



FOCAL POINT

DATA RISK

CASE STUDY:

LEVERAGING **DATA ANALYTICS** FOR RETAIL SUPPLY CHAIN OPTIMIZATION

The Big Picture

Focal Point was hired to assist a global, Fortune 500 retailer with improving their inventory management and demand planning performance. The retailer had recently undergone a significant merger, increasing the pressure to reduce excess inventory, streamline the ordering of new inventory, and better manage the flow of existing inventory across the supply chain. Focal Point's Data Analytics team was brought in to help address these challenges and initially tasked with building a forecasting model that would outperform the existing platform. When that project was a success, the Focal Point data analytics team was quickly integrated into other initiatives to reduce excess inventory and improve demand forecasting through use of advanced data analytics. This document walks through some of the individual problems this retailer faced, the solutions Focal Point developed to address these problems, and the benefits gained by the company.

Challenge #1: Improve Forecast Accuracy

For the company to remain atop their industry, improving forecast accuracy and demand-planning performance was a top priority. Focal Point sought to identify ways the organization could leverage the functionalities native to their current demand-planning software to improve forecast accuracy. Focal Point was challenged with testing the accuracy of the Multi-Linear Regression forecasting algorithm that the company had historically relied upon by pitting it against five alternative algorithms. Using back-casted forecast data and historical sales, Focal Point simulated each algorithm and identified the optimal mix for the company.

After the implementation of the suggested algorithms, the company experienced a 2%-3% increase in total forecast accuracy, which is expected to increase over time when adjusting for seasonality. This was a huge success for the company, since only a rough 25% of the multi-algorithm model was applied to the total unique SKU population.

Challenge #2: Understand and Reduce Excess Inventory

The company was seeking a way to improve visibility into excess inventory levels and accurately measure its impact. The company also needed assistance in developing a roadmap to reduce excess inventory. To implement this plan more successfully than prior attempts, we developed a multi-year Excess Reduction Program incorporating over 30 distinct projects and initiatives.

SNAPSHOT

Client: Global Retailer

Goal: Optimize the supply chain with data-focused decision making

Tools: SAP, Oracle, JDA, Teradata, MS SQL Server, SSIS, Alteryx, Arbutus, Java, Paracel, Tableau

BENEFITS

2-3% INCREASE

in total forecast accuracy, while only applying 25% of the recommendations chosen by the multi-algorithm model.



Predicting a 5-7% lift in forecast accuracy within 6 months, leveraging the algorithm assignments on an ongoing basis.

BENEFITS



Increased data quality and control.

RELIABLE, ACCURATE REPORTING.

Initiatives covering the cross-functional organization were scoped for reduction opportunity, organizational impact and overlap among initiatives. Focal Point played a key role in:

- Conducting interviews with leadership in the business and in IT
- Identifying data sources across many databases and data stores
- Developing reports to scope and measure initiative impact
- Creating dashboards for monitoring
- Working with omni-channel cross-functional organization to implement action plans

Key staff were able to more easily view inventory levels and threats to corporate goals, which resulted in lower inventory levels and improved turns and GMROI.

Challenge #3: Efficiently Reallocate Inventory

Due to the recent merger, the company was seeking ways to better facilitate the redistribution of excess inventory across a broader network of stores and distribution centers (DC).

Focal Point worked with the company to develop an end-to-end solution to support the truck-building and transfer processes. The transfer model worked to automatically (1) identify and prioritize the inventory stored at the closing distribution centers, (2) match that inventory to ideal store/DC locations, (3) submit the request to a truck-building algorithm to maximize the efficiency of the inventory transfer (by loading full trucks to minimal locations and within the closest proximity), and (4) examine dimensional data, such as inventory-cube size and weight, standard pack, case pack and pallet quantity, to determine the optimal arrangement of inventory to be shipped, based on the available truck space. This new solution resulted in significant cost savings and operational efficiencies.

Challenge #4: Enable Standardized Reporting

Standardized reporting for forecast accuracy, as well as consistent methods for calculating forecast performance, did not exist across the enterprise. In addition, the company did not have a central data repository for the forecast and sales data needed to run reliable forecast accuracy calculations. Because this data was stored, managed, and reported inconsistently, leadership was unable to obtain insights needed to effectively manage their forecast performance.

To solve this problem, Focal Point developed a process for aggregating the forecast and sales data in a central repository, from which the company could automate forecast reporting. The team then developed custom reporting that offered both weighted forecast accuracy by sales volume and by cost of goods sold, which allowed the business to look at accuracy in terms of units vs. dollars. The company could now drill into what SKUs, departments, and stores were performing well and identify those that needed improvement. Additional ad hoc reporting options gave management the ability to quickly pull accurate reports that allowed for better decision making.

About Focal Point

Focal Point Data Risk is a new type of risk management firm, one that delivers a unified approach to addressing data risk through a unique combination of service offerings. Focal Point has brought together industry-leading expertise in cyber security, identity governance and access management, data privacy and analytics, internal audit, and hands-on training services, giving companies everything they need to plan and develop effective risk and security programs.

BENEFITS



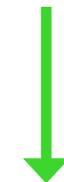
Real-time visibility into excess inventory threats.

Added **ad-hoc functionality.**

BENEFITS



Drove cost savings through reduction in manual effort.



Reduced excess stock through better reallocation process.
Reduced building capacity issues.

Increased cash flow position for ordering of more productive inventory.

BENEFITS

Resolved **data integrity and availability** issues.

Enabled business to drill into specific products and segments of the business to understand which areas needed improvement.



Enabled the company to look at trends by compiling historical forecast accuracy.

INCREASED AD-HOC FUNCTIONALITY AND REAL-TIME REPORTING.

CONTACT US

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