



CASE STUDY ON

Bridgestone's Journey

To Optimized Manufacturing Operations

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PPN Solutions

Overview

We have successfully implemented a comprehensive merchandising solution for Bridgestone, encompassing key functionalities such as Strategic Planning, Supply chain, Profitability by IPC reporting and RLUP. This integrated solution has enabled Bridgestone to optimize IPC levels, enhance demand forecasting accuracy, streamline allocation processes, and ultimately improve overall operational efficiency and customer satisfaction.

About Bridgestone

Bridgestone Corp is a tire and rubber products company that develops, manufactures, and markets tires and tire tubes, tire raw materials, wheels and accessories, and other tire-related products for passenger cars, construction and mining vehicles, agricultural machinery, trucks, buses & industrial. Its mission extends beyond tires, focusing on contributing to society and improving mobility and lifestyle through continuous advancements and sustainable practices.



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Challenges

- **Difficulty in Maintaining Prices & Rebates**
Struggling to allocate the missing prices for the IPC combinations
- **Demand Forecasting Inaccuracies**
Difficulty in predicting customer demand, resulting in misaligned seasonality of volume and slow & manual processes
- **Profitability by IPC**
Struggling in taking accurate decisions due to difficulty in analysis of profit & loss, Actuals vs Budget comparison due to lack of proper dynamic dashboarding and reporting.
- **Unstructured Planning**
Absence of a well-defined data model, resulting in unstructured planning and data inconsistencies.
- **Challenges in Identifying the Cheapest Product**
The customer faced significant challenges in identifying the cheapest product due to varying cost calculation rules across regions. This made the process complex, time-consuming, and prone to errors, as cost comparisons were done manually.

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Proposed Solutions & Implementation

Demand Planning Using ML

- **Data Integration:** Historical data from Board was fed into Azure AutoML.
- **Model Training:** Machine learning models were built, trained, and deployed in Azure.
- **Forecast Scenarios:** Forecast scenarios were run using the trained models..
- **Result Storage:** Results were automatically retrieved and stored in the target Cube within Board.
- **Sales Team Collaboration:** High-level forecasts were reviewed & adjusted by sales team, aligning with market conditions
- **Granular Forecasting:** Board extrapolated high-level data to the product level based on the percentage that users provide.

Purchase Plan

- **Starting with a Sales Plan:** The process begins with a sales plan, which will be the output of demand planning solution.
- **Turning the Sales Plan into a Purchase Plan:** Next, we use a "conversion key" to turn the sales plan into a purchase plan. This conversion key helps calculate how much needs to be bought, based on the sales goals. It also considers delivery times, supplier limits, and stock levels.
- **Reviewing and Modifying the Purchase Plan:** Generated purchase plan will be reviewed and modify based on the business requirement.
- **Creating a New Sales Plan:** After the purchase plan is finalized, it is used to make a new sales plan. The conversion key helps to update the sales plan so that it matches the updated purchase plan.
- **How the Cycle Works:** This process keeps repeating to improve and align both sales and purchase plans. Each step helps the plans stay up-to-date and useful for the business.
- **Conclusion:** Purchase Plan module shows how linking sales & purchase plans helps businesses run smoothly. By using simple tools like a conversion key and reviewing plans carefully, companies can achieve their goals more effectively.

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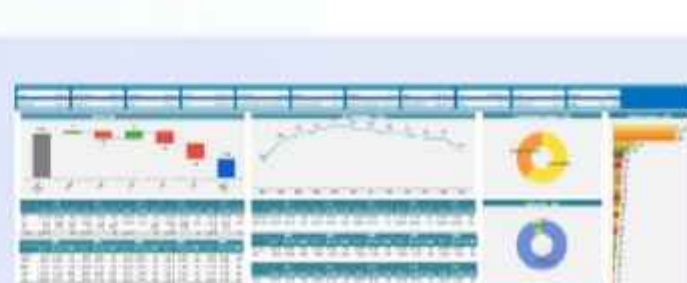
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Pricing Module

We implemented a pricing module in Board to automate price generation and manage missing prices. It uses templates like YTD Order Prices and Latest Price List, along with IF logics and weighted averages, to generate prices for unassigned combinations based on 'SOLDTO' and 'IPC'. The module includes a dashboard for identifying and inputting missing prices, supports price adjustments, and handles currency updates and FX management. Additional features include rebate, AGSP, and ANSP modules. This reduces manual effort, improves accuracy, and enhances decision-making.

Profitability by (IPC)

- Development of Summary Report with the help of Actuals data to get Actuals at Soldto level which leads to easier analysis that what amount is marked against which customer..
- Development of Consolidated P&L using 3 different sources – BJS PL, SO DB, Management PL file which leads to complete analysis of P&L for better decision-making.
- Reporting and dashboarding to analyse P&L among different scenarios i.e. ACT, BUD and Forecast.
- Cost Analysis & Revenue Analysis in P&L through various dashboards and KPIs.



RLUP Module For Bridgestone

Streamlined Data Management

- One-click implementation of changes.
- Data categorization based on OE, REP, and Strategic patterns.

Enhanced Decision-Making.

- Generates reports identifying the cheapest products while meeting business requirements.
- Saves hours of manual effort previously done in Excel.
- Two-minute process for report generation.

Improved Efficiency and Agility

- Reduced complexity and increased accuracy.
- Seamless experience for Bridgestone.
- Enhanced decision-making agility.

Unparalleled Flexibility

- Easy addition and removal of products.
- Comparison of reports across different versions.
- Flexibility to add/remove exclusions or inclusions.
- Dynamic adjustments to business parameters.

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Results And Benefits

- **Increased Sales**
Significant Increase In Sales Due To Improved Product Availability & Optimized Assortment,
- **Enhanced Operational Efficiency**
Streamlined Processes, Reduced Manual Tasks.
- **Higher Profit Margin**
Higher Profit Margins Due To Accurate Decision Through Analysis Of Various Reports
- **Increased Productivity**
Productivity Of Business Has Been Increased To Take Decision To Start New Business,
- **Cost Savings**
Reduced Product Costs Through Efficient Price Optimization.
- **Increased Efficiency**
Faster Decision-Making With Automated Calculations.
- **Improved Accuracy**
Fewer Errors In Cost Analysis, Ensuring Reliable Data.
- **Simplified Decision-Making**
Quick Identification Of The Cheapest Product.
- **Enhanced Planning**
Data-Driven Insights For Better Strategic Decisions.
- **Scalability**
Handles Growing Data Complexity, Supporting Future Expansion.

Conclusion

Bridgestone's adoption of this solution led to substantial operational improvements and a competitive edge in the tire manufacturing industry. For potential clients facing challenges in Demand Planning, supply chain management, or P&L Analysis & Reporting, let us assist you in transforming your business for greater success.

