

WHITEPAPER

THE DEFINITIVE GUIDE TO INVENTORY OPTIMIZATION

Inventory Optimization Process



HYDRIAN'S UNIQUE PROCESS SOLVES COMPLEX CHALLENGES WITH TECHNOLOGY, STRATEGY, AND HANDS-ON EXECUTION.

When it comes to inventory optimization, having the right stuff, in the right place, at the right time is certainly much harder than it sounds.

Managing variable supplier lead times, dynamic demand, and snarled supply chains is complex work that requires constant attention to get right. Aside from time and effort, the data analytics and supply chain expertise needed to get the most out of your inventory investment are outside the reach of most companies.

Inventory optimization is both a tactical and a strategic challenge. With sub-optimal processes, you're likely to face:

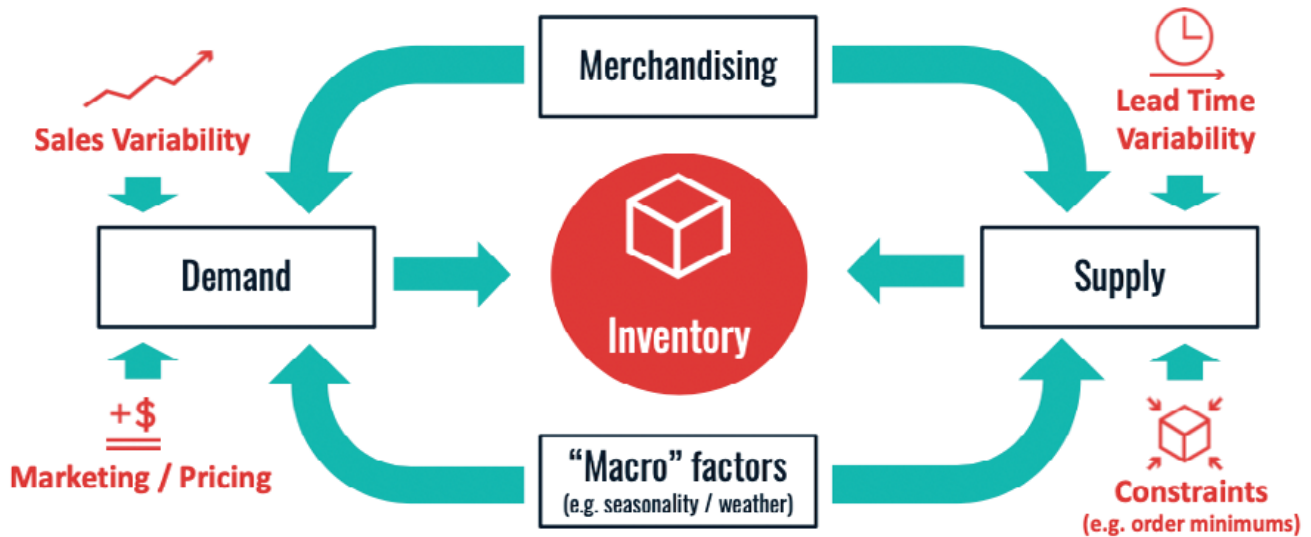
- Stockouts and low fill rates (or low service levels) leading to lost sales
- Excess, aging, and outright dead stock
- Rising cancellation rates and customer dissatisfaction
- Expensive split shipments (i.e., one customer order, multiple deliveries)
- Supply chain delays as COVID and other global factors continue to affect large swings in both supply and demand
- Low supply chain visibility due to ineffective reporting and analysis

Yes, inventory optimization is complicated. But, it's solvable, and it's what Hydrian does for our customers every day. In this white paper, we will do a deep dive into our approach. Our goal is not just to help you understand Hydrian better but also to offer you at least a few takeaways to apply to your own business.

Before getting into the specifics, we should understand what we mean when we talk about inventory optimization. In short, we want inventory to achieve its primary goal as efficiently as possible: to serve as a **buffer between supply and demand**. If you:

1. Knew exactly when every vendor replenishment will arrive, and...
2. Knew exactly which items customers will buy, when, and...
3. Didn't have to worry about vendor constraints like minimums orders...

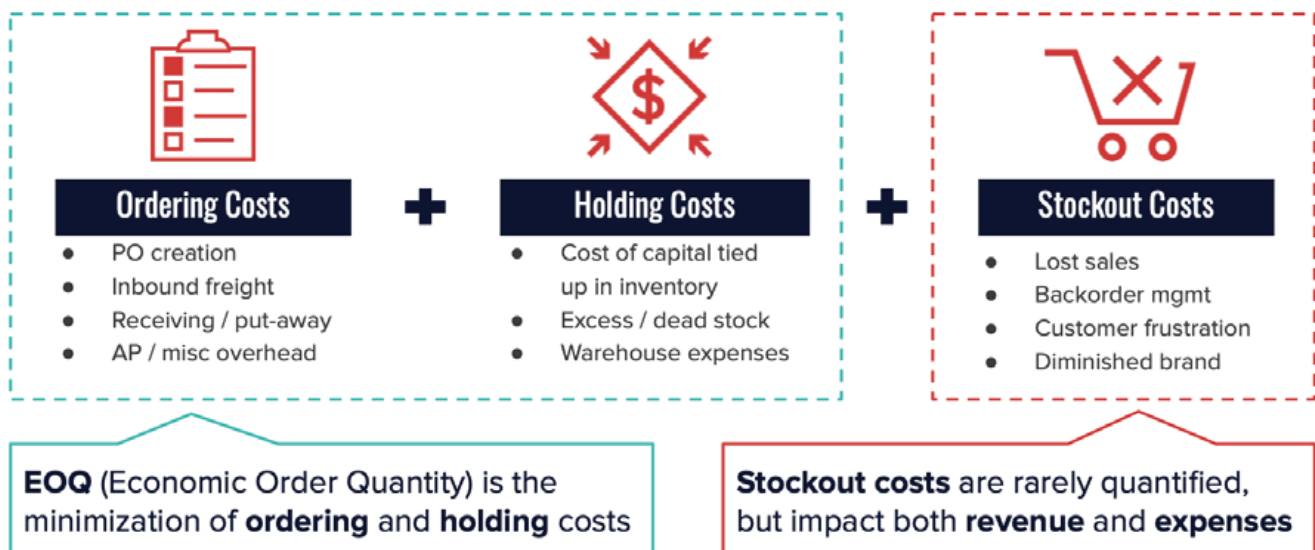
...you would carry zero inventory. Instead, every vendor purchase order would arrive at your warehouse on the same day as a corresponding customer order, and you'd cross-dock everything straight to the customer.



Of course, the real world doesn't work this way - life is uncertain. Inventory optimization determines the correct inventory buffer required to minimize three major cost factors in light of that uncertainty:

1. **Ordering cost** - the marginal cost of bringing in multiple, smaller vendor receipts, as opposed to receiving inventory in larger "chunks."
2. **Holding cost** - the space and cash tied up in your inventory.
3. **Stockout cost** - lost sales, cancellations, and customer service overhead that occurs when you don't have in-demand items in-stock.

Once you've figured out a strategy that minimizes those costs, you have to execute a purchasing and replenishment plan that delivers on that strategy. Moreover, you need to continuously adapt both the strategy and execution as your world of supply and demand changes.



INVENTORY OPTIMIZATION WITH HYDRIAN

Hydrian's inventory optimization process flows through four core phases:

1. **An initial, no-cost inventory assessment**
2. **Strategic recommendations with real ROI**
3. **Daily, actionable recommendations for your team**
4. **Ongoing strategic guidance and tactical execution for your business.**

Our approach encompasses technology, strategy, and execution and is focused on achieving results through daily interaction with your team on detailed tasks geared towards better inventory performance. Unlike traditional software or consulting, we are effectively **embedding** our team with yours in a high-touch, long-term **partnership**.

The bespoke technology we build for each client is internally facing and leveraged by our team members, who push live recommendations into your existing systems. There is no new dashboard to log into, no training, and if you're ever unhappy with Hydrian, your old processes remain intact

With Hydrian, there are no new systems to buy, no additional staff to hire, and no long term contracts.

As we work together, our clients realize:

- **Higher revenue due to greater stock availability**

If you are more in-stock on the products that people want to buy, you will sell more of those products, resulting in higher revenues. However, determining exactly how much more inventory should be held to maximize revenue while not tying up too much cash in inventory is a far harder question and one we help answer for all our clients through a spill rate analysis.

[More on spill rate can be found here.](#)

- **Less dead and excess stock**

Reducing the amount of dead and excess stock is done in two ways. The first is ensuring more of the items people want to purchase are being stocked - easy enough. The second is keeping a watchful eye on all inventory levels to quickly take action (through promotions, vendor returns, etc.) when sustained drops in demand are observed. This is a much harder thing to do, and Hydrian has built ways to support the identification and liquidation of stock on a path toward obsolescence. Better managing excess will not only improve your income statement by selling would-be-excess stock before it is too late, but it also improves your balance sheet by freeing up cash tied up in slow-moving or dead inventory.

- **Free warehouse space yielding reduced costs**

In most cases, we observe fill rate increases accompanied by inventory reductions. As a result, shelf space opens up, allowing for product line expansion or deferral of opening an additional warehouse. Either way, if inventory can be managed more effectively, the “cost” of warehouse space is reduced, given that more of it exists.

- **Lower logistics costs with fewer shipments delivered more quickly, plus fewer cancellations and returns**

As you optimize inventory within your distribution network, more orders will be fulfilled in their entirety from the shipping point closest to the customer resulting in broad cost savings. Not only do delivery times and distances decrease across the board, but split shipments are also vastly reduced (saving an additional shipment or eliminating a shipping delay). Together, these also decrease cancellations and returns, creating even more savings.

- **Enhanced customer service and brand reputation**

By having the right inventory, in the right place, and at the right time, satisfied, repeat customers will begin to consider you a trusted stocking source, driving added customer lifetime value as well as referrals. [A Bain & Company study](#) conducted in collaboration with the Harvard Business School found that a 5% increase in customer retention led to a corresponding 25% to 95% increase in profits when factoring in both customer lifetime value and additional referral business.

Our engagements follow a proven step-by-step process:

STEP 1. YOUR NO-COST INVENTORY ASSESSMENT

At Hydrian, we begin with a no-cost inventory assessment built around identifying current challenges in your inventory, finding the optimized relationship between your inventory investment and stock availability rate, and describing what a future for inventory may look like at your business. We want to make sure our relationship begins with a clear understanding of how Hydrian can make a tangible difference that is quantifiable and justifiable.

GATHERING YOUR DATA

Our first assessment step begins with gathering a standard set of inventory, sales, and receiving data readily available from any ERP system via standard reports or exports. Our “integration-less” method means we are happy to accept the data we need from any system and in any format - most clients transfer to us via SFTP. Easy.

Because this data flow does not require any special integrations or API calls, all Hydrian customers continue to use their existing ERPs with our service. There's no new software to buy. No disruptive implementations. No systems investment of any kind.

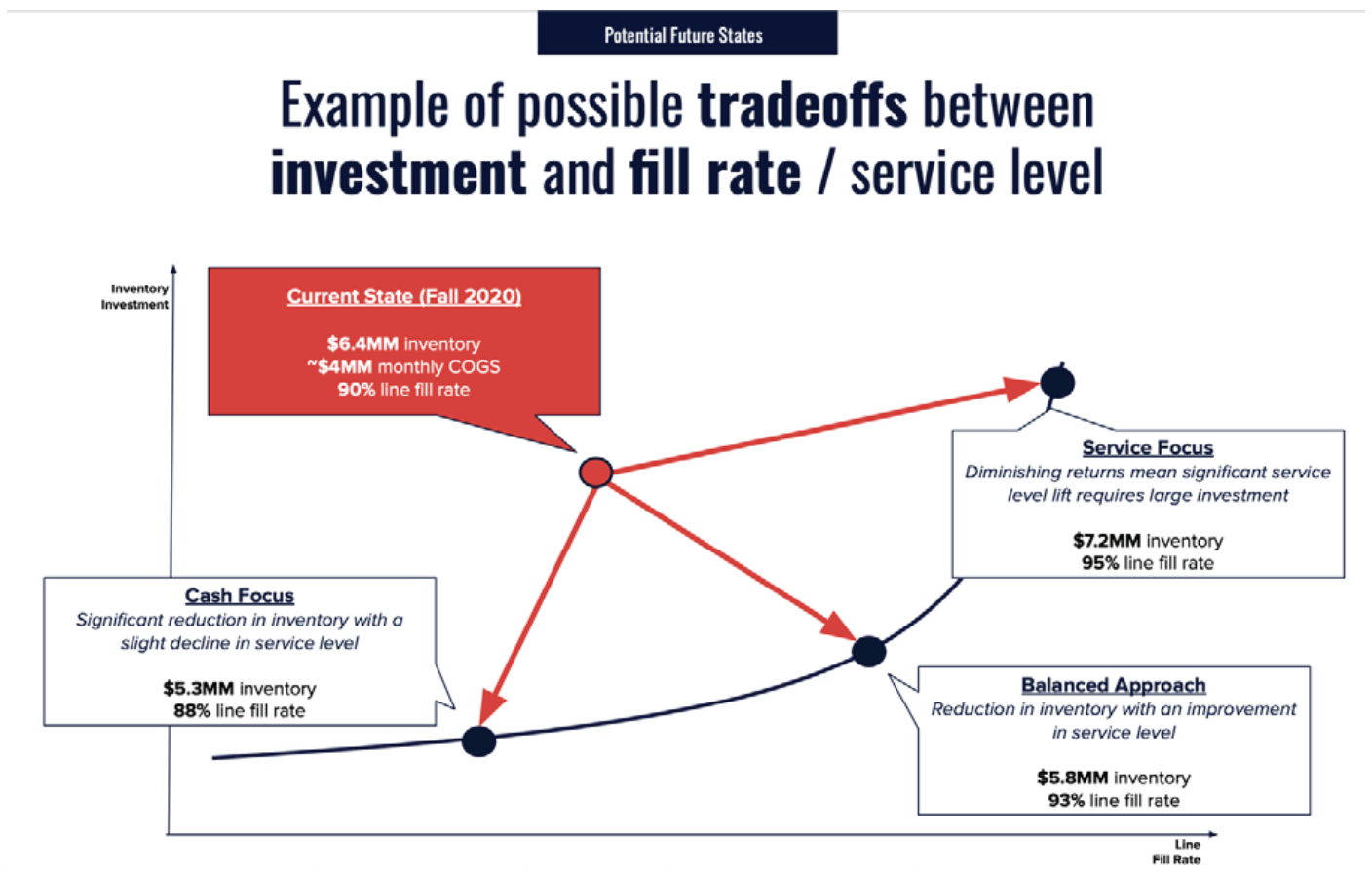
Adding to your efficiency, as you continue with Hydrian's inventory optimization service in the future, the data transfer method established during your assessment phase remains in place. *When we move from assessment to action, negligible additional IT effort is required.*

POWERFUL AI-BACKED DATA SCIENCE PLUS UNPARALLELED EXPERTISE

Next, Hydrian's powerful algorithms and expert inventory analysts crunch enormous data sets, turning them into actionable insights. An example of an insight you can expect from an assessment is the "efficient curve."

This representation plots how your inventory investment, service levels, and operational costs interact with your unique mix of products. Hydrian will suggest a few points on the curve that we would recommend considering, but all points along the curve are optimal.

An example curve is below.



STEP 2. INITIAL STRATEGIC RECOMMENDATIONS WITH REAL ROI

With the visibility provided by Hydrian's no-cost inventory assessment, it's then a short step to calculate demonstrable return on investment with key strategic recommendations. This quantification brings your inventory picture into a clear view.

Hydrian's strategic recommendations explore the two major drivers of ROI in inventory optimization in addition to other bespoke challenges (i.e. split shipments, hub-and-spoke transition, etc.):

- **Increased revenue due to greater stock availability**

Hydrian can use the data received to estimate current stock availability and suggest where we believe your optimal availability should be. With these two data points, we can estimate the expected sales lift from a reduction in stockouts using data on spill rate (sales lost when out-of-stock). This sales lift has often been known but never quantified within an organization and can be a tremendous driver of inventory optimization ROI.

- **Inventory reduction**

Returning cash to the business that is or was expected to be tied up in inventory is often the source of significant ROI in our engagements. Usually, our customers can cut inventory investment while maintaining or increasing their service levels. One piece of this is having better controls around managing and identifying excess stock. However, a surprising portion of inventory reduction is found around higher volume products. In many cases, high-volume products have less variability in demand and therefore permit stocking strategies that run closer to the edge of the envelope because how they sell is more predictable - this goes back to the purpose of inventory defined at the beginning.

- **Bespoke challenges**

The two sources of ROI above are shared in any inventory optimization work. However, Hydrian addresses all inventory-centric problems. The more we know about current inventory challenges or near-term inventory dreams, the more prescriptive we can be with strategy recommendations that will drive added ROI. For example, if we know you are considering opening a new warehouse, we can provide some guidance on 1) if it is needed (assuming the need was driven by limited space) and 2) where we would recommend placing that distribution center (DC). Leaning on Hydrian to help make this decision can save you from enlisting a consulting firm to do this work and/or help shine a light on additional considerations that may have been overlooked internally to make an optimal decision.

Our initial strategic recommendations should readily demonstrate an ongoing ROI that easily outstrips our fixed monthly fee – typically 5 to 10 times over. If it does not, we will not take on the engagement.

GETTING STARTED WITH HYDRIAN

As you consider Hydrian's inventory optimization process, keep in mind that everything we've discussed so far comes at no cost. We leverage your data to deliver a series of strategic optimization recommendations spanning the breadth of your inventory practices.

And we demonstrate that our inventory optimization guidance quickly yields significant cost savings and revenue increases. If these financial impacts are not 5 to 10 times greater than Hydrian's fixed monthly optimization fee, it's our practice to NOT proceed with such relationships.

WHY NO RISK FOR YOU?

Solutions in the market today for inventory optimization require lengthy contracts and steep up-front costs. However, because inventory optimization has such observable ROI, our business model (no contract with a flat monthly fee) is predicted on results rather than contracts. We use the assessment to get to know our prospective customers better and provide them with meaningful insights, and as an opportunity to ensure we can bring value. This approach helps us foster a more meaningful partnership from the onset of the relationship.

STEP 3. HYDRIAN'S DAILY, ACTIONABLE RECOMMENDATIONS

Once signed on as a customer, the inventory optimization strategies presented in the no-cost assessment are refined with leadership. They are used to craft daily, actionable recommendations to begin achieving your inventory goals.

Hydrian's algorithms span the breadth of your data to generate explicit purchasing, transfer, and inventory tasks. We share these daily, actionable recommendations in any way you would like. Typically they come in two forms: (1) a direct upload into your purchasing system and (2) an Excel spreadsheet that serves as a to-do list for your team and support for the recommendations already uploaded into your system.

Common recommendations cover:

- **Purchase orders (queued directly into your ERP for execution):**

These are explicit purchase orders tailored to your inventory goals - what item, in what quantity, and into what facility.

- **Inventory transfers**

Just like purchase orders, these are explicit transfer recommendations that include the exact item, quantity, transfer from the warehouse, and transfer to the warehouse. These can come as often as necessary to support your business. In some cases, our customers don't require transfer recommendations frequently, which is no problem.

• **Excess and dead stock disposal**

Although inventory optimization will reduce the amount of excess stock you carry, it is unavoidable. These daily recommendations are used to prompt actions (such as discounting) on items that are candidates for becoming excess stock so profit can still be extracted from these items before it is too late.

Here's an example of a daily, actionable recommendations sheet:

Hydrian's daily, actionable recommendations are incredibly powerful in three important ways.

- 1. They are tangible and achievable representations of your inventory optimization goals driven by finely tuned calculations.** Daily, actionable recommendations take the guesswork out of inventory management, replacing it with proven precision. As we work with your teams, this certainty builds confidence and effectiveness. However, these recommendations can also be discussed, and we encourage it. It is always worthwhile to have a conversation about an order you don't understand so both parties can align on the why.
- 2. With your daily, actionable recommendations in hand, your staff is more efficient as they're able to quickly execute purchasing tasks day by day.** This focus on action – not reaction – means your vendor, distribution, and sales relationships become more predictable and productive.

3. When the heavy volume of inventory management becomes more automated and predictable, you gain more capacity for strategic planning. This force multiplier often builds additional optimization momentum as your teams become more efficient and more effective at their roles. It's not uncommon for Hydrian's daily, actionable recommendations to enable managers to take on additional leadership projects and initiatives.

ADDITIONAL VALUE-ADD DELIVERABLES

Daily, actionable recommendations are a core pillar of Hydrian's offering and make a tremendous difference in inventory performance improvement. However, there are additional deliverables in our engagements that happen less frequently but account for considerable value.

- **Performance reporting**

The same goals set during strategy meetings that influence daily, actionable recommendations can also be measured. Hydrian creates reporting to measure inventory metrics over time to provide current and past performance visibility. Although we track several generic metrics with customers, such as fill rate, this reporting is often tailored to monitoring improvement in inventory challenges specific to your business. For example, if a goal of the business were to ship more orders from stock in 3 or fewer business days, we would build reporting to ensure that metric is improving based on our daily, actionable recommendations.

- **Actionable reporting**

There are plenty of inventory tasks outside of orders and transfers that do not require daily action but are optimization tasks and can make a big difference. These are usually unique solutions to address bespoke challenges at a business, but ones we see frequently are:

- Rebate optimization: determining the best basket of goods to order from a vendor offering a rebate
- Historic supplier performance: tracking lead times and lead time variability by month by supplier makes it easier to pick up the phone and correct any supplier issues quickly
- Open order management: it can often be useful to quickly respond to demand changes by editing open orders with your suppliers before they ship out to either avoid excess accumulation or capitalize on a hot selling item.

As we get to know a business through our no-cost assessment or as new issues arise during our engagement, actionable and insightful reporting is created to tackle specific issues head-on.

STEP 4. ONGOING STRATEGIC INSIGHTS FOR YOUR BUSINESS LEADERSHIP

One additional advantage of Hydrian’s inventory optimization process is that the high volume of tactical wins it produces creates a natural platform for strategic planning. This momentum drives monthly or quarterly meetings with your executive team and our inventory experts, which often focus on:

- Supply chain safeguards and contingencies
- Distribution network models and expansion
- Import and domestic sourcing
- Sales channel diversification
- Ecommerce opportunities.

TAKING STOCK

As shared at the start, inventory optimization is often a noise and signal challenge. The sheer volume associated with managing variable supplier lead times, dynamic demand, and complex networks frequently overwhelm clear focus.

At Hydrian, we know that inventory relationships from supplier to the customer may be measured, quantified, and understood. We’ve built powerful algorithms and an amazing team that calculates exactly how to optimize this mix every day.

Amazing things happen when your teams are armed with these “daily, actionable recommendations.”

- Confidence and efficiency increase,
- Supply networks operate effectively,
- Strategic insights surface,
- Customer satisfaction grows,
- Sales increase, and
- Your brand improves.

This bright line — technology to strategy to execution — is inventory optimization done for you. With Hydrian, there are no new systems to buy, no additional staff to hire, and no long-term contracts.

Hydrian’s process and strategic insights are proven to deliver at least a 5 to 10X ROI on our fixed monthly fee. We will not move forward as your inventory optimization partner if we can’t demonstrate such returns with our no-cost inventory assessment. There’s truly no risk for Hydrian to help you finally get a handle on your inventory challenges.

As we work together with your teams, you'll achieve:

- higher revenue due to greater stock availability
- less cash tied up in inventory
- free warehouse space with fewer costs
- lower logistics spend with fewer shipments, cancellations, and returns
- enhanced customer loyalty and brand reputation.

THAT'S THE POWER OF INVENTORY OPTIMIZATION DONE FOR YOU WITH HYDRIAN.

LET'S GET STARTED

**REACH OUT NOW TO TAKE CONTROL OF
YOUR INVENTORY**

 **(888) 263-4207**

 **EMAIL US**

