IBM Dynamic Inventory Optimization Solution

Improve your bottom line through inventory optimization

Highlights:

- Supports strategic decisions by evaluating the impact of changes to the supply chain network and the adjustment of inventory policies
- Improves tactical decisions by identifying stock excess and shortages, leveraging demand forecasting, consolidating inventory across multiple locations and evaluating stock and service level trade-offs
- Helps increase operational efficiency by forecasting stock consumption with a better understanding of peaks and sporadic demand

Effective inventory management has become critical to companies as they strive to improve their customer service, cash flow and profit margins, while meeting the challenges of global competition, product proliferation, shorter lifecycles and demand uncertainty. At the core of inventory management is stocking control, which ensures that the right amounts of stock — raw materials, subassemblies, spare parts and finished goods — are available to support the company's production and distribution activities, as well as its cost objectives. To that end, companies must determine and manage to specific service levels so that customers across the supply chain are served in time, in full, to the extent required. Otherwise, stock-outs quickly translate into lost sales.

But finding the optimal balance among these factors is not easy, especially with the large volume of Stock Keeping Units (SKUs) that companies maintain today. Despite the use of enterprise resource planning (ERP) systems, just-in-time supply and other forecasting techniques, many companies continue to carry too much inventory while never achieving their desired service levels and fill rates. The response to poor availability is, in many cases, to over-produce in an attempt to safeguard against future shortages.

The IBM Dynamic Inventory Optimization Solution is designed to help you smartly manage 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 ERP, supply chain management (SCM) or legacy systems and is designed to help you:

- Assess and analyze parameter changes in near-real-time
- Assign the correct demand variation for each finished good through patented algorithms
- Choose from multiple service level options when calculating safety stock and conducting simulations

- Utilize various reporting options, including dissipation curves to track progress in reducing surplus over time and simulation graphs to use in policy planning sessions
- Assess inventory reduction opportunities by determining the optimal inventory at the end-item (finished good) level
- Evaluate many factors including service levels, demand variation, supplier lead times, batch size, overage and underage levels
- Identify quick hit opportunities for reducing inventory

Recognizing 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. The IBM Dynamic Inventory Optimization Solution can help you:

- Calculate the safety stock, reorder quantity and stocking location for every product at every location
- Create and update demand forecasts using methods that can help reduce forecasting errors
- Optimize the trade-offs between stock value, order quantity and frequency
- Consider inventory carrying costs and order processing costs in setting inventory targets and reorder quantities

Streamlining inventory, reducing costs

Demand uncertainty can compel 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. Achieving optimum service levels and fill rates is a challenge; the IBM Dynamic Inventory Optimization Solution can cost effectively help you ensure that the right amount of stock is available to support your company's production and distribution. Clients who have used the IBM Dynamic Inventory Optimization Solution have typically realized one-time inventory reductions of 15 – 30 percent.

Combining demand forecasting and inventory policies

The IBM Dynamic Inventory Optimization Solution helps you transform your inventory processes using a powerful "what if" analyzer built into the solution that is designed to let you quickly and easily examine the impact that changes to service levels, supplier lead-times or lot sizes, for example, might have on costs, budget and inventory levels.

Why IBM?

IBM consultants can work with you to assess your current inventory and present the optimal inventory levels you need to achieve your desired service levels. Or they can integrate the solution into your existing operational environment so you can analyze your inventory when you want. The solution is supported by IBM Business Analytics and Optimization, which brings together IBM's industry and process expertise, hardware and business performance software, and the company's deep computing and advanced analytics and optimization capabilities to tackle your most difficult business challenges.

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