Predictive Analytics for
Auto Part Industry

Automotive part sellers have faced many challenges in the recent years to find the right balance between the demand and the stock level. By taking appropriate actions at different level and time points, it not only increases the sales but also helps in maintaining the optimum stock level which helps a tab on costs. With the availability of historical data, predictive analytics methodologies can help in determining the demand, price and optimum inventory levels.

Why should I use Predictive Analytics?

Predictive analytics helps...

• To track the previous sales & demand of a product which helps in forecasting for a particular part
• To achieve a good mix of auto parts
• It helps in planning the right amount of stock at the right time. So, it is easy to solve the out of stock problems and maintain an operating store space for bringing in the new stocks
• It helps in improving sales performance as well as efficiency
• It helps to identify the fast and slow moving parts
• It helps to identify the subset of auto parts having the highest contribution to the total sales

How do I use Predictive Analytics?

Predictive Analytics is a variety of statistical tool and technique to analyse the present and historical facts to make predictions about the future. Here, are some of the methods which helps to get the answers of the above written questions:

ABC Analysis: The ABC analysis provides a mechanism for identifying parts that will have a significant impact on overall inventory cost, while also providing a mechanism for identifying different categories of stock that will require different management and controls.

There are no fixed thresholds for each class. Different proportion can be applied based on objective and criteria. ABC analysis is similar to the Pareto principle in that 'A' items will typically account for a large proportion of the overall value but a small percentage of number of items.

In the figure, group 'A' denotes 10% of total auto parts covering 80% of sales and it is easy to see that they have high value and low volume. Parts in group A, B and C products are known as fastest moving, moderate moving and slow moving respectively. Using this analysis, it is easy to categorize the parts and shows which group need more focus.
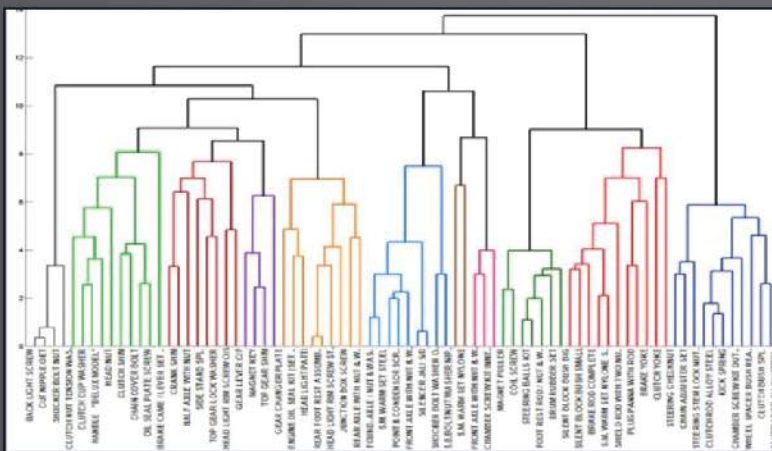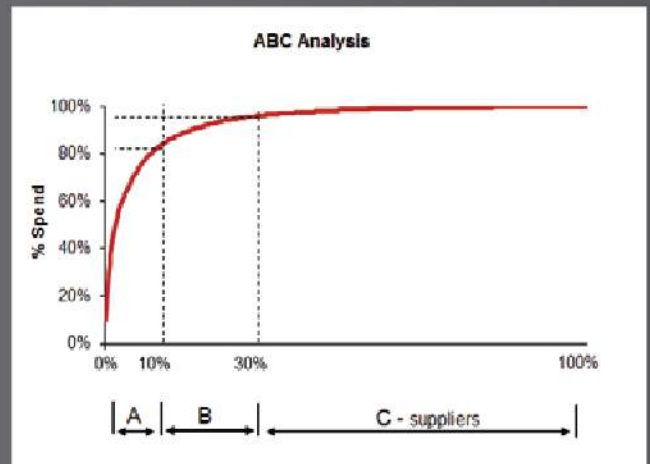

Clustering: In ABC analysis, grouping of parts is mostly done on the basis of sales achieved in the past. It puts minimum amount of care in identifying the behaviour of the parts. There are a variety of statistical clustering techniques based on different business models.
It also helps to see the auto parts from a different angle. It includes K-means, Fuzzy C – means, Expectation maximisation algorithm, Cohort analysis, Decision trees and Neutral networking.

Time – Series Forecasting: Demand forecasting is based on time series data which chooses the best model and optimized its parameters to produce the forecasts. It helps to solve the problems related to out-of-stock, over stocking, adding new factors to increase demand and so on.
There is a wide range of forecasting models based on different business situations which includes intermittent demand models, unobserved components models, ARIMA models, dynamic regression, exponential smoothing models with optimized parameters and user-defined custom models.
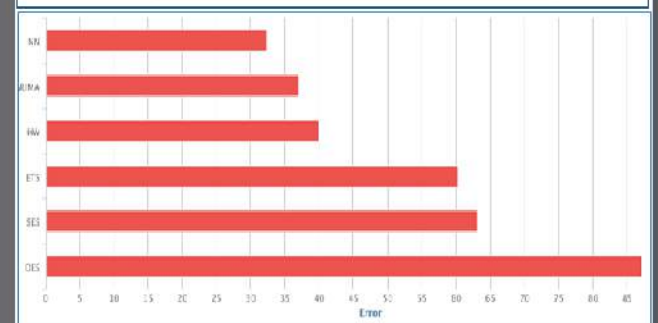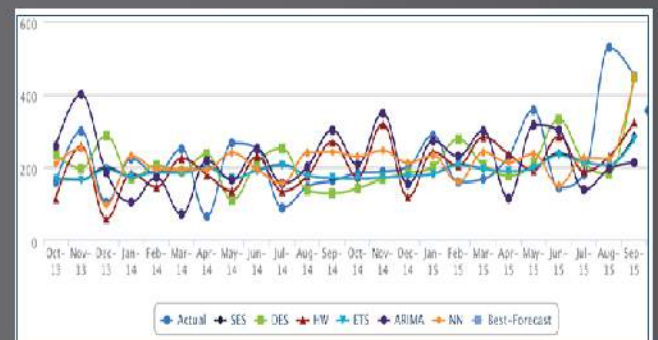
CONCLUSION

Nowadays bringing auto parts innovation to the store is the ante for the game and it may be necessary to carry out the slow- moving parts and maintain parts availability. The storage condition, pick up facility, packaging material/style, handling and replenishing of the product can make a huge difference in the productivity of our overall operations. Now is the time to make some decisions about what to do with the auto parts.

bista

www.bistasolutions.com

Our Offices

UAE Office

Bista Solutions DMCC,
P.O. Box 62604, #1206,
Indigo Icon Tower, Cluster F,
Jumeirah Lake Towers, Dubai, UAE.

+971 52950 0990

uae@bistasolutions.com

USA Headquarters

Bista Solutions Inc.,
980 Hammond Drive, Suite 1275,
Atlanta , Georgia 30328.

+1 (678) 756-2665

sales@bistasolutions.com

India Office (Global Delivery Centre)

Bista Solutions Pvt Ltd.,
208-210, Eco Star,
Vishweshwar Nagar, Off Aarey Road,
Goregaon East, Mumbai 400063, India.

+91 (22) 66219933

salesrow@bistasolutions.com