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Robust Demand Forecasting Model With 80% Accuracy For Mobile Handsets

Demand forecasting focuses on trying to predict consumer demand for particular products or services. This generally entails looking at specific data sets that characterize sales and coming up with informed estimations of future trends. Companies can use the estimates to prepare for upcoming periods of high demand. This will improve the customer experience. It will also help maximize profits by reducing inventory of low-demand products and preventing the depletion of high-demand product stocks.

A Telecom Retail Case Study

Demand Forecasting For A Telecom Provider In Germany | A Telecom Retail Case Study

Maximizing Customer Recontracts And Improving Overall Sales Productivity For A Top-Tier Telecom Provider In Germany

01

Allocating better SKU level inventory of handset models

Increased sell-through rate by 18%

02

Reducing cost of inventory by minimizing purchase of low-demand handsets

Reduced inventory cost by 7%

03

Increasing customer recontracts with relevant marketing promotions

Increased customer recontracts by 13%

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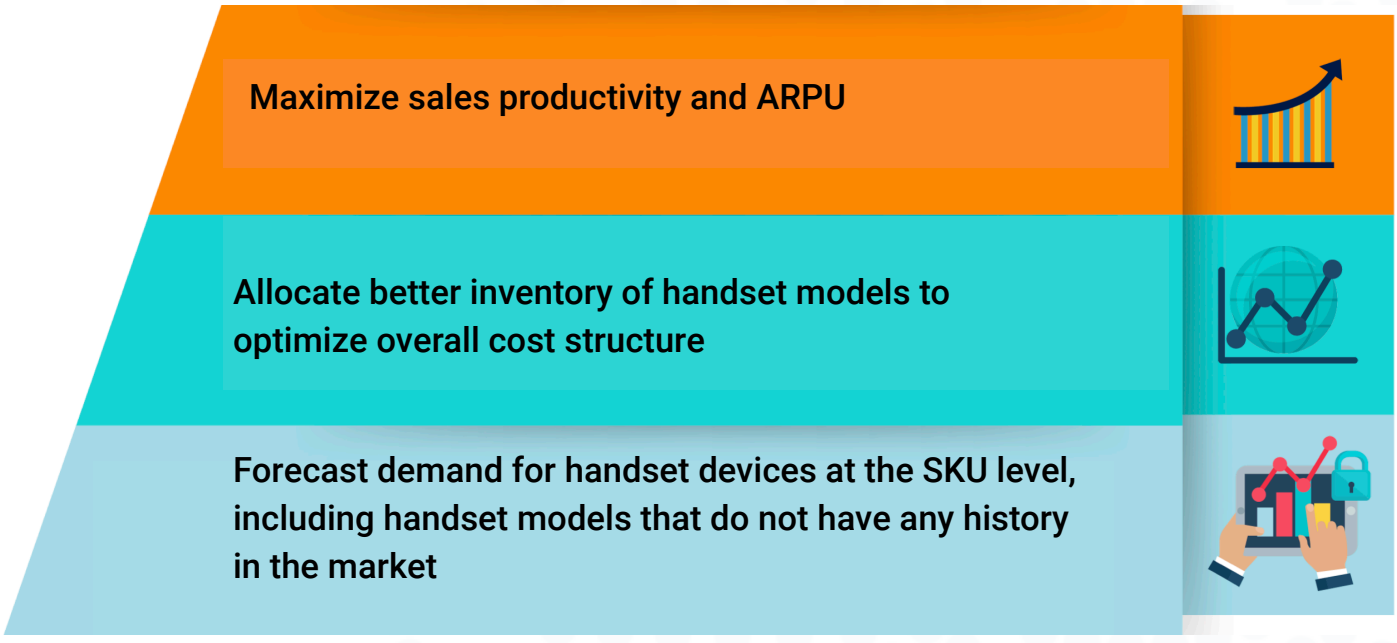
Objective

A top-tier telecom provider in Germany was looking to centralize procurement for all mobile devices it plans to sell in the future in global markets. In order to accurately manage product lines for each country, negotiate the best prices from handset vendors, and align promotions and subsidies with customer upgrade cycles, it needed to forecast demand six months in advance for handset devices at the SKU level. The forecasts will enable the telecom provider to better allocate inventory of handset models, reduce inventory costs, and increase recontract rates to maximize sales productivity and ARPU.



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The Challenge

The project was complex because it required predicting future trends for every device model at the SKU level. Lynx Analytics had to factor in the influence of manufacturer discounts and product bundles on customer demand. The forecast needed historical data for sales and inventories for each SKU and distribution channel, but the carrier did not have a consistent method of identifying devices across systems. Lynx Analytics needed to find a way to cull appropriate data from relevant data sets. It also needed to predict demand for new handset models that do not have any history in the market.

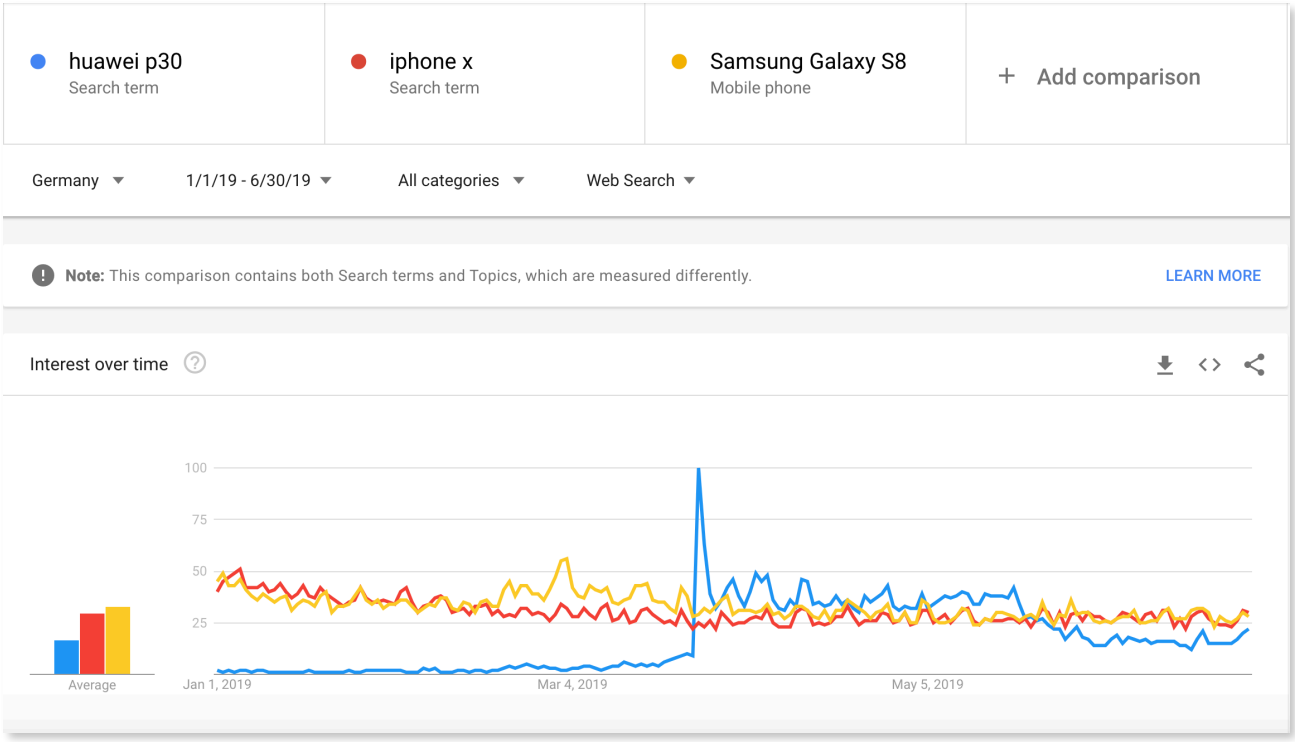
High volume of historical data for sales and inventories for each SKU and distribution channel

Disparate systems with different aggregation logic that added complexity in identifying devices

Predicting demand for new handset models that do not have any history in the market

The Solution

The first step was to create reliable data from the data sources to characterize device inventories, sales, promotions, customer contracts, and other factors. To achieve this, Lynx engineered an automated data pipeline to collect and cleanse the data. Following that, Lynx Analytics leveraged machine learning techniques to predict the demand for existing handset device models. This approach incorporated inputs from Google Trends to forecast demand for handset models.



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The Outcome

Lynx Analytics delivered the demand forecasting model within three months of project startup. The solution, which was automated and integrated into the customer's operations provided a prediction of all SKU sales in Germany, six months in advance, with 80% accuracy.

With these very granular forecasts, the carrier was able to better allocate SKU level handset inventories, increasing the sell-through rate by 18%. The carrier minimized purchases of low-demand handsets, reducing inventory cost by 7%. It was able to improve the relevance of marketing promotions to increase customer recontracts by 13%.

Engineered an automated data pipeline to collect and cleanse the data

Used machine learning techniques to predict the demand for existing handset device models

Leveraged Google Trends to forecast demand for new handset models

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Lynx Analytics

Founded in 2010 and headquartered in Singapore with an engineering team based in Hungary, we bring value to companies across the retail domain with artificial intelligence and predictive analytics solutions to improve forecasting, assortment planning, size optimisation, promotion planning, markdown optimisation and replenishment scheduling.

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