



**Service Parts Optimization (SPO)  
for  
Bharat Earth Movers Limited,  
Ministry of Defense, India**

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*An analytical tool that provides the ability to forecast parts demand and optimize parts inventory, helping BEML maintain adequate stock levels and optimal response times. It enables BEML to achieve the universal service goal: to reduce inventory costs while improving customer satisfaction. Equipping BEML sift the important signals from all the noise coming, so that they can make decisions that leverage their inventory and assets optimally and give them a good ROI in the market.*

**CLIENT:** Bharat Earth Movers Limited

**LOCATION:** Bangalore, India

### **CLIENT DESCRIPTION**

BEML Limited was established in May 1964 as a Public Sector Undertaking for manufacture of Rail Coaches & Spare Parts and Mining Equipment at its Bangalore Complex. BEML Limited (BEML) was conferred with Mini-Ratna Status and under the administrative control of Ministry of Defense, has evolved to a multi-technology company offering high-quality products for diverse sectors of economy such as coal, mining, steel, limestone, power, irrigation, construction, road building, aviation, defense, metro and railways. BEML's nationwide network of sales offices enables buyers with ready access to its wide range of products. Also, the full-fledged service centers and parts depots offer total equipment care, maintenance contracts and rehabilitation services.

### **CHALLENGES**

- BEML, with a large service chain network servicing around 2, 00,000 spare parts to a large number of distributor, dealer and Manufacturing Plants managing the service levels with minimization of cost becomes a challenge which can accurately forecast the demand stream of spares.
- BEML has to meet customer SLA so that downtime of equipments are minimal and customers can renew AMC as well.
- Need to optimize service levels and profitability of EOL (end of life) products.
- Reduce Manual Intervention and point of contact to increase forecast efficiency and reduce errors

### **SOLUTION OFFERED**

SAS Service Parts Optimization (Data warehousing, Business Intelligence, Data Mining, Forecasting)

### **BENEFITS TO THE CLIENT**

- Automated forecasting: BEML will get short term and long term forecasting with minimum manual intervention on various time grain
- Report generation: Based on the forecast will provide the comparison between actual and forecasted values and forecasting errors will be reduced
- Inventory at various facilities will be optimized by providing accurate ordered quantity
- Inventory optimization with the ability to calculate optimal inventory levels and policies based on user-specified constraints, such as service levels, lead times and costs. This will enable BEML to maintain high customer service levels, stock adequate inventory, while

minimizing average total costs, which can include ordering, inventory holding and optional backorder penalty costs.

- Inventory scenario analysis that will enable decision makers to perform various what-if analyses.
- Provision to check stocks at RO or DO before placing orders at HQ level.
- Centralized data warehouse that can be used to generate various inventory reports.