IBM Dynamic Inventory Optimization Solution for Automotive Spare Parts

Help gain a competitive advantage with improved inventory management and service

Highlights

- Help manage spare parts inventory to optimal levels through tailored, product-aligned strategies

- Identify specific actions to help reduce inventory cost and increase effectiveness to better support business growth

- Help provide the right amount of spare parts to meet demand for improved customer service

Optimizing inventory in the automotive spare parts industry can pose unique challenges. The demand for many parts is often unevenly distributed and volatile, making it difficult to achieve reliable forecasting results. Standard forecasting results are typically not usable and have to be reworked manually. Critical parts need a higher availability than others, but standard safety stock calculations complicate the inventory. How do you ensure that you have the right amount of inventory in your service and distribution centers to support your company's strategy and better serve customers? Depending on the individual demand history and characteristic of parts you may need many tailored strategies to achieve optimal results.

IBM can help.

IBM® Dynamic Inventory Optimization Solution (DIOS) can help you manage spare parts inventory to optimal levels—providing the potential to reduce carrying and logistical costs and improve asset utilization and inventory performance. The solution acts as an extension to your existing enterprise resource planning (ERP), supply chain management (SCM) or legacy systems.

Designed for planning uncertainty—especially spare parts—DIOS comprises advanced optimization algorithms and is tuned for fast, medium and slow movers. DIOS offers tailored inventory optimization strategies adapted to product characteristics including:

- Intelligent automatic adjustment of the input data.
- Independent time series for use in forecasting and safety stock calculation.
- Forecasting and safety stock strategies that can be defined and combined globally, at the class level and for each sub-selection.
- Self-optimizing dynamic forecasting models (parameters, horizon, time aggregation).
- Patented forecasting strategies and safety stock determination calculations for slow movers.
- Optimal safety stock for slow movers through simulation.
- Full automation of the analysis, planning and optimization run, reporting, and order generation to help reduce manual efforts.
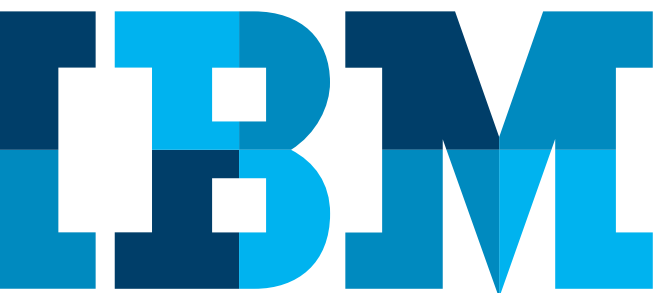
- Interactive what-if usage due to high processing speed from high-performance implementation.
- High cost savings potential of 20 percent–40 percent of inventory costs.[1]
- Integrated modules for replenishment and container optimization to help directly create order proposals based on the optimal inventory parameters calculated by DIOS.

Recognize areas where action is needed

A rigorous analysis of your supply chain management practices, tools and policies can help identify specific actions your business can take to both reduce inventory investment and increase inventory effectiveness, ultimately supporting business growth. IBM DIOS for spare parts can help you:

- Identify quick-hit inventory reduction opportunities
- Set differentiated service levels by segmenting customer and product portfolio across revenue, margin, lifecycle and inventory impact
- Identify high-opportunity areas to focus customer and supplier programs to reduce variability
- Trade-off replenishment and stocking costs to create optimal inventory levels that simultaneously reduce working capital investment while optimizing product availability

Help streamline inventory and reduce costs

Demand uncertainty and a highly competitive commodity business environment can compel maintenance companies and automotive spare parts companies to overstock their inventory—a costly problem. Increasing the inventory base can tie up working capital and increase storage costs. For every day your business holds excess inventory, you lose money. Simultaneously achieving optimum service levels and minimizing inventory is a challenge. IBM DIOS can cost effectively help you provide the right amount of spare parts to meet customer demand.

See how organizations are using DIOS

- BMW's central logistics operation is responsible for the inbound and outbound control of materials, quality management and overall logistical and commercial control for the global company. It supports multiple dealers with BMW OEM parts through 18 regional distribution centers and the central warehouse in Dingolfingen, Germany.

DIOS helps BMW manage its inventory at optimal levels based on highly complex, individually configurable algorithms for planning optimization with regard to assortment planning, order volumes, safety stocks, service levels and order points for rush orders, providing it with the potential to reduce carrying and logistical costs, increase service levels, and improve asset utilization and inventory performance.

- Using IBM DIOS, IBM was able to show Mann & Hummel Filter, a major European manufacturer of automotive components, how it could reduce inventory by more than 30 percent, while achieving service levels of 97 percent or more and reducing order lines by 18 percent a year.

For more information

Please contact your IBM DIOS representative or visit:
ibm.com/gbs

1 Based on internal IBM data.