU details, per container, were required to manage internal and external expectations for product availability. We operated with limited visibility into when goods would arrive.

Problem

Customers wanted to know when their orders would be delivered. The quality of ETAs on Open POs influenced the company's responses to customers. The Product team and Sales team communicated, internally and externally, available inventory commitments. Often, my buyers were not aware of a container arrival/delivery until an associate from the respective distribution center reached out for help resolving an issue with scanning the goods into inventory.

From a data and process perspective, in early 2021, my buyers received a data file to reference for the status of a container. Although that was a step in the right direction, the process was highly manual for providing an answer about a SKU's next inbound delivery.

Limited Visibility

This work and the project were both implemented as part of my professional work experience at an industry-leading HVAC/R Electrical company. Out of respect for one of my previous employers (also a private company), I will limit references to results and/or volume as generalities.

At the time, the capability did not exist to forecast container volume, i.e., by month, for the following fiscal year.

As a long-term action item, a colleague and I implemented system changes (ERP and WMS) to capture the container number for each container delivered. In the short term, I utilized my data and analytical skills to compile statistics on historical inventory receipt transactions.

I extrapolated an “estimated container” by supplier. Then, I cross-referenced SKUs in the receipt transactions data to the forecast. My full-year container forecast for 2023 was nearly 100% accurate.

From Grinding it Out to Automation

Building this data, reports, and dashboards required significant data handling and analytical skills, as well as an in-depth knowledge of SQL coding (data queries).

It also required a deep knowledge base of supply chain, operations, and international shipping via ocean containers.

Moreover, business acumen.

Streamlining processes and creating new and meaningful visibility is a sweet spot of mine.

Solutions

Implement refreshable Open PO data via SQL queries, gathering ERP data with the ability to periodically update the ocean freight data from the current ocean freight partner.

Leverage complex Excel-based formulas to prepare the data for managerial and operational reporting.

Identify all actual and future shipping lanes and create capabilities by lane for:

- Baseline capturing
- Historical trends
    - Cost
    - Port-to-Port cycle (in days)
    - On-time arrivals vs. ETAs

Include “order flow” for simplicity of knowing the status of a PO (or container or SKU):

- By SKU
- Summaries by product categories

Weekly inbound supply updates in SIOP:

- Details by SKU, container, and product categories
- Backorder resolutions (full or partial)

Results

Improved the quality of the company's commitments to customers about when their orders will ship.

Made data-driven decisions for prioritizing container delivery/unloading based on backordered SKUs and/or SKUs at-risk of slipping into backorder. I created an MRP in my early days at this company, which enabled efficient connection of MRP data and ocean freight data.

Adjusted lead-time days based on Port-to-Port actual and anticipated trends.

Offered simple and proactive insights, such as the number of containers on the water for delivery within the same period vs. our receiving capacity.

Freed up time for my Buyers to increase the number of calls with suppliers.

The new visibility helped answer the question: Do we need to find an ocean freight partner that has digital optics and competitive freight rates? Yes, and we did. I was the business lead for the onboarding of the new ocean freight partner.

Reliable ETAs for Internal & External Communications

Shortly after I joined the company, I implemented a weekly SIOP (S&OP) with an Executive Summary, and I led the SIOP meetings for 2.5 years.

I leveraged the SIOP attendees (key stakeholders) to gain buy-in on a weekly update of inbound supply via ocean containers.

It was an easy sell.

It caught on like wildfire!