White Paper

Six Keys to Exceeding Expectations with Inventory Optimization Initiatives

The crucial factors you must get right to ensure inventory optimization projects deliver outstanding results

Executive Summary

Congratulations, you're leading the inventory innovation initiative in your organization. Maybe you are a front line supply chain professional, or maybe you're a senior executive who "gets it" and understands the enormous cost savings and customer service improvements that can be gained by implementing a successful inventory optimization process.

In either case, you're committed to moving forward. But you also know that there are "forces of nature" out there that will work against you to slow you down or sidetrack your program. In this paper we will share experience gained from helping some of the world's leading manufacturers and recognized supply chain leaders avoid the pitfalls that can stall progress, sap forward momentum and potentially spell disaster for a program that would otherwise yield major business improvements.

We've distilled the most common factors that can make or break your inventory optimization [IO] projects. For this paper, we'll focus on six keys to success.

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Air Cover

"Air cover" for a supply chain professional means solid support at the executive level.

Even a senior staffer needs the backing of peers in supply-side procurement, manufacturing, distribution, sales and marketing, finance, and even strategic planning. Without air cover, many great supply chain initiatives wind up going nowhere. Here are the areas that your main stakeholders need to understand and buy-in to:

The Rising Tide Lifts All Boats: Working Together is a Good Thing.
Stakeholders in the supply chain come from diverse, often isolated, functions, ranging from purchasing to 3PL's, from sales to inventory planners, and so on. The organization that succeeds is the one that realizes it has much more to gain by generating a shared understanding [vision] of the supply chain. Making inventory-related KPIs visible, comparable and available amongst all business units will create a sense of internal competition and achievement.

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Getting Educated about Inventory Optimization is a Good Thing.
There are significant, proven benefits for just about every large or mid-sized manufacturing company that adopts an inventory optimization program. This is not in dispute—just read any recent supply chain report from industry analysts like Gartner, Forrester or Aberdeen. They basically assume that every manufacturer with revenues of US $500 million or more is already using inventory optimization technology to complement their enterprise resource planning [ERP] and supply chain infrastructure.

If you're just starting, this means you need to foster an attitude among the supply chain staff, as well as higher levels of management, that it's better to learn about optimization because leading companies—probably even competitors—have started taking it very seriously.

Here are some of the ideas to consider:

- A rule-of-thumb inventory methodology can erode your competitiveness. The complexity of today's global supply chains and the need to be demand-driven has changed the way we need to approach the supply chain.
- Supply chains have stages and locations, "echelons," that interact in complex ways that produce excess inventory. This excess can be scientifically counteracted without resorting to crippling brute-force reductions.
- Uncertainty on the demand side and volatility on the supply side can be managed to produce vastly better business results, but not by execution systems like ERP and advanced planning and scheduling [APS] alone.
- Uncertainty data is not typically collected, but if you don't collect it you're missing the boat. Uncertainty must be managed by an inventory optimization solution.

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Inventory Optimization Must Match Your Organization's Planning Process

Your organization has a planning process, but it may not be perfect. However, it does dictate how you'll go about the job of gaining support and successfully implementing your inventory optimization initiative. As Gartner notes, it operates on three levels: **strategy, tactics and execution.**

Supply chain strategy [inventory plans and policies], tactics [individual inventory target setting down to the SKU level], and execution [ERP] are like separate gears that mesh together to perform the work of managing your inventory wisely. But they should not be thought of as three facets of a single entity—strategic course setters take the long view, while those who care about day-to-day decisions need a dedicated, easily adopted mechanism for maintaining inventory and service at optimal levels.

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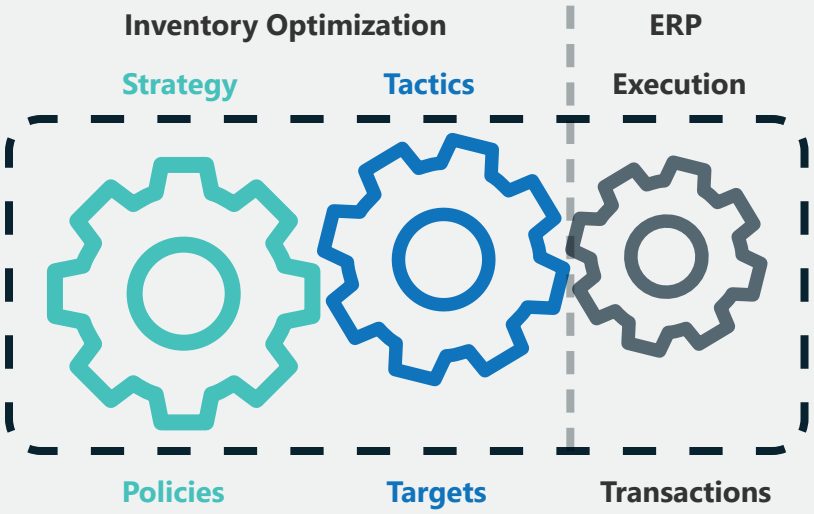
Your organization plans at the strategic, policy-setting level—establishing aggregate-level plans such as where products will be manufactured, which locations will store inventory and policy-related decisions such as postponement, vendor-managed inventory and target customer service levels. It then uses those policies to develop plans at a tactical level—how much of each product do we build, when and how much do we need to hold as safety stock. Finally, those plans go into action—the execution phase. ERP executes the plan.

You will need to learn how your organization manages through each of these phases. Strategic planners need different tools to evaluate step-change improvements in the supply chain, while day-to-day planners benefit from having a common process in place [instead of disparate spreadsheets].

To lock in usage and inventory savings, you must support each of these planning phases, cater to the different users and easily integrate with the execution systems.



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Avoid the Black Box

Your inventory target planners won't use a new solution unless and until they believe in it. It's simply not possible to put a "black box" into the supply chain organization and expect everyone to follow its lead.

Basically there is no substitute for—or shortcut around—using the knowledge of planners who are in the trenches on a day-to-day basis. These planners have at least a basic understanding of the data that goes into the process and accept the results that come out. Your staff needs to familiarize themselves with why and how supply chain information is being modeled, analyzed and processed to create optimal results for the organization.

The ongoing optimization takes into account transaction data as well as uncertainty in demand, volatile supply, costs and delivery timetables, inaccurate or inconsistent forecasts, replenishment cycles, manufacturing considerations, and more. It's not magic: it's math. Even though the algorithms and analytics have been extensively validated by academics and practitioners across industries and around the world over years of successful use, it is still crucial that your users have a chance to validate results, not only during the initial launch, but on an ongoing basis.

It is a fundamental fact that if planners are comfortable with the results of optimization recommendations—if they take ownership of the numbers—they become confident and will not revert back to old static and simplistic methods.

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This is NOT an Implementation Nightmare—Move Fast!

Every supply chain is characterized by an efficient frontier curve, which represents the trade-off between inventory cost and service level performance. You are in the process of moving your entire supply chain from one efficient frontier curve to a new, improved trade-off curve that achieves higher performance at much lower cost.

This is a profound improvement in the way your business operates and competes, but the most important factor in reaching this new level is to organize and mobilize your key resources quickly. Long, multi-year rollouts are vulnerable to shifts in focus and budget. You may lose key resources. And of course, there is always the impact of stakeholders changing jobs. So optimize your optimization initiative.

Don't let integration intimidation slow your initiative down. Some executives may believe that the extensive and expensive ERP or advanced planning infrastructure recently put in place should handle inventory optimization [IO], and adding an IO solution would require a major integration effort. This is a misperception. Execution-oriented ERP systems cannot do analytical inventory optimization, but a best-of-breed IO solution works alongside your transaction systems and does not require a massive enterprise integration project. Time-to-value should be a matter of weeks, not years. Estimates of lead times longer than a few months should be examined skeptically.

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Inventory optimization uses the data your ERP or advanced planning system have accumulated as its input, delivers optimized inventory plans, policies and specific inventory level targets as its output—which are fed right back into those ERP and advanced planning systems.

The work of the supply chain team is to ensure that the master data, assumptions and inventory components are properly configured in data sets, not to manage a complex or lengthy implementation project.

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Avoid the “One System Fallacy”

No matter what stage of an ERP implementation you are in, the truth is that multiple systems still run the business. Even in a firm that has standardized on one ERP platform, often multiple configurations and instances exist that effectively comprise separate systems. Your IT department needs the flexibility to use data from multiple platforms and systems to drive the right business policies. As an example, companies implementing in emerging markets like Brazil, India and Russia face diverse business and supply chain networks: their distribution channels could be vast and numerous; the data may not be available uniformly across all entities; coverage in the ERP/APS may not be adequate. All of these realities necessitate a built-in flexibility regarding the configuration, implementation and setup of the inventory system. Rigid assumptions on data integration and usage of systems will almost always have to be revised if the benefits are to be extended across this diverse and complex environment.

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Think Multi-Tier

Today’s leading supply chains have left their old, myopic, facility-centric viewpoints far behind. Your supply chain is a multi-stage, international network of nodes and interdependencies. It is bound to shift and change in reaction to acquisitions, consolidations, as well as evolving transportation, distribution and supplier relationships. You must factor in the global nature of your business when thinking about reducing inventory. Powerful analytical engines have been developed in the past five years that can reliably reduce end-to-end inventories across functions and facilities. Best-in-class companies use these systems to gain—and maintain—the edge in their industry.

Let multi-echelon inventory optimization [MEIO] become central to your supply chain performance improvement strategy and your ongoing sales and operations planning [S&OP] process.

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Conclusion

Inventory optimization [IO] is a proven vehicle to gain competitive value through reduced inventory, freed-up working capital and improved service levels. Industries are adopting IO en masse. Leading the inventory innovation initiative in your organization requires more than an understanding of its enormous cost savings and customer service improvements. It also helps put in place these crucial success-drivers:

- Build executive support within supply-side procurement, manufacturing, distribution, sales and marketing, finance, and strategic planning, and create a shared understanding of the supply chain. Make inventory-related KPIs visible among business units. Foster an attitude that it's better to learn about IO now because leading companies have started taking it very seriously.
- Learn your organization's planning process, from the strategic, policy setting level, through the tactical planning level, and then to the execution phase. Support each of these phases and cater to the different users in each.
- Use the knowledge of planners who are in the trenches day-to-day. They must validate IO results, not only during the initial launch, but on an ongoing basis. When planners are comfortable—when they take ownership of the numbers—they will not revert to simplistic methods.
- Long, multi-year rollouts are vulnerable to shifts in focus and budget. Take advantage of the fact that certain IO solutions do not require a massive integration project.
- Business and supply chain networks are diverse: their distribution channels can be vast, the data may not be available uniformly and coverage in the ERP/APS may not be adequate. Your IT department needs the flexibility to use data from multiple platforms and systems to drive the right business policies.
- Your multi-stage, international supply chain will shift and change in reaction to events. Factor in the global nature of your business and select a technology that can reliably reduce end-to-end inventories across functions and facilities.

About Logility

Accelerating the sustainable digital supply chain, Logility helps companies seize new opportunities, sense and respond to changing market dynamics and more profitably manage their complex global businesses. The Logility® Digital Supply Chain Platform leverages an innovative blend of artificial intelligence [AI] and advanced analytics to automate planning, accelerate cycle times, increase precision, improve operating performance, break down business silos and deliver greater visibility. Logility is a wholly owned subsidiary of American Software, Inc. [NASDAQ: AMSWA].

To learn how Logility can help you make smarter decisions faster, visit www.logility.com.

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