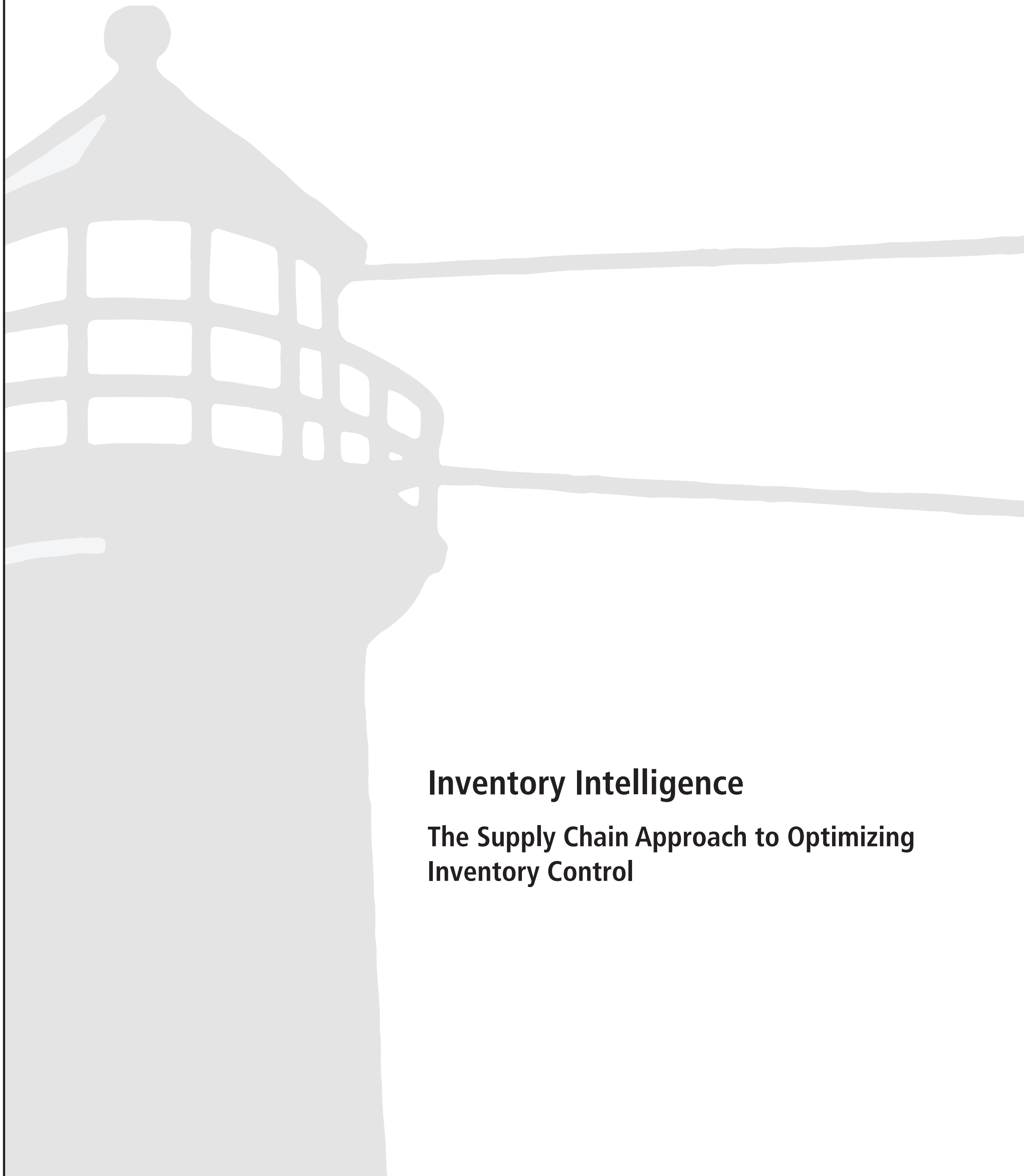


Inventory Intelligence

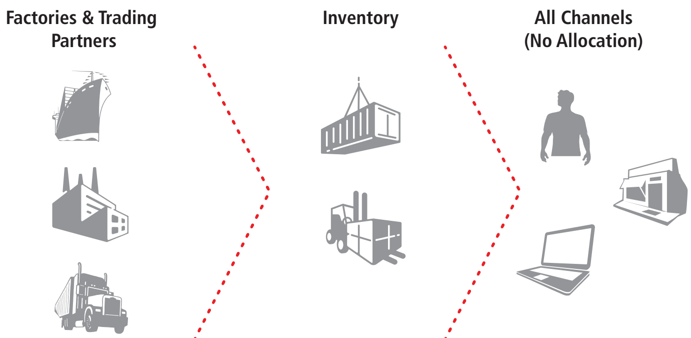
The Supply Chain Approach to Optimizing Inventory Control

A GT Nexus White Paper

The Inventory Problem

How much inventory should you carry? Getting stock levels right has always challenged retailers. Too much product, and goods go obsolete, forcing you to mark down prices. Too little, and you risk losing sales and customer satisfaction. And since a significant portion of retailers' assets are tied up in inventory, a well-balanced stock is crucial for cash flow.

FIGURE 1: Traditionally, supply chains are not built to optimize inventory & fulfill orders in an omnichannel world.



Traditionally, retailers tried to perfect inventory levels by focusing on what they could see — the on-hand stock at the distribution center or store. This was still incredibly difficult. But now, a revolution in customers' shopping habits has rendered even those tactics inadequate.

Omnichannel — purchasing and returning goods through a seamless combination of physical, online, and mobile experiences — has made it difficult to figure out where to direct inventory, let alone how much to carry. Additionally, the short product lifecycles of **fast fashion** companies have created the need to replenish inventory rapidly, to deliver goods from "catwalk to consumer" in an instant. And the global expansion of commerce has brought overwhelming complexity to today's retailers by introducing long, extended supply chains that involve countless suppliers, manufacturers, and transportation providers.

Today's retailers need to look upstream in the supply chain network to solve inventory problems. The decisions made there involving cost and service have rippling effects all the way down to the store level.

Yet this upstream focus remains dark, uncertain territory for many. It is the single greatest challenge in this new era of volatile demand.

Planning Has Its Limits

One common way to deal with uncertainty is through extensive planning and forecasting. Planning systems are necessary, but they receive a disproportionate amount of time, energy, and money — when execution is really where the rubber meets the road.

After all, things don't always go as planned. Environments change. Unexpected events happen. Demand shifts. Investing solely on a finely-crafted plan is a waste. Instead, retailers must become more aware of all their operations. The more aware you are — the more information you have — the better you will respond to any sudden occurrences.

For managing inventory, that means having detailed information about the entire supply chain network.

Using supply chain data to remove even a few days from total pipeline inventory can equate to millions of dollars in asset and cost reduction per year, due to:[1]

- Understanding the impact of true vendor lead times on cost/time of ownership
- Knowing how on time failures drive an increase in safety stock
- Eliminating inaccurate cost factors affecting projected margins

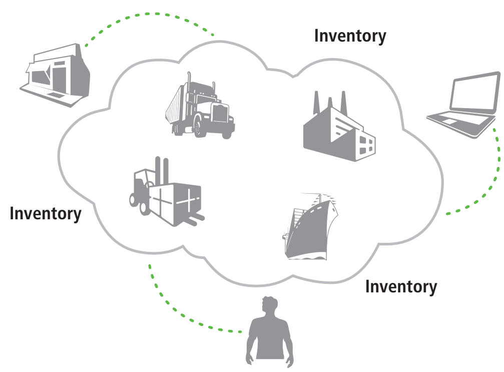
Such direct benefits aren't even the best part of having supply chain insight; aware retailers can protect themselves against inventory uncertainty in the best way possible — through **agility**.

Agility Brings Adaptability

By being agile — having the visibility and communication tools to make quick changes — a supply chain can respond to demand shifts in lock-step. Whatever incidents come up, the right inventory can still get to the right places at the right times.

Retailers, in particular, can use agility to make several types of adjustments on the fly.

FIGURE 2: Omnichannel: Supply chains connected in the cloud have agility to make rapid adjustments on the fly.



Adjustments to "What"

Assortment — the type, kind, size, color, and model of goods — is a big part of inventory management. Figuring out what assortment to carry is difficult because the goods customers want fluctuate with time and location, especially in today's omnichannel, fast-fashion age. Satisfying customers requires tapping into real-time demand while still producing within realistic lead times.

One solution is to postpone decisions about finished products' color and size until as late as possible, to adjust orders based on up-to-date demand.

CASE STUDY 1: Positioning & Postponement

A leading lifestyle brand has eliminated days in inventory by finalizing its assortment closer to market. This gives it a distinct competitive advantage. By positioning materials close to production sites and making late decisions about dyeing and cutting, it is no longer committing to final assortments 120 days out from sale.

[1] Caterpillar: Visibility Through CAT's Eyes http://www.gtnexus.com/success-stories/cat/

Adjustments to "Where"

Demand changes geographically just as it does with time. By being able to **dynamically reallocate** goods on demand — sending them from one destination to another seamlessly at any given moment — retailers can adjust to regional and channel volatility. Accomplishing dynamic reallocation requires having real-time, SKU-level information on demand and supply worldwide.

CASE STUDY 2: Dynamic Reallocation

A large toy manufacturer is leveraging dynamic allocation through its third-party logistics (3PL) relationships. Purchase orders contain freight stations, instead of endpoints, as destinations. Once the goods are received at the freight station, a status update goes out to the manufacturer's allocation forecasting systems. Factoring in updated demand, and making decisions based on certain criteria, these systems then send orders to the 3PLs to redirect the shipments to new destinations.

Adjustments to "How Much"

Quantities can fluctuate with demand too. What sells out in one place at one time might sit unpurchased at another. Once again, this is a balance between overstock and out-of-stock, amplified across multiple channels.

Obtaining real-time data at every node of the supply chain enables retailers to execute rapid re-planning programs. For instance, retailers can avoid stockpiling inventory by cancelling part or all of a purchase order prior to delivery, or match order-ready dates to maximize utilization.

CASE STUDY 3: Agility & Resilience

A leading sportswear company has adopted new strategies for synchronizing supply to support demand spikes, and pre-empt disruptions. By having full supply chain visibility it can see what replacement or substitution options are readily available. Coupled with securing supply early, this clear view of supply allows for fast decision making and scenario analysis. The company can adjust to hot items, change orders, or what is not selling.

New technologies and new approaches to inventory management will empower retailers to develop the agile supply chains they need to handle volatile demand.

Integrating Management and Information

It's important for retailers to align their own internal incentives in a way that's consistent with achieving supply chain agility. The merchant, sourcing, logistics, and planning teams are all responsible for the cost of getting product from supplier to customer.

CLOUD

The engine behind inventory success will not be found online or in the brick-and-mortar storefront. It will be in the agile supply chain.

The best inventory management programs depend on many variables. However, improving inputs from the supply chain has a great influence on:

- Replenishment
- Short shelf life category planning
- Allocation

Precise information about order cycles, lead times, and variances gives retailers a superior view of their inventory flows. Managers need to harvest that information with the right technology to develop agility.

An easy mistake is to think that simply adding features to existing technology will increase process control. It won't. Dealing with the complexity of today's retail supply chains requires technology that's centered upon all the events that take place across the entire supply chain network. Good technology captures every bit of detailed information and presents it in an intuitive, actionable format.

It may seem a herculean task, making sense of all that data from disparate systems. This is where a cloud-based approach becomes powerful.

Cloud platforms, by nature, are system-independent, highly reliable, interoperable across vendors, and social. The cloud can therefore act as a museum curator for supply chain data. No matter where the information is coming from, it can arrange each piece together to tell a larger story to everyone involved.

In today's mutually-dependent ecosystem of retailers, manufacturers, suppliers, and distributers, the cloud also serves as a single point of collaboration and engagement, removing the constraints of point-to-point interaction. It provides global access and a ready-built community, and by doing so, turns every transaction into a collaborative process. This enables all partners to gain proactive insights and take coordinated actions together. At the same time, each individual business takes a customized approach to its priorities. And the cloud keeps all internally-relevant information private and secure.

The role of the cloud will continue to expand as supply chains continue to grow more complex.

Inventory Intelligence

Inventory continues to be one of the most complex challenges facing retailers today, magnified by new shopping trends. Finding the right way to manage inventory upstream will be crucial to retailers' success.

The approach to inventory management can be evolutionary or revolutionary, depending on the goals of an individual organization. However, after the recessionary focus on cost cutting over the last several years, there has been an important shift toward growth.

Now the challenge is managing cost and profitability in conjunction with growth.

Inventory intelligence means leveraging the right information technology to take action about volatile demand. It means using all available resources, like supply chain network data, to analyze and optimize, coordinate and communicate, and adjust expertly to any given situation.

The upstream territory of inventory directly impacts working capital requirements, carrying costs, margins, service levels, and SKU profitability. A retailer can know it's getting the most out of its inventory investment when its gross margin return on inventory investment (GMROI) improves.

As retailers strive to provide the best consumer experience they can in a world full of volatility, effective inventory intelligence across the supply spectrum will be the cornerstone for delivering differentiation, profitability, and sustainable innovation to the retail market.

So how much inventory *should* you carry? There's only one way to find out — ask your supply chain.