

The Agile Enterprise

Inventory Strategy Optimization



RIVERLOGIC™

8350 N Central Expressway, Suite 1500
Dallas, Texas 75206
214.393.4650
sales@riverlogic.com
www.riverlogic.com

The optimal Inventory Strategy supports the company's strategic and financial objectives while maximizing service levels. The optimal solution improves corporate performance by simultaneously considering working capital, inventory policy, and the cash-conversion cycle.



Inventory Strategy Optimization

Problem/Situation

Successful manufacturers must understand the financial impact their inventory has on their working capital obligations. Similarly, they must constantly manage the delicate balance between acceptable service levels and cash flow – Items that often come at the expense of the other.

Most inventory planning solutions determine the best inventory mix using various heuristic methods for determining policy (including ABC classification) and for calculating key variables, including:

1. Average days of supply
2. Uniform service level
3. Product-specific attributes such as optimal service levels and demand characteristics

Although this approach is pervasive across manufacturing-related industries, it does present two significant barriers to inventory strategy optimization.

Optimization Barrier #1: The working capital and cash conversion cycle implications are always an output of this approach; not inputs used in the planning process.

Optimization Barrier #2: The financial impact of various policy decisions (service level, where to hold inventory, etc.) is always measured in terms of costs; not in terms of impact on cash flow or earnings per share.

River Logic Solution

Built on the revolutionary COR technology and Enterprise Optimizer® I Server 2008, River Logic's Inventory Strategy Optimization solution enables managers to determine the inventory strategy that best supports the company's strategic and financial objectives, while optimizing target service levels.

A more holistic approach to defining inventory strategy will allow inventory and supply chain managers to better align current inventory planning metrics with the financial goals of the company.

As part of River Logic's Integrated Business Planning (IBP) system, the Inventory Strategy Optimization solution incorporates constraint-based modeling, activity-based costing, and comprehensive financial modeling. Specific elements of EO's Inventory Strategy solution include:

- A single business model using operational, financial and KPI metrics, as well as business constraints, to act as a planning and decision-support platform
- Activity-based costing and advanced financial modeling methodologies for calculating full costs associated with inventory (holding; obsolescence; cost of capital), as well as cash flow and profitability implications
- Segmentation of products based on demand forecasts, profitability, cash flow and alignment with financial and operational KPIs
- Quantification of marginal opportunities associated with increased inventory holding, storage capacity and transportation capacity
- Impact of inventory policy decisions on cash flow and balance sheet line items at the location, division and enterprise levels, as well as by product segment
- Impact on the cash conversion cycle by incorporating the necessary accounts payable and receivable data for suppliers and customers
- Optimal performance by defining the best inventory strategy in a given scenario using financial, operational, or key performance indicator (KPI) metrics as the objective function

River Logic's EO Inventory Strategy Optimization solution addresses all the features of an inventory strategy solution, including:

Build Ahead

By simultaneously weighing the costs associated with longer run times, set-ups and capacity utilization, vis-à-vis the cost of holding inventory, EO provides visibility into key trade-offs and optimizes the build ahead strategy.

Safety and Cycle Stock

Through a proactive, well-informed product segmentation strategy, EO improves the planning frequency for products that are best aligned financially and operationally, thereby reducing the requirements for safety and cycle stock.

Additionally, EO provides simultaneous consideration of ranges of service level options, based on product segmentation weighed against operational (capacity, storage, transportation) and financial (working capital and cash flow)

constraints; thereby providing the optimal inventory mix strategy.

River Logic's EO Inventory Strategy Optimization solution is fully integrated with the other components of the Integrated Business Planning system, making an extension of business capabilities a high-value, high ROI solution.

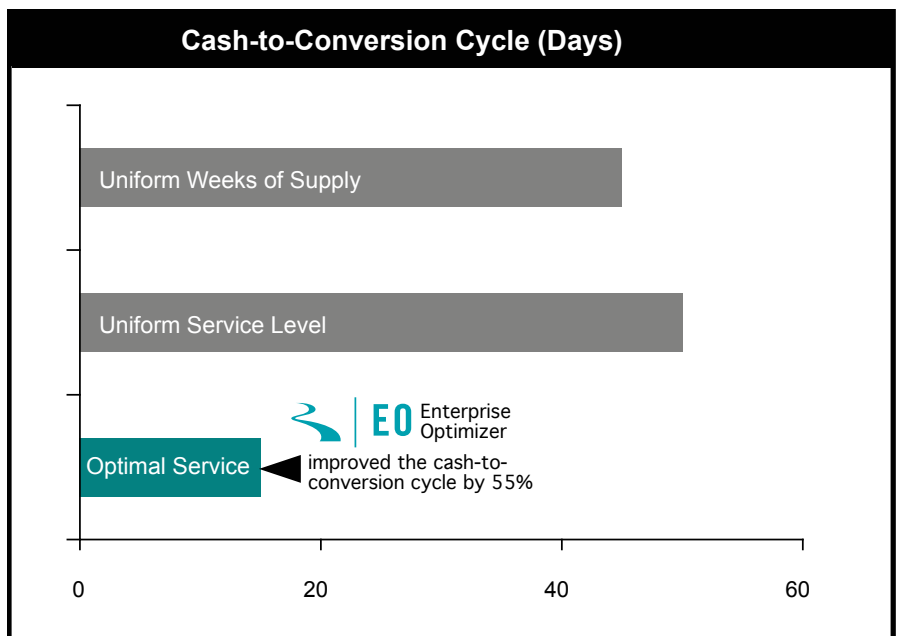
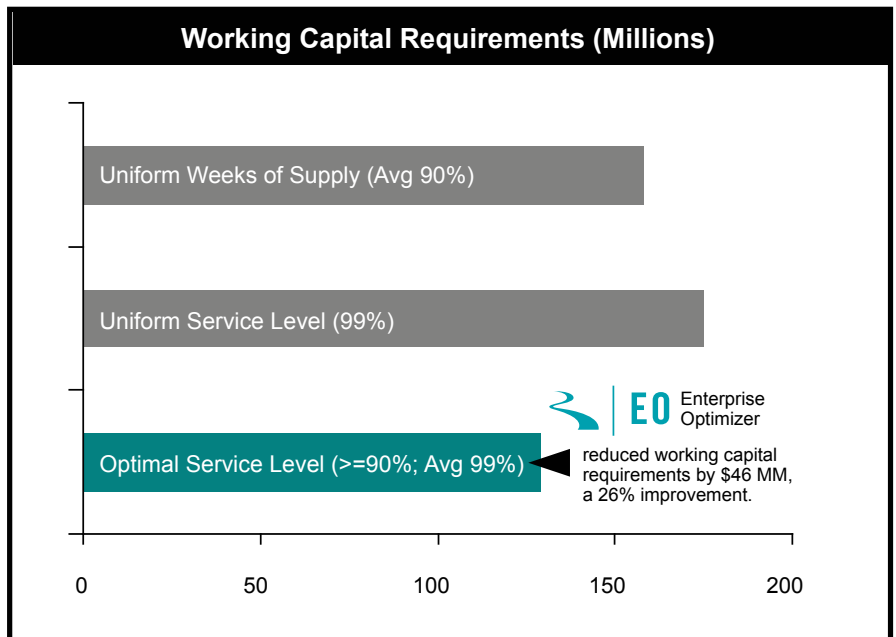
Case in Point

Customers typically obtain a short-term benefit of at least a 20% reduction in inventory. Longer-term benefits include a better-performing product mix, and a planning process that is aligned with financial performance. This leads to higher profitability and further reductions in working capital requirements.

A typical example of weighing different policy decisions, and studying their impact on working capital and net income, is reflected in the adjacent charts. The example considers three possible approaches:

1. Setting a uniform days of supply of 2 weeks (ignoring the order cycle), which results in lower service levels for some products
2. Setting a uniform service level of 99% for all SKUs
3. Setting a minimum service level of 90%, and an overall target of 99% fulfillment, while minimizing working capital

After evaluating each option using EO's Inventory Strategy Optimization solution to calculate the impact on net income and working capital, option three is the optimal solution. As illustrated, approach #3 reduced working capital requirements by 26% (\$46 million) compared to the other options, without decreasing net income. Even more significant is the faster cash-to-conversion cycle, which improved by 55%.





RIVERLOGIC™

© Copyright 2008 River Logic, Inc. All rights reserved. Enterprise Optimizer is a registered trademark of River Logic, Inc.

River Logic, Inc.

8350 N. Central Expressway Suite 1500 Dallas, Texas 75206 214.393.4650

www.riverlogic.com