



## CASE STUDY

Product and price simulation tool helps global retailer increase in-store revenues during COVID-19 slowdown

# Introduction

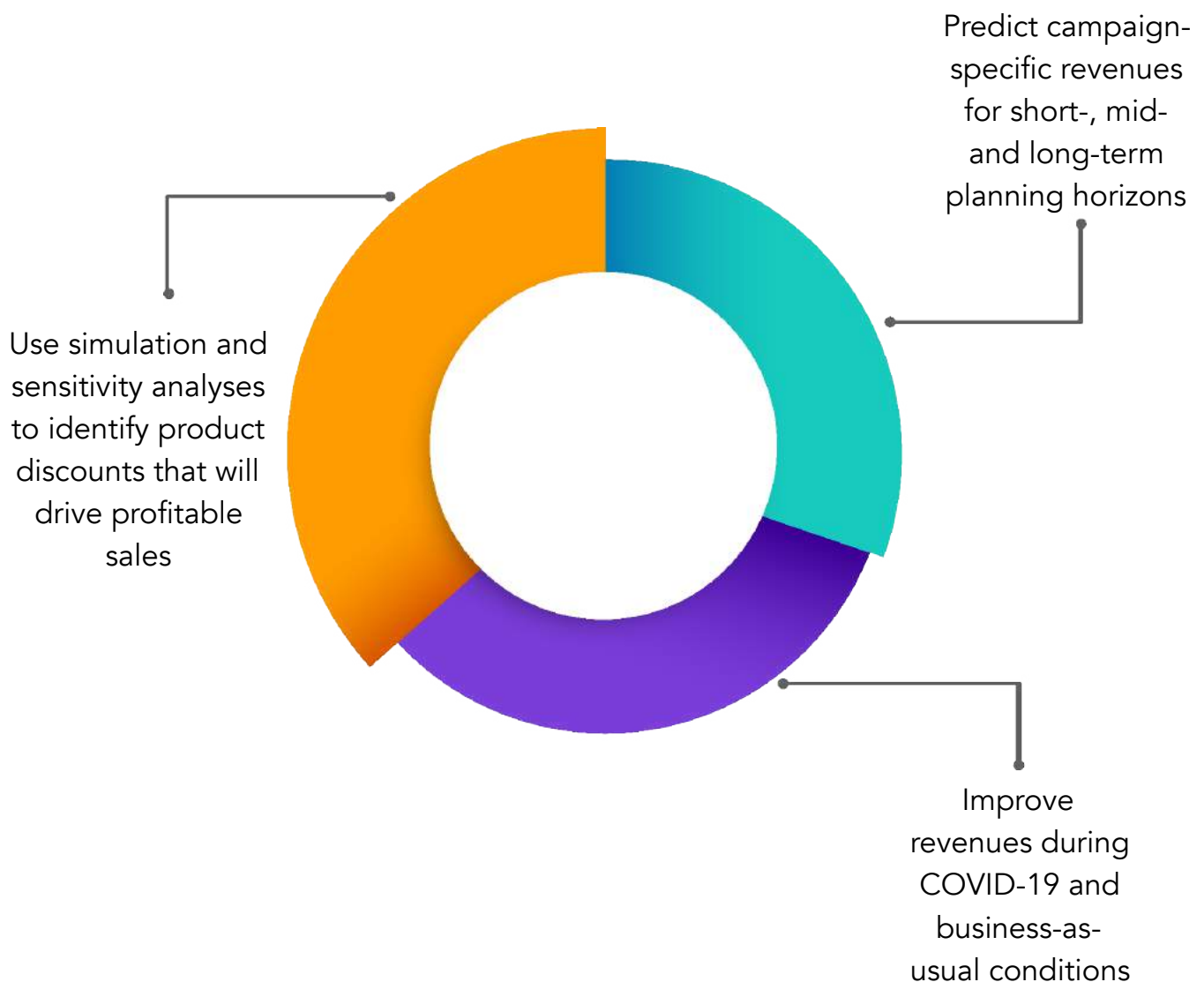
Retailers are hard hit by in-store revenue losses as the ongoing COVID-19 pandemic continues to discourage customers from shopping in brick-and-mortar stores. To optimize store performance and rebuild revenues, retailers need ways to better understand the in-store sales context and guide their promotional campaigns.

This was the situation with a global apparel retailer that had been struggling to increase revenues at its stores across Japan. The retailer had tried discounting product prices, without success.

It asked Lynx Analytics to develop a tool that would guide its decision-making to improve the performance of its stores during the pandemic and later, when routine business conditions return. In response, Lynx developed a price simulation tool and sensitivity analyzer that can predict the effect of key drivers such as in-store traffic, inventory composition, and the depth and breadth of product discounts, in order to optimize revenues. The solution produced significant revenue increases after just one month of use, and the retailer has since deployed the solution in other countries.

# Objective

Improve the financial performance of brick-and-mortar stores by identifying product and pricing strategies that will increase revenues







## Challenge

The retailer was losing revenues across dozens of stores in Japan. Much of the company's business in the country was driven by tourists, but in-store traffic and sales had suffered during the COVID-19 pandemic. The retailer tried increasing its discounts on selected products to stimulate more transactions, but traffic did not improve and the discounts did not generate additional sales.

The company needed a way to predict the impact of inventory and discounting decisions so it could improve revenues with minimal risk. It wanted a solution that provides very granular analyses, can be used across its markets, and can be customized for any store.

# Solution

The Lynx team designed a simulation tool and sensitivity analyzer that predicts the impact of detailed inventory and discounting decisions on store performance. The solution was developed, rolled out in Japan, and expanded to multiple additional markets in a short, 4-month timeframe. The simulation tool considers and learns from multiple data sources and uses four predictive models to generate accurate forecasts. A key feature underlying the predictions is a store traffic model, which uses historical customer traffic data from in-store sensors, third-party data providers, or analytics models to estimate future traffic. The traffic estimates have an average accuracy rate of 84%, alleviating the retailer from making merchandising decisions. The tool is flexible, allowing the retailer to evaluate the effects of different scenarios

on a variety of business outcomes such as revenue, units sold, and gross margin. The retailer's priority was to predict revenues based on alternative price discounting decisions. The tool enables this approach, and it can also run simulations to predict units sold, gross margin, average unit revenue (AUR), sales, or units per transaction (UPT). Data inputs include point-of-sale data, inventory product categories, discount depth and breadth for each category, store attributes and features, as well as relevant calendar- or event-based information. The solution serves the retailer's need for highly granular analyses with an interactive dashboard that allows the user to select specific stores to model; define inventory based on product types, product categories and gender; and specify the ratio of discounted items and applicable discounts.

The dashboard uses tables and graphs to visually display results for the outcomes of interest, such as traffic forecasts and revenues, showing historical values as well as forecast values for baseline and simulated conditions for any given time horizon. A sensitivity analyzer, also available via the dashboard, enables the retailer to visualize the inter-relationships between various features—such as discount depth, product type—and the combined impacts these features have on units sold, revenues, and gross margins. The retailer can experiment with different settings to optimize discounts and product selections to ensure the best-possible outcomes. The tool can be customized for each store or any combination of stores.

## Outcome

- The retailer used the solution's simulation, modeling, and optimization functions to craft a discount strategy that successfully built revenues in Japan.
- The campaign, covering 39 retail stores and 28 outlets, was initially implemented for two weeks. Seeing positive results, the retailer extended the campaign for another two weeks.
- Revenues increased across all traditional stores by 2% compared to the baseline. Outlet store revenues improved by 5%.

Despite declining store traffic, store performance improved because the retailer was able to reduce the depth of its discounts compared to previous promotions, while expanding the use of discounts across a greater breadth of products.

The retailer is now using the solution for ongoing campaign guidance in Japan and other countries. It plans to expand use of the solution to model more business outcomes and to experiment with different campaign mechanics.

The product and price simulation tool is effective because its powerful models and optimization features enable retailers to make pricing decisions informed by past experience. Brick-and-mortar retailers in any sector can use the solution to plan successful campaigns for any location at any time, because the solution is flexible, easy to customize and easy to implement.

By reducing the risk of decision-making, retailers can confidently design strategic campaigns whether their objectives are to improve business during the pandemic or routine conditions.

## Talk To Us

Headquartered in Singapore, Lynx Analytics is a leader in artificial intelligence and data science solutions. With a strong expertise in predictive analytic models, Lynx Analytics help businesses across the retail domain to improve forecasting, assortment planning, size optimisation, promotion planning, markdown optimisation and replenishment scheduling.

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