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How to Optimize Inventory in the Digital Age

For businesses with complex supply chains and demand uncertainty, service-driven inventory optimization is the better way to optimize inventory in the digital age. Here's why.

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Introduction

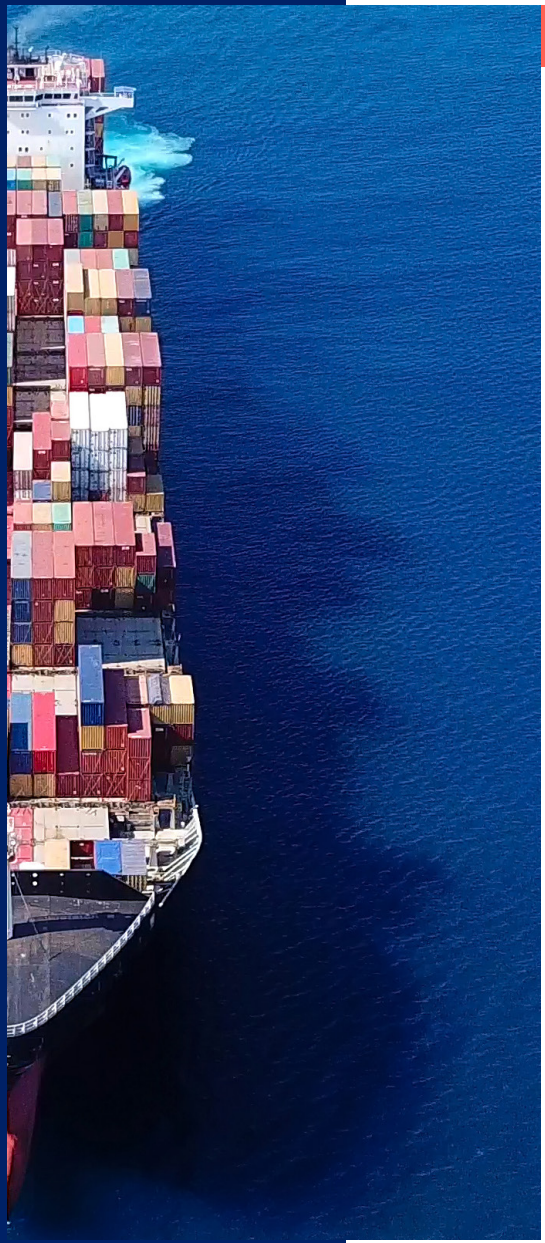
As many as 75 percent of companies are still trying to use spreadsheets to optimize their inventories. Most still also use ABC Classification, which dates all the way back to 1951. Planners relying on last century's solutions, however, stand little chance of being able to meet both service level and financial goals in a sustainable way. Global supply and demand is affected by such a staggering range of planning variables nowadays that ABC inventory planning on spreadsheets is akin to using a feather to crack a coconut.

Fortunately, the digital age has ushered in new tools, science, and ways of working, with the common thread of automation. According to a 2019 study by MHI and Deloitte "Elevating Supply Chain Digital Consciousness" inventory optimization (IO) tools, predictive analytics and artificial intelligence (AI) are among seven 'NextGen' solutions having the greatest impact on supply chains. Not only can these handle complexity, they actually thrive on it. They enable planners in companies as large as Procter & Gamble down to mid-sized family businesses to optimize inventory across their supply networks while freeing up capacity to engage in creative, personal and value-added tasks.

The most exciting part? Though much more powerful, these solutions are relatively easy to deploy and they empower and liberate supply chain professionals. Humans get to apply their business and market expertise and delegate the onerous, labor-intensive and precise data management and analysis to the machines.

This ebook, which draws on hundreds of successful deployments, will introduce you to the new building blocks for optimizing inventory in the digital age so you don't get left behind. It's right for you if your supply chain is characterized by:

- Diverse inventory mix needs that don't mesh well with ABC inventory classification or simple rules of thumb
- A high percentage of long-tail items
- Multiple demand streams, each usually with different service level requirements
- Global, multi-echelon supply and demand networks
- Seasonality, replenishment constraints
- Manufacturing constraints
- Promotional impacts
- New product introductions



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"The current generation wants the opportunity to be creative and solve challenging problems. They are not infatuated with the mundane. They want the flexibility to leverage their unique understanding of NextGen supply chains.[1]"

Randy Bradley, Assistant Professor of Supply Chain Management, University of Tennessee.

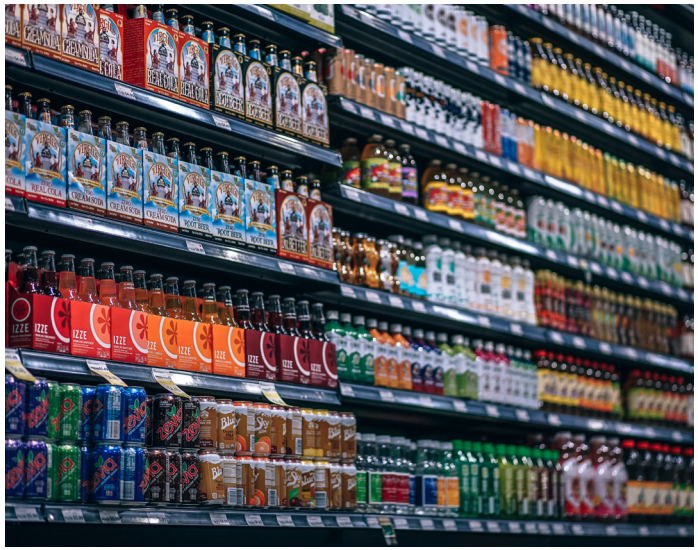
(1) 2019 MHI Annual Industry Report: Elevating Digital Consciousness

What's Wrong with ABC Inventory Analysis?

Before we introduce new tools and techniques, let's confront where we're going wrong. First stop: ABC inventory analysis. This has been around so long that most planners just assume it's the only way to segment an SKU portfolio. In fact, it's not. It's not even nearly the best way. ABC is a throwback dating back to 1951. Though it has served us well for many years, it hasn't responded to changing business requirements nor the massive increase in computer power that's enabled far better ways of solving the problem. This chapter explores why ABC is no longer fit for purpose and introduces the next-gen approach known as service-driven inventory optimization (service-driven IO).

To understand ABC's shortcomings, first we need to understand the fundamentals. Nearly all traditional inventory management applications calculate safety stock for each individual SKU-Location combination. Part of this involves identifying the desired service level percentage for each SKU-Location. Since many companies have hundreds of thousands, or even millions of combinations, it's impossible to identify a service level for every individual SKU-Location. ABC classification provides one way to simplify an SKU portfolio to make this process more manageable.

A common ABC tool is a 3x3 matrix with the cost value on the Y axis and order-lines on the X axis - a so called "double" ABC classification. The typical way to distribute items across the classes is to put 80% of the cost value in A, 15% in B and 5% in C. You then apply the same 80/15/5 breakdown to the number of order-lines. Since the 80% thresholds for order-lines and cost of sales are hit quickly, there usually end up being only a few A items. Therefore the end result is a matrix that looks like the one below, with a very small share of items classified as AA and the majority classified as CC.



AA	AB	AC	Item Number
9%	3%	2%	Count
BA	**BB**	**BC**	**Total**
8%	4%	3%	100%
CA	**CB**	**CC**	
7%	12%	54%	

Next, a "trial and error" process is applied to allocate a desired service level to each ABC class. The AA class is often given the highest service level and the CC class the lowest. The aggregated service level is calculated and might end up at 94% in the first try, which might fall short of the company's overall goal. To reach, say, a 95% goal, the planner makes a series of attempts using higher service levels for one or several classes (and perhaps reducing some). In this example the new distribution might turn into an aggregated service level of 95.5%. A small buffer (0.5% in this case) is typically applied, and the service levels for each class are confirmed.

From here, the planners assigns service levels for each ABC class. In the example above, if we have 10,000 items in stock, then 5400 in the CC class will be assigned the same service level target. Then the safety stock levels are calculated, which results in a total inventory investment.

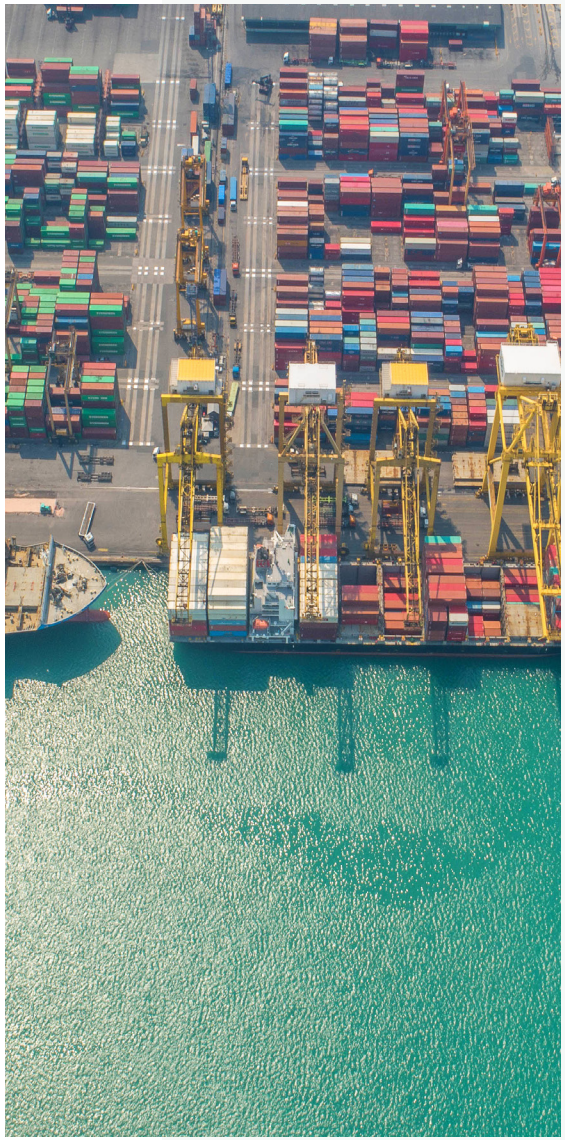
Now let's stop and think about this for a moment.

In ABC analysis, your inventory investment is calculated based on the service level for each item class. But we arrived at these by trial and error. Could we have chosen other service levels

for the classes and still reached 95.5%? Of course! There are a large number of combinations that could have yielded the same result.

How can we be sure that the distribution we chose was the most optimal one, achieving a minimum stock investment? The answer is that we can't. That is why this method is called "inventory management" and not "inventory optimization".

In our simple example we only described the process for one inventory echelon. Most supply chains are more complex, with multiple connected echelons such as central, regional and local inventories. Some traditional inventory management tools try to address this by providing an 8x8 ABC matrix per location. The workload to define and continuously maintain these matrices becomes very intense. What's more the odds of optimizing inventory are even lower than with the 3x3 matrix because there are more possible combinations.



Service-Driven Inventory Optimization: A Better Approach

There's a better way to optimize inventory in the 21st century! The new approach, service-driven IO, has been proven by hundreds of successful deployments from mid-sized spare parts retailers to the largest global consumer brands. Unlike ABC, which has an operational perspective, service-driven IO centers on sales, marketing and customers.

Service-driven inventory optimization looks at the problem from the vantage point of product range and the business. This key difference is the use of "service classes". Examples of service classes can be "accessories", "high margin items", "own-brands", "high-end brands", and "critical spare parts", to name a few. This way of categorizing makes much more sense to sales and marketing people than ABC.

What happens next is very different from traditional inventory management. By applying "stock-to-service" curves, software designed for this purpose optimizes every single service level and safety stock level by SKU-Location. This process is also known as "mix optimization". If demand variation or lead times increase, the stock investment (or complexity) must be increased in order to keep the same service level and vice versa.

You can even automatically define different target ranges for each service class. For example the aggregated service level goal for "accessories" could be 93% with a lower limit of 89%. The inventory optimization tools then calculates how to service this range in a way that minimizes stock investment. The beauty of this approach is that you arrive at an aggregated service class goal with the lowest possible stock investment. In other words, it's truly optimal.

In the next chapter, we'll explore probability forecasting, one of the key principles behind service-driven IO.

Probability Forecasting: a Primer for Supply Chain Planners

Probability forecasting (also known as stochastic forecasting) is an important principle in service-driven IO. This chapter explains how employing this relatively simple predictive concept can be an IO game changer.

There are two ways to make a prediction. The first is predicting that one specific thing will happen. For example: the horse "Secretariat" will win the Kentucky Derby. Since Secretariat is the most successful racehorse of all time, you might place a single bet on him to win. In the traditional world of inventory planning, this kind of prediction is called a 'one number' forecast. With this, planners aided by spreadsheets or legacy planning systems forecast one number for a particular item.

Single number forecasting can work in those circumstances where you are confident that an established pattern will be repeated – such as with fast-moving, commodity items. For example, you might have three years of history of selling 100 standard USB chargers every week, give or take a few. In this case, forecasting 100 units is a pretty safe bet.

Most products, of course, aren't like that, just like most racehorses aren't like Secretariat. Even the most successful, healthy horses with able jockeys are subject to many

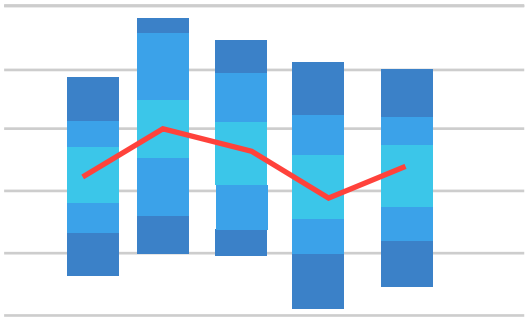
unforeseeable variables that affect their actual outcome. They could have a collision, develop a sudden injury, or just have an off day. Serious gamblers often review the range of possible outcomes and then apply their own knowledge before settling on a bet. They may also place multiple bets to 'hedge' against losses that would result from making a single bet.

This scenario is somewhat analogous to probability forecasting. In supply chain planning, advanced algorithms are used to analyze multiple demand variables to identify the probabilities of a range of possible outcomes, one of which is the most likely. It's a much more reliable way to make predictions where demand patterns are variable, where there's limited order history (as in the case of new product introduction), or when factors like seasonality come into play.

Even if aggregate weekly or monthly demand for an item stays relatively consistent, when you drill down into daily demand for that item by location, there is usually considerable volatility at this more granular level. And in a distribution network, looking at aggregate demand is not enough. To meet service levels, you need a plan that ensures you get the right number of items to the right locations.

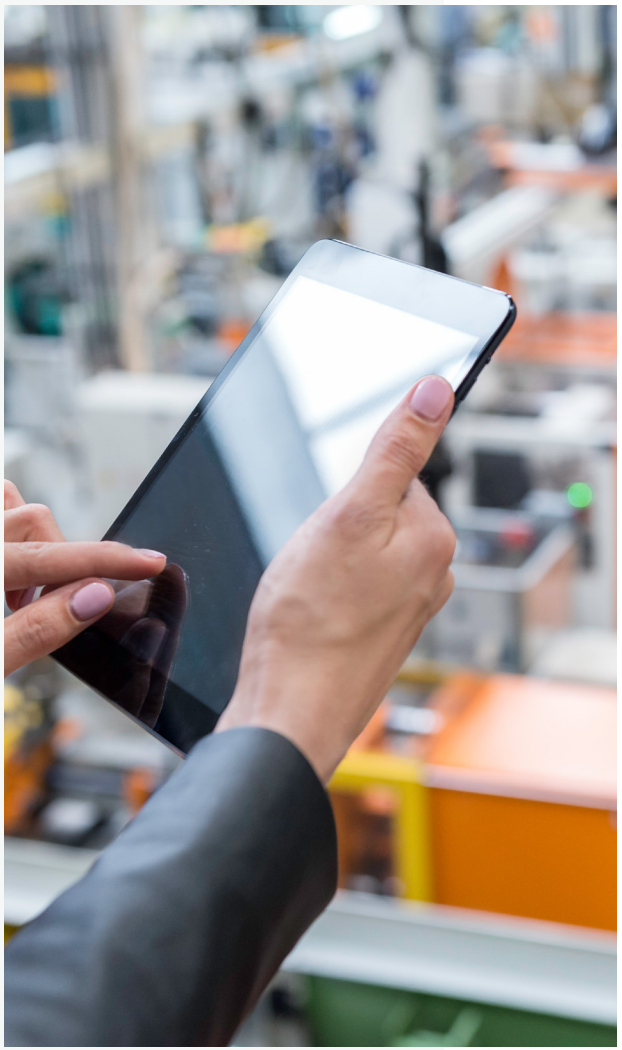
A probability forecast that takes uncertainty into account helps you manage risk. It's not just about improving average demand predictions but assessing the entire range of possible outcomes—including demand volatility, which has the biggest impact on service levels.

With probability forecasting, you still get one number that's associated with the highest probability. However banded around this number you get a range of other possible outcomes, each with a different probability attached.



Returning to the horse racing analogy, betting on Secretariat is likely pretty safe. But where there's little risk, there's also less reward. Similarly, in business, there's usually less upside in selling predictable commodity products.

Most thriving companies profit from carrying 'long-tail' products in their portfolio. Viewed



in this light, probabilistic forecasting is much more than a statistical method. It allows you to consistently place better inventory bets than your competitors for those harder-to-forecast items.

By freeing up working capital and improving service levels at the same time, this tried and tested approach can provide the sustainable competitive advantage to take your planning from good to great. And it can restore the trust in your forecasting.

When supply plans or safety stocks are based on wrong assumptions about demand uncertainty, targets go unmet and supply chains go into firefighting mode. Trust in the planning process erodes. When planners stop trusting forecasts they usually err on the side of holding too much safety stock. This leads to excessive costs, waste and obsolescence. Better to hedge your bet through probability forecasting.

How Probability Forecasting Drives Service-Driven Inventory Optimization

Now that you've mastered the basics of probability forecasting, let's see how it supports service-driven inventory optimization. In this chapter will run through a classic scenario: how probability forecasting optimizes stock levels at store and warehouse locations in a distribution network.

To understand the relationship between probability forecasting and inventory, your first assignment is to stop viewing your supply chain as a chain! Instead, think of it as a living system, subject to uncertainty and unpredictable chaos. This will help you understand why spreadsheets and legacy suites like SAP APO, which produce top-down aggregated forecasts using a deterministic approach, aren't right for service-driven IO. While easier to comprehend, in this context those tools produce chronically poor forecasting outcomes.

Let's take a simple example. A single number forecasting system might look at a sales history for a specific SKU of 12 tires per year and identify average demand as one tire per month. Therefore it may propose keeping one tire in stock. Because this forecast does not address customers replacing all four tires at once, it would continually propose poor inventory stocking levels.

Probability forecasting, as we explained in the last chapter, identifies a range of outcomes and the probability of each of those outcomes occurring. Modern IO systems can then use this information to calculate the optimal inventory targets.

Going back to our tire example, you really want to know the probability of each order quantity – for one tire, two tires, three tires, four tires, etc. which then provides better information to determine how much inventory to stock. Probabilistic forecasting provides exactly that information, identifying the order patterns (e.g., order size, order frequency) that inventory can use to service demand.

Most real life examples are far more complex, but the basic concept remains the same. Understanding the demand details yields a clearer understanding of the forecast than just averages. For instance, in the diagram above, on the left side two forecasts have the same aggregate historical sales. Without detailed knowledge of the demand stream, they would result in the same forecast and the same

inventory. But on the right, the demand details (order patterns) reveal that the two demand streams are quite different, yielding very different forecast uncertainty and very different inventory requirements.

Nucleus Research says that inventory optimization is best understood as "a form of predictive analytics." They say that best-in-class probability planning systems do the most accurate job of predicting the amount and type of stock to carry at the item-location level.

A deterministic approach is particularly inappropriate for planning "long tail' items such as specialty foods or certain spare parts. That's because demand for long tail items is intermittent and doesn't conform to predictions of "average" demand or normal distributions. So demand details make all the difference.

Real life examples of companies using probability planning systems abound. Consumer giant P&G recently moved to a probabilistic forecasting tool to plan its complex Global Distributor Markets (GDM) supply chain that serves emerging and challenger markets.

Global prescription lens manufacturer Shamir Optical's is an excellent example of how probabilistic forecasting is linked to being more service-driven. Rather than a "one size fits all" inventory policy, Shamir applied "mix optimization" (introduced in Chapter 1) to create a blend of different service level targets for each individual SKU in each location. The firm reduced inventory levels by more than 25 percent overall while consistently achieving service levels exceeding 99 percent. See the full case study, along with others at the end of this ebook.

Probabilistic forecasting yields not just better forecasts, but leads to a host of inventory planning and optimization benefits as well, such as being able to better address specific demand patterns, long tail demand, complex supply chains, and achieving aggressive service level targets.

The good news about probability forecasting and service-driven IO is that you don't have to earn a PhD in statistics to apply it your daily supply chain planning work. The concepts might be more advanced, but the tools automate and shield you from the underlying complexity. However you do need to know how to evaluate service-driven IO software.

In the next chapter, enterprise software experts Nucleus Research explain what to look for and what outcomes to expect in a modern IO tool.

DO YOU HAVE A LONG TAIL?

SYMPTOMS OF A LONG TAIL

Growing SKUs

Product variations (such as colors and sizes)

Items considered not forecastable

Seasonality/ regionality

Increasing number of distribution centers

Replacement parts

Global business expansion

If you have **any** of these symptoms, then you have a long tail.

Many businesses don't realize how many slow movers they actually have and how fast their tails are growing. Learn how to evaluate yours.

If not managed properly, the long tail has an insidious effect on profit margins and service levels.

YOUR LONG TAIL MAY BE MORE COMPLEX THAN YOU REALIZE

The long tail is analyzed by examining **the combinations of items and locations**. For many, the complexity of the long tail issue can involve distributors, distribution centers, and can be global with millions of SKUs.

ITEM

SHIPPING LOCATION	A	B	C	D	E	F	→
1	✓	✓	✓	✓	✓	✓	→
2	✓	✓	✓	✓	✗	✗	→
3	✓	✓	✓	✓	✗	✗	→
4	✓	✓	✓	✗	✗	✗	→
5	✓	✓	✗	✗	✗	✗	→
6	✓	✓	✗	✗	✗	✗	→
7	✓	✓	✗	✗	✗	✗	→
8	✓	✗	✗	✗	✗	✗	→
9	✓	✗	✗	✗	✗	✗	→
10	✗	✗	✗	✗	✗	✗	→
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TO ASSESS THE EXTENT OF YOUR LONG TAIL:

- Create a matrix of items and shipping locations
- Identify SKUs where number of weeks without demand exceeds the number of weeks with demand – this defines your long tail.

Pay attention to SKUs that are not considered forecastable. They also comprise the long tail and may become forecastable with the proper analysis.

For more information on how to manage your long tail, visit **http://bit.ly/1HhVJOY**

THE LONG TAIL CAN BE MASTERED

STEP 1- ANALYZE:
Determine where the long tail is the most extensive and make a business case for implementing changes.

STEP 2- AUTOMATE:
Evaluate technology that can model demand and inventory – and minimize manual intervention. This will reduce errors in forecasts and improve inventory turns.

STEP 3- MONITOR:
The long tail is ever changing. Continue to refine your forecasts as your analysis dictates.

How to Pick the Right IO Tool: 7 Steps from Nucleus Research

As we said in the last chapter, software does the heavy lifting involved with service-driven IO so, it's vitally important to select the best tool for the job. The advice that follows is an abridged and annotated version of Nucleus Research's "Seven Steps to Pick the Right IO Tool" to help you set the right evaluation criteria and functional brief. This advice assumes that your company isn't among the small minority whose demand is highly predictable and can be managed using simple, deterministic tools.

#1. Assess business purpose

This one might sound obvious but it's important to be very clear and specific about the outcomes you expect before contacting software vendors with an RFI. As a first step Nucleus recommends that you determine your primary business reasons for buying an IO tool. Here are some typical questions to help guide the process.

- Do you need a tool to help you lower inventory to free up working capital? Or are you looking to ensure the right mix of inventory is available to support sales and drive revenue?
- Are you struggling to maintain the right stock levels to address growing volatility in the market?
- Do you need to keep the right parts in stock to reduce expediting costs and provide a more level signal to

production scheduling?
- Does your company have twin goals: inventory reduction and better service?

#2. Assess functionality

What capabilities do you need that are unique to your industry and supply chain? Depending on the complexity of your distribution network and other planning variables, Nucleus Research recommends that you consider including the following criteria in your brief:

- Multi-echelon inventory optimization (MEIO) included as standard functionality. This allows companies to adjust inventory holistically across multiple locations in the supply chain.
- Employs a stochastic (probability) model for inventory calculations, so that the application not only identifies the most likely outcome (the forecast) but also the implications of possible upper and lower limits of demand fluctuations.
- Models inventory at the SKU level and by location.
- Provides granularity at the item level, which is critical to being able to determine the precise inventory holdings by location to meet anticipated demand.
- Can accurately predict the amount and type of stock to carry at each location. (Generating high-level predictions and then smoothing them to the individual SKU-location level will not get the job done right).
- Can the tool model your supply chain accurately. If that's not done right, your company won't get favorable results, no matter how many features and functions can be found in the tool.
- Does the tool employ machine learning AI to improve and fine-tune optimization over time?

NOTE: Nucleus advises not to get caught up in the old way of buying transaction-based software – with long detailed lists of feature and function requirements along with vendor responses.

#3 Conduct a proof-of-concept

Before making a firm commitment for a solution, a company should test drive the software. A Proof-of-Concept (POC) involves providing actual data to the vendor and asking the vendor to validate the software's ability to build a working model of its solution.

The data selected could be for a geography, a product line or some representative portion of your business. Providers should be given actual company data for the trial. Take a significant

portion of items from the company's inventory and ask the vendor to run its model to set inventory levels. Then compare the vendor's test scenario with what actually happened.

The test should be substantial enough to verify the sustainability of the process and the scalability of the solution. A successful test should offer proof that the solution can indeed improve service levels and minimize stock, thus offering a clear indication as to whether the company will get a payback from the investment.

NOTE: The POC helps avoid a feature and functionality "bake-off" where bells and whistles distract from the required functionality of the proposed solution.

#4 Test for "Cruise Control" (automation)

Optimized inventory models are extremely complex and not suited for manual analysis. Therefore it's vitally important that the IO tool provides automation. Nucleus advises testing IO tools for these capabilities:

- Alerting users to 'exceptions'
- Handling 'what-if scenario' planning'
- Ability to incorporate new variables as the business grows or changes, or the supply chain operation becomes more complex
- Ability to automatically and continuously adjust for a variety of conditions and changes without constant manual intervention

#5 Test for ease of use

The tool you choose should be easy for supply chain planners to use in their daily jobs. Although many tools offer a high degree of functionality, planners still need to understand the application and the results. For instance:

- Users must be able to easily define their "service policy" (target service levels for classes such as high-margin products), so the IO system can translate service targets into inventory targets.
- It should have an intuitive graphical user interface (GUI) that allows the user to easily set up "what if" scenarios.
- The tool should come with dashboard analytics allowing users to spot key metrics at a glance.

#6 Evaluate cloud support

Nucleus Research has determined that cloud solutions get a 1.7 X greater ROI than on-premise applications. That is because cloud

solutions do not incur additional costs for installation, hardware systems, integration, maintenance, and can be set up according to a company's specific needs without custom coding. Companies may also save considerable money by purchasing cloud software on a subscription basis rather than laying huge sums of money upfront on licenses.

#7 Evaluate training and support

Nucleus Research found that 56% of companies that have dedicated users for a supply chain tool received their desired ROI. This compares to only 33% of companies that don't have dedicated users. In order to cultivate skilled users, the vendor must provide thorough training and high level of support.

Ask the vendor for user references to validate claims of after-sales support. The level and amount of support should be the deciding factor when comparing IO solutions with the similar functionality, usability and ROI.

Case Examples

Although probability forecasting and service-driven IO are next-generation supply chain planning techniques, there are hundreds of companies that apply them successfully to reduce inventory and raise service levels and planner productivity. These range from small family-run automotive spare parts companies like Lubinski to large global brands like Absolut. We've selected a few to inspire you to imagine how service-driven IO can positively impact your supply chain and business outcomes.

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Case Example

The Absolut Company

For the Absolut Company supply chain complexity has steadily increased, with SKUs jumping by 19% as the number of core flavors increased from 11 to 18 and the number of limited editions went from two to 12—an increase of 600%. In contrast to the highly automated production process, the production planning process was a manual task. Forecasting and production planning was performed by one planner, with the help of spreadsheets.

Absolut set long-term objectives to increase service levels and reduce inventory investment. ToolsGroup partner Optilon proposed a solution that could guarantee product availability according to targets, with minimal investment in finished goods. ToolsGroup was put in place for demand planning, inventory optimization and replenishment. With a fully integrated yet user-friendly solution, one planner is still in control of the entire forecasting and production planning process.

ABSOLUT.

Results:

- Reduced time needed for manual planning, while freeing up time for exceptions and decision making
- Better overview of the bottlenecks enabling higher deliverability when inventories are temporarily low
- Overall production efficiency and product availability improved, with no further investments in resources and competences

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Case Example

Lennox Industries

Lennox Industries faced a monumental challenge of growing its North American distribution network by 250% while simultaneously transitioning to a hub-and-spoke model with 55 shipping and 161 selling locations. The company's inventory profile included 450,000 SKU-Locations and a very "long tail" - lots of slow movers and lumpy demand. In addition, Lennox's business is highly seasonal and it replaces up to 50% of inventory in new products every year. Finally it must meet very high service levels: 75% of orders are delivered next day and 20% are picked up on the same-day by installers and contractors.

Lennox partnered with ToolsGroup to dynamically rationalize the inventory mix and create an operational plan that sets inventory stocking targets and balances service levels with inventory cost. The system allows Lennox to reliably model both seasonality and variable demand patterns. Network inventories are rebalanced by creating a dynamic optimal mix of inventory and service levels down to the store level. Lennox can also set global service policies by group or category and then the system automatically calculates individualized service levels for each SKU-Location. The system is integrated to Lennox's SAP APO platform. Deloitte Consulting provided integration services and addressed key strategy, technology and change management issues.

LENNOX

Results:

- Improved service levels by 16%
- Increased inventory turns by 25%
- Supported significant increases in sales and market share growth

Case Example

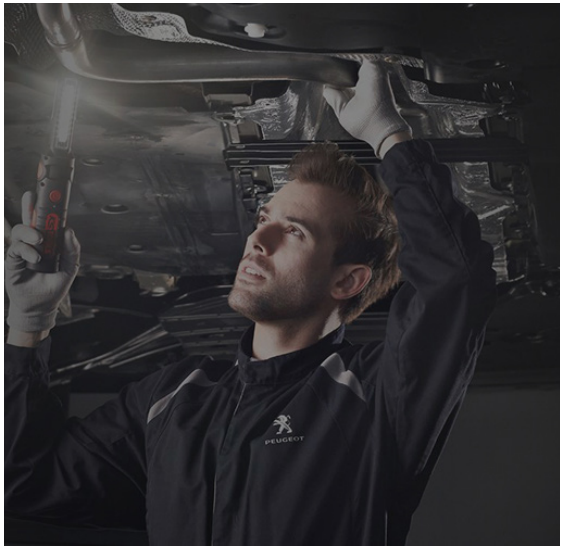
Lubinski

Lubinski is Israel's sole importer of Peugeot and Citroen vehicles and spare parts and one of the country's leading privately-held family businesses. Lubinski faced a challenging environment of managing more than 20K slow moving items in their warehouse. Planning was done with fixed and manual methods. Although having two full-time planners, stock levels were still increasing forcing write-offs due to obsolete items.

Technology partner, Rasner Logistics Software, convinced Lubinski that it could break its planning impasse by integrating its new ERP system with the ToolsGroup supply chain planning system to build an advanced system that was fully-automated and self-learning. The team fine-tuned optimal replenishment policies for all of Lubinski's SKUs. Popular fast-moving items, for example, are assigned the highest service levels. New items with fewer than three sales are assigned slightly lower service levels. Today the ToolsGroup system is fully automated and 'self-driving' to the point that Lubinski almost never needs to override the replenishment proposals the ToolsGroup system recommends. It takes only one planner a day a week to handle all inventory planning and replenishment.

Results:

- 25% stock decrease
- Stable service level of 95%+
- Rush air shipments slashed by a third
- €1.5 million first-year savings attributed to inventory reductions alone
- Increased planning productivity



Conclusion

Five Points to Remember

We hope that this ebook has provided you with practical knowledge and inspiration for how your company can optimize inventory in the digital age. Here are the key points to remember:

1. **It's impossible to optimize inventory in a complex environment using ABC inventory analysis and spreadsheets.** The new way is to apply probability forecasting and advanced planning software that supports this approach.

2. **Probability forecasting is replacing the traditional 'one-number' deterministic forecasting approach.** Probability forecasting identifies a range of outcomes and the probability of each of those outcomes occurring. This information is used to calculate the optimal inventory targets.

3. **Service-driven IO is the new and proven way to optimize inventory in the digital age.** Unlike ABC, which has an operational perspective, service-driven IO centers on sales, marketing and customers. It uses categories known as "service classes" that sales and marketing people can easily relate to, like "own-brands", and "critical spare parts". Then it optimizes every SKU-Location against a target service level for each service class. The result is that you arrive at an aggregated service class goal with the lowest possible stock investment. This approach truly optimizes (not just manages) your inventory at every stocking point.

4 **Probability forecasting is the key to 'service-driven' IO.** To understand why you need to stop thinking of your supply chain less as a 'chain' and more of a living and highly complex system. A deterministic 'one-number' forecast only works when your demand is highly predictable and consistent. Probability forecasting is a predictive approach that is suitable for the majority of scenarios: SKU portfolios that include large percentages of long tail items; fast-fashion and other forms of 'hyper-seasonality; frequent new product introductions; products that are highly influenced by fast-moving trends and other external factors like weather and stock price fluctuations.

5 **Since IO in complex supply chain environments cannot be done manually, selecting the right software tool for IO tool is vitally important.** Selecting the right tool isn't just about evaluating a different set of functional criteria, it requires a completely different approach. For example, IO tools must be test-driven with real data in a live environment to ensure they produce the right business outcomes. Nucleus Research's 'Seven Steps' are excellent tips for ensuring your IO tool evaluation is successful.

toolsgroup®

Take a Service-Driven Approach to Inventory Optimization

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