Manufacturing

# Streamlining F&B Product Portfolio With Demand Forecasting And Inventory Optimization

*Reduced the wastage and improved safety stocks*

**Industry**

F&B Coffee House Chain

**Function**

Supply Chain, Procurement, and Inventory Planning

**Data Used**

1. Sales Data
2. Customer Data
3. Merchandise Data
4. Promotion Campaign Data
5. Macroeconomic Data

**Tech Stack**

1. Azure HDinsight
2. Azure DevOps

## Who Is The Client?

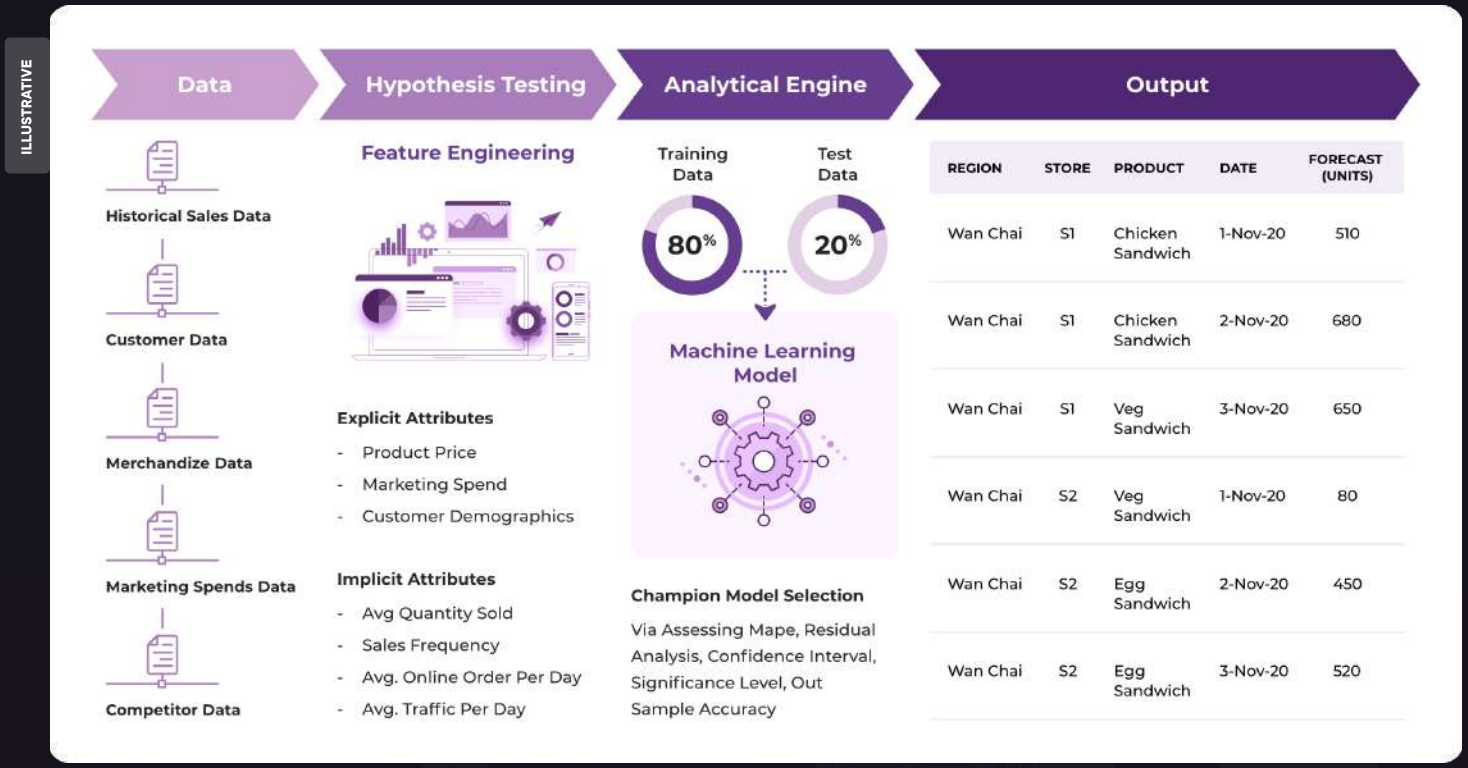
The go-to source for a cuppa Joe, delectable sandwiches, or flaky croissants with the sunset's glow, the client is a globally renowned coffee house chain. Their freshly brewed creative lighter fluids (a.k.a. coffee) and sumptuous snacks can rejuvenate exhausted souls.

## Business Quandary

The client needed to integrate within their existing functionalities a method of automating inventory processes and tracking demand. They wanted Affine to develop an extremely precise demand forecast analyzer for its perishable and short shelf-life offerings. Additionally, they wanted to improve the accuracy of their safety stock estimation. The end goal was to avoid stock-outs and excess inventory.

## How Did We Solve The Problem?

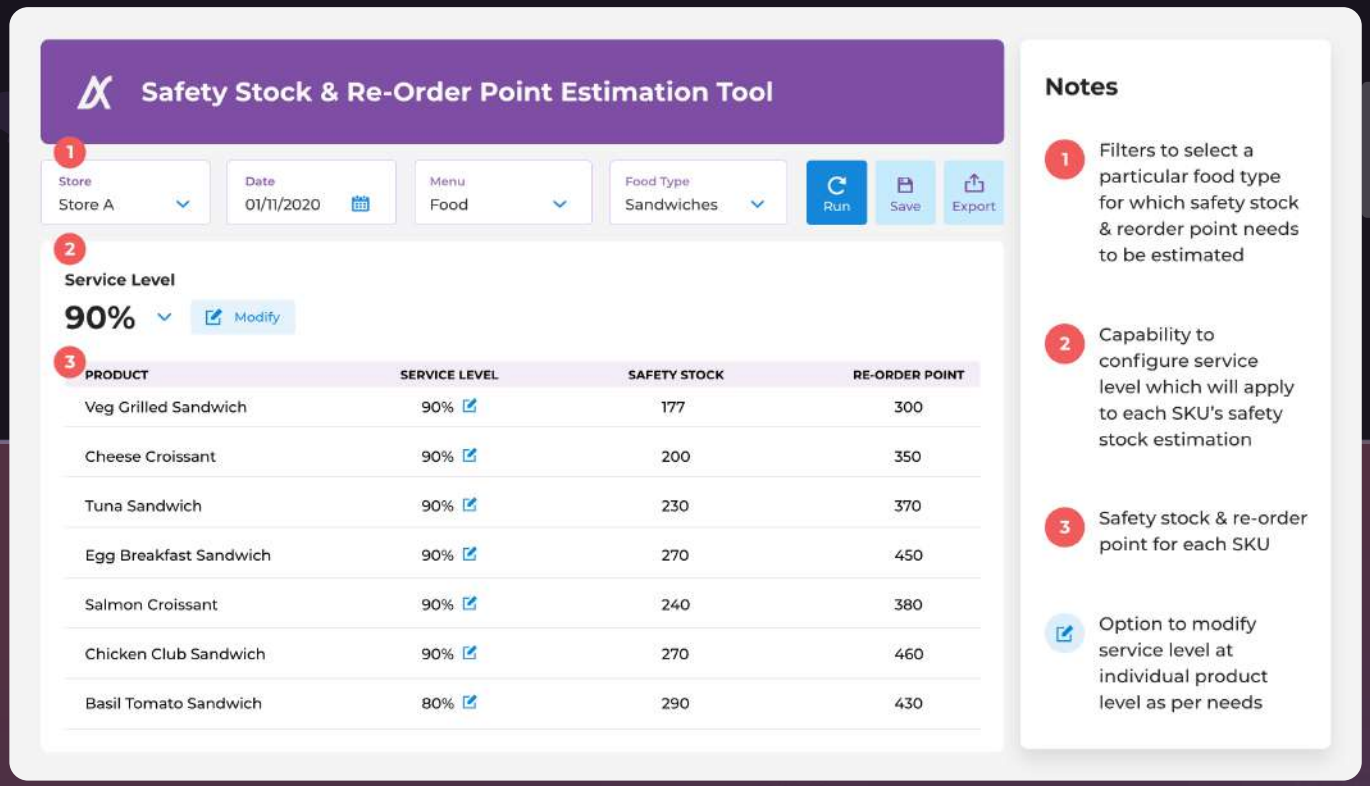
Affine's Analytics Engineers and AI experts filtered relevant data that would help in predicting daily demand and safety stock levels, such as sales data, customer feedback, competitor analysis, merchandise information, and weather patterns, to brew an analytical dataset. We trained a model using Linear Regression and Machine Learning. This was infused into the firm's pre-existing systems (rather than creating a new platform) to incorporate advanced forecasting techniques.



## The Pay Off

Affine distilled the client's supply chain management with customized solutions such as integrated demand forecasting and inventory planning to power predictable outputs relating to inventory and safety stock. This enabled the client to make data-driven decisions, such as establishing re-order points. Therefore, they could successfully take into account the criticality of time with respect to perishable products with short shelf life.

We brought flavours of feature engineering, scenario generation, and replenishment recommendations together to create an enriching harmony of systems.




ILLUSTRATIVE

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## Augmented Outcomes

- Improvised decision-making process
- Lower Total Cost of Ownership
- Reduction in waste of perishables
- Increased efficiency in planning systems