



Missing Links in Retail Out-of-Stock:

Maximizing Technical Solutions Through People

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Executive Summary

Game-changing technologies are helping retailers both manage and reimagine the entire value chain. These technologies—and robust technical expertise—are critical components of solving what remains one of the industry's oldest and most costly challenges: out-of-stock retail inventory. However, based on live engagements with our clients and supported by persistent global out-of-stock figures, we believe technologies alone don't guarantee transformation: they require people to bring to life.

For those seeking to reduce and/or control high out-of-stock levels, this report details Integration's four-part approach to bridging the gap between technical solutions and human capital to achieve lasting, transformative results. Our four-part approach covers what we call the "missing links"—practical, tangible actions that connect people to processes and enable C-level retail executives and senior leadership to:



I. UNDERSTAND YOUR REALITY

Assessing the impact that different categories make on your company's bottom line, and identifying the strategies that are most important to your inventory assortment are critical first steps to reducing out-of-stock levels. By answering two simple questions about the turnover rate of each category you sell, and the stability of consumer demand and supplier availability, it's possible to classify your inventory assortment into one of four distinct quadrants in our Replenishment Segmentation Matrix. The Replenishment Segmentation Matrix delineates how retailers can optimize replenishment strategies per category (eschewing a one-size-fits-all approach) by understanding each category's "replenishment DNA." As just one example, prescription medication is typically characterized by a predictable turnover rate and stable supply and demand chain, and falls into what we call the "Maintain Discipline" quadrant. This type of product category can be managed exclusively by Supply Chain and its replenishment is likely to be fully automated.

II. GUARANTEE UNITY & COLLABORATION

Identifying the demands of your inventory assortment and the replenishment strategies that support it gives each organization a compass to follow in bringing out-of-stock levels under control. However, it is absolutely necessary to secure top-level company sponsorship to ensure that the different areas that contribute to out-of-stock inventory (Merchandising and Store Operations as well as Supply Chain) are involved and committed to its resolution.

This section includes examples of how siloes between departments can cause out-of-stock scenarios to quickly escalate and spin out of control (what we call the "vicious cycle"), and why positioning out-of-stock alongside the more common KPIs of revenue, margin and inventory works well for many retailers.



III. PICK YOUR BATTLES

Retail has never been more complex. For companies dealing with tens or hundreds of thousands of SKUs, it's literally impossible to control everything at once, even with a clear understanding of category demands and replenishment strategies. We recommend identifying root causes through a few simple questions and zeroing in on the biggest problems first. After reviewing common root causes across the major retail departments of Merchandising, Store Operations and Supply Chain, we focus on how leveraging vendor relationships—just one piece of the value chain—can kickstart results throughout your organization.



IV. STAY THE COURSE

The most self-evident piece of advice is often the most difficult to execute. As we illustrate through live case examples, achievements in out-of-stock inventory rates can easily backslide when any of the above steps falls out of priority. As new company initiatives and inventory choices come into play, consistency is key.



Finally, in our conclusion, we offer details about how all four missing links recently came together for a premier retailer, and the potential that awaits all companies who pursue a holistic approach to ensuring technical out-of-stock inventory solutions are connected to people within their organizations.



Read more about our approach to Retail Out-of-Stock Inventory at integrationconsulting.com.

I. Why Are We Still Talking About Retail Out-of-Stock Inventory?

From a concrete perspective, this question is quite simple to answer: out-of-stock (OOS) inventory remains at the forefront of retail challenges because it continues to harm the profitability of companies everywhere. A 2018 study from global research and advisory firm IHL Group, for instance, estimates the global financial drain of OOS inventory at nearly USD\$1 trillion¹ due to challenges ranging from misplaced products to staff unable to locate items to bare shelves and more.

However, it's likely that the real cost of OOS inventory is even more. As one of our clients recently asked, "Why am I risking losing a customer that I worked so hard to win and have already spent so much time and money on over an OOS item?"

Implicit in this view is that the price tag on OOS inventory extends to everything that's been done to bring a product across

the value chain: the hours spent negotiating with vendors on pricing and contracts, the marketing dollars on branding and promotions, the cost of rent and maintenance on premium store locations—and last but not least, the investments in technology and processes that never quite reach desired results.

In a landscape of more technical possibilities than ever before—possibilities that are undoubtedly propelling retailers forward in significant ways—our experience suggests that non-technical solutions are the true crux of persistent OOS inventory issues. We know many successful retailers, for example, who despite the benefits of big data analytics, predictive software or increasing automation, still struggle with routine steps such as matching master data to items on shelves, maintaining vendor relationships, guaranteeing items make it to the store floor, etc.

"Why am I risking losing a customer that I worked so hard to win and have already spent so much time and money on over an OOS item?"

Critically, this is *not* because new tools and capabilities aren't important. Robust technical solutions are non-negotiable in all scenarios. However, a new technology or process alone doesn't guarantee real, lasting transformation. In fact, it's only half of what it takes to make a solution truly work—which we believe will continue to be true, even in a world of fast-evolving possibilities.

The other half, attention to people, requires connecting human capital to the practical actions that make implementation

of a technical approach effective. We call these connections the "missing links" of OOS inventory. With the goal of preserving not only monetary investments but everything a retailer expends on winning customers, the following four steps—Understand Your Reality, Guarantee Unity & Collaboration, Pick Your Battles and Stay the Course—offer pragmatic ways of bridging the gap between each organization's people and the actions that make an OOS inventory initiative transformative as a whole.

¹ IHL Group, "Out of Stock, Out of Luck," June 2018.

II. Missing Links in Out-of-Stock Inventory



i. Understand Your Reality

It may seem obvious that a bakery running out of bread creates a completely different impact on a retail business than ovens at a home appliance store, shampoo at a grocer or medicine at a drugstore. However, many retailers apply similar, one-size-fits all approaches to their categories, despite very different contexts. For this reason, our first missing link guarantees that leadership has a precise view of the replenishment demands of the business' inventory assortment, e.g. its reality, to establish the scope of actions that professionals from different areas (Merchandising and Supply Chain at this step) must take to support healthy OOS

levels. This means segmenting the business—and selecting the strategies that correspond to each category's replenishment DNA.

Take a department store that carries a limited inventory of high-end, seasonal apparel and a large variety of quality basics (T-shirts, jeans, socks, etc.). While the high-end apparel verging on OOS will create urgency to buy, implying a different OOS objective all together, a low supply of basics has the opposite effect—shoppers may think the selection is minimal or picked over and seek options elsewhere. Accordingly, replenishment of basic items may be relatively automatic, while the high-end

apparel requires something different, i.e. on-demand shipments and strong vendor relationships to have more top-selling product delivered quickly. The key point is, managing OOS inventory effectively across multiple categories and product types can imply a variety of strategies that demand different things from different areas of the business.

However, the exercise can quickly get complex. Think of a grocery or big box store with upward of 100,000 SKUs. A retailer must have a strong view of how consumers feel about different purchase types—for instance, that a preferred brand of toilet paper is more easily substituted than a cosmetics product, or that the characteristics of laundry detergent are more important than soap bars. Items for which customers are very sensitive to price (those with low elasticity) should be more carefully protected compared to those with high elasticity, such as irregular and/or opportunity purchases.

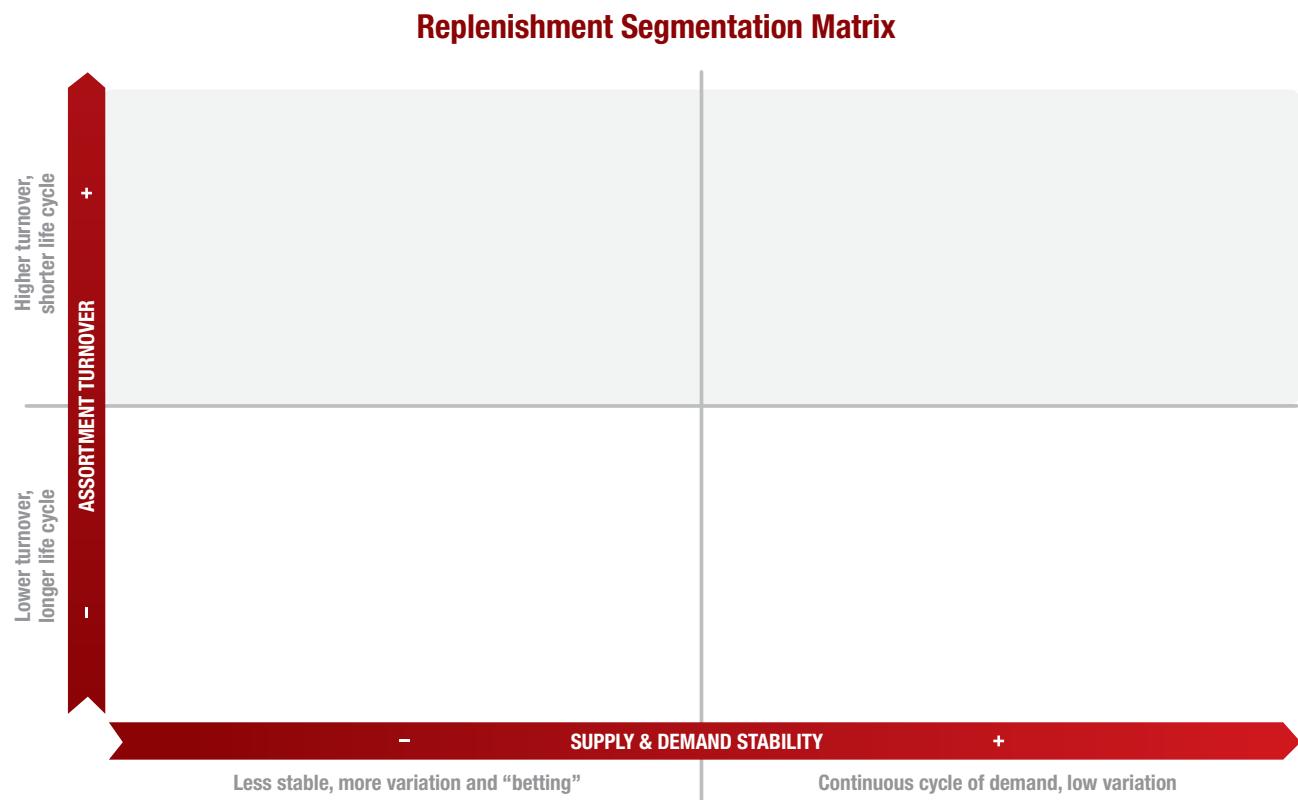
We'll talk about how to reduce complexity by setting realistic priorities among thousands of SKUs further on, but it's important

to first establish clarity about roles and responsibilities between areas. This is about more than optics. Who does what is often a sensitive, polemic issue. Having a framework that illustrates the business' needs can go a long way toward simplifying this discussion, and lays the groundwork for how to foster unity and collaboration in our second missing link.

THE REPLENISHMENT SEGMENTATION MATRIX

Over many years of working alongside our clients and understanding the nuances of OOS inventory, we have developed the following Replenishment Segmentation Matrix.

The matrix leverages two powerful criteria of inventory replenishment—Assortment Turnover and Supply & Demand Stability—to segment retail categories into four quadrants. As you read the criteria descriptions below, think about where your categories fit within the matrix or if they touch all quadrants.



The Replenishment Segmentation Matrix uses the determinants of inventory turnover (Assortment Turnover and Supply & Demand Stability), to divide retail categories into four quadrants. (fig. 1)

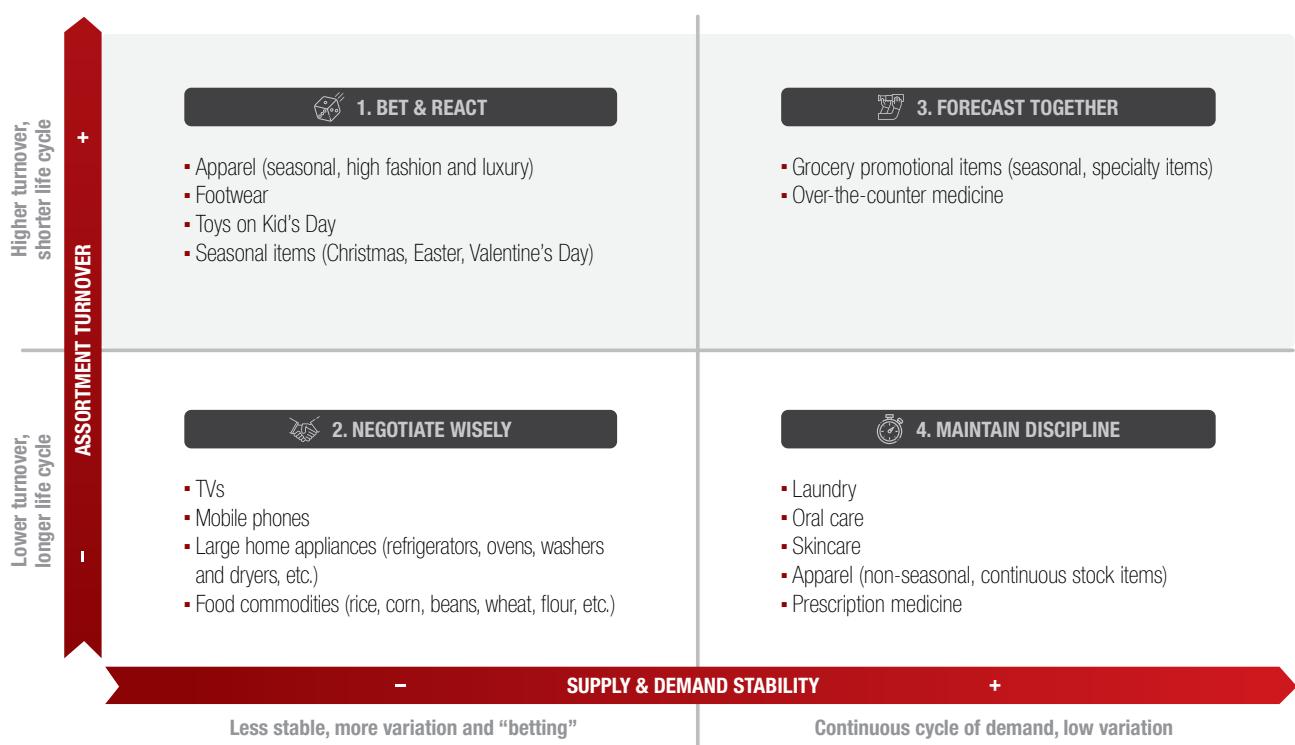
Assortment Turnover: How fast does your assortment change? Do your products have a naturally shorter and/or seasonal life cycle, such as electronics, holiday items and trending apparel? Or is the life cycle longer, as with hygiene products, cosmetics, soap and laundry, over-the-counter medication, dry/processed foods, etc.?

Supply & Demand Stability: How stable is the value chain in terms of negotiations, vendor relationships, reliability and demand-variation forecasting? An example of a very stable chain would be prescription medication refills at a drugstore, which consumers routinely need (e.g. on a monthly basis), and

manufacturers fulfill with good consistency. On the opposite side, categories such as food commodities at grocery stores are less stable—consumers may want them, but variables such as weather impact pricing and availability (i.e. beer and wine), so purchases are more opportunity-based.

Consider the matrix again, this time with examples of product categories in the four quadrants. Each is labeled by what we see as the core replenishment strategy or "replenishment DNA" of the segment, which guides how OOS actions should be developed—and who will be involved.

The Replenishment Segmentation Matrix – Replenishment DNA Actions



The four broad groups above are labeled by the primary replenishment action, or "replenishment DNA" of each. (fig. 2)

Diving deeper into each segment below makes it possible to understand, concretely, how people must work and act together to manage OOS inventory continuously. On the next page, see the roles and responsibilities that Merchandising and Supply Chain must assume, along with additional details about variations in DNA replenishment characteristics.

By orienting replenishment strategies to the needs of different product categories (your replenishment DNA), many of

our clients begin realizing why certain approaches have worked in certain categories and why OOS levels remain unsolved in others. In terms of people, initial friction points of where collaboration needs to be improved will also start to become clear, paving the way for why OOS inventory must be positioned as a priority for the wider company.

The Replenishment Segmentation Matrix – Replenishment DNA by Action (Detailed)



1. BET & REACT

Examples

- Apparel (seasonal, high fashion/luxury)
- Footwear
- Toys on Kids Day
- Seasonal items (Christmas, Easter, Valentine's Day)



Roles & Responsibilities

- Merchandising:** Full autonomy to manage purchase orders, inventory levels and distribution.
- Supply Chain:** Mostly plays a logistics role (warehousing and transportation), although in some companies Supply Chain will also assume store distribution responsibilities (allocation).

Replenishment DNA

- Characterized by higher assortment turnover and lower stability.
- Product categories are trending and/or limited in supply (Christmas décor, Easter eggs) and can be leveraged for short-term promotions.
- Products in this category are driven by consumer desire and imply a greater degree of "art" for the retailer in selecting products to actively "bet" on selling and/or merchandising at the highest margin. If the items don't sell, they will have to be marked down or managed in other ways ("reactively") that minimize impact to the company's profits.



3. FORECAST TOGETHER

Examples

- Grocery promotional items (seasonal, specialty items)
- Over-the-counter medicine



Roles & Responsibilities

- Merchandising:** Forecasts consumer demand for new products. Makes choices about what products to invest in and advertise, typically using Supply Chain data to select quantities, estimate the relevance of each product and communicate baseline needs back to Supply Chain.
- Supply Chain:** Once Merchandising completes forecasting, Supply Chain must manage the flow of goods, from purchase to store distribution.

Replenishment DNA

- Based on projected consumer demands, "Forecast Together" comes with the benefit of relative reliability. For example, seasonal grocery items such as matzo balls at Passover or chocolate on Valentine's Day will sell; however, the life cycle is short and fluctuations in pricing are constant.
- Replenishment forecast must be well-planned, leveraging historical data to draw a baseline. In cases of less forecast certainty, responsive actions such as inventory buffers can be positioned strategically close to consumer demand. Some retailers do this through their DCs, if the footprint enables low lead times, or by renting storage and/or rearranging backrooms during seasonal peaks.



2. NEGOTIATE WISELY

Examples

- TVs
- Mobile phones
- Large home appliances (refrigerator, oven, washer/dryer, etc.)



Roles & Responsibilities

- Merchandising:** Looks for opportunities to buy and often is responsible for the final call on purchase volumes. It's common for Merchandising to set store distribution guidelines to ensure proper merchandise displays, according to the allowances negotiated with vendors. Requires good partnership with Supply Chain.
- Supply Chain:** Responsible for regular replenishment and can make direct purchases (utilizing gross margin return on investment analyses).

Replenishment DNA

- Starts like Bet & React in terms of how Merchandising must "bet" on certain products. However, products may become more or less automatic (Maintain Discipline) in replenishment over time, depending on consumer response. For example, a new TV model that is initially a bet may become an expected product offering.
- Key to watch over margins and inventory carefully, as consumer demand and supply may vary in reliability.
- Vendor relationships are critical, which should include negotiating wisely on just-in-time purchases, trade terms and price breaks, e.g. if a vendor wants to push a new-generation electronic that you don't have room for, they may accept existing stock back at cost.



4. MAINTAIN DISCIPLINE

Examples

- Laundry
- Oral care
- Skincare
- Basic Apparel (non-seasonal, continuous stock items, e.g. white socks)
- Prescription medicine



Roles & Responsibilities

- Merchandising:** Dedicated purely to commercial activities, such as assortment and pricing decisions and purchase-cost negotiations with vendors.
- Supply Chain:** Holds 100 percent autonomy to manage purchase orders, inventory levels and store distribution. Categories are ideal for algorithm-based, completely automated replenishment.

Replenishment DNA

- This group likely includes many items with a long life cycle, e.g. low Assortment Turnover, but it's composed of necessity goods that consumers will always buy, placing it on the higher end of Supply & Demand Stability.
- There is less "betting" in this segment—forecasting can be done using historical demand data to project future demand.
- Represents the brands your store carries that are likely fixed, with several in each category type. Vendor supplies should likewise be consistent.
- Because demand is continuous, the replenishment DNA is straightforward and requires maintaining discipline to ensure that goods flow through the value chain as planned.



ii. Guarantee Unity & Collaboration

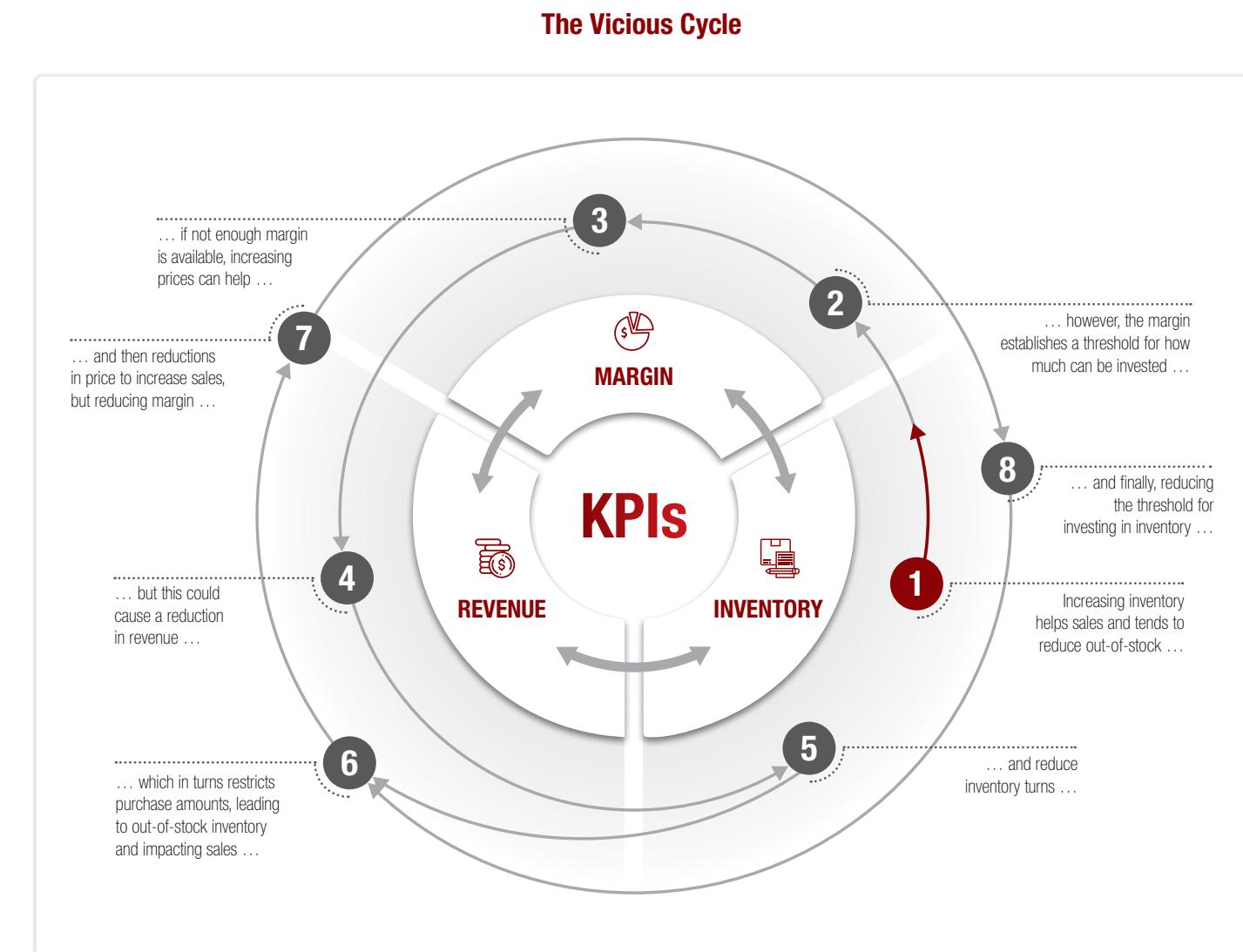
In our experience, there is no possibility of resolving OOS inventory without strong, committed leadership at each level of the organization (department heads and managers), as well as a CEO or other high-influence executive to spearhead the effort. Most companies we work with instinctively understand that transformation requires more than investing in a new technology, but it can be difficult to structure tangible actions related to unity and collaboration—our second missing link. This is done through empowering leaders in two key areas: shared KPIs and engaging people.

1. SHARED KPIs

Imagine a retailer facing serious OOS challenges. Out-of-stock items have decreased inventory turnover to the point that cash flow is restricted, with little money available to buy new items or repurchase at volume. In turn, limited ability to buy in bulk has affected margin negotiations, further straining cash flow.

As a result, replenishment is stunted, sales stop and there are few options to bring the business back to solvent. With little choice, the retailer reduces prices to boost sales—but only in the short term while again harming margin. In the end, without enough money to reinvest in OOS inventory fully, the business gets stuck in an endless loop of lowering prices to boost sales and improve revenue. However, unless promotional gains are large enough (a rarity), the retailer won't be able to maintain the business in the long run.

This is just one way a retailer can get snared in what we call the “vicious cycle” (see p. 15), which is often underpinned by not including OOS alongside the more prominent retail KPIs of revenue, margin and inventory. This is where, in addition to Merchandising and Supply Chain, Store Operations must be engaged, requiring alignment and sponsorship by the company's CEO to achieve.



The vicious cycle typically starts with an adjustment to one of the fundamental KPIs of retail, creating a domino effect of impacts around and around the circle. (fig. 3)

Fundamentally, this is due to the specific actions and trade-offs that each area must commit to, despite the naturally competing interests of Merchandising, Store Operations and Supply Chain. In the example above, hard, short-term trade-offs will be necessary to break free of the vicious cycle, e.g. marking items down to boost sales and free cash, yet this will cause the KPI of margin to take a hit within Merchandising. This would also affect revenue in Store Operations if the promotion isn't successful, but there are several other considerations as well. Allocating labor to check inventory on shelves could impact revenue within Store Operations, as would be the case for margin if it becomes necessary to renegotiate vendor returns and trade terms in Merchandising.

We find it difficult, if not impossible, to generate this type of compromise unless OOS inventory goals are backed by the CEO.

The best way to garner buy-in among all areas is to position OOS as a shared KPI alongside revenue, margin and inventory. If this understanding is in place, when the KPIs of margin or revenue are impacted, they can be balanced by the mutual benefit of improving OOS inventory. Even if this is challenging to enforce at first, aligning KPIs encourages departments to routinely consider how they contribute to OOS inventory over time. There is a wide range of interdependencies to be mapped inside each organization, and the chart on the following page is only a starting point, but it's a good device to help Merchandising, Store Operations and Supply Chain begin visualizing how their KPIs are intrinsically linked together.

Simple Impacts: Aligning Out-of-Stock as a Shared KPI

	OUT-OF-STOCK	REVENUE	MARGIN	INVENTORY
MERCHANDISING	<ul style="list-style-type: none"> Item master-data maintenance Vendor relationships 	<ul style="list-style-type: none"> Assortment decisions Pricing and promotion strategy Display decisions (store locations, layout, etc.) 	<ul style="list-style-type: none"> Assortment decisions Vendor negotiations Pricing and promotion strategy 	<ul style="list-style-type: none"> Assortment decisions
SUPPLY CHAIN	<ul style="list-style-type: none"> Distribution center replenishment Store replenishment Sense/response 	<ul style="list-style-type: none"> OOS control Prioritize top-selling items and store replenishment 	<ul style="list-style-type: none"> Prioritize high-margin items Excess stock control Write-off control 	<ul style="list-style-type: none"> Inventory centralization (replenishment model) Inventory policy strategies Open-to-buy management
STORE OPERATIONS	<ul style="list-style-type: none"> Shelf replenishment Phantom inventory control 	<ul style="list-style-type: none"> Customer experience Sales force efficacy 	<ul style="list-style-type: none"> Prioritize shelf replenishment of high-margin items Sales force efficacy 	<ul style="list-style-type: none"> Maintain shelf display plan and master data

The columns above reflect the many different ways Merchandising, Supply Chain and Store Operations contribute to OOS inventory. (fig. 4)

2. ENGAGING PEOPLE

We once worked with a large global retailer whose OOS problems had persisted for nearly a decade. The company had been dealing with a stark contrast between severe OOS inventory and excess inventory at the same time. The diagnosis spanned issues from flawed and outdated systems to poor management and tracking of deliveries to zero ability to forecast promotions or enable lifts in inventory. A full-scale solution was designed and piloted within a single category with strong expectations. However, results after the first few weeks were discouraging. Analyses were re-run and processes revisited to find a better solution.

During this time, it became clear that another issue entirely was thwarting the transformation. Although leadership was committed,

the employees of the company, having been through years of failure, no longer believed in the possibility of real change. As a result, there was no technical solution that had any hope of working without fully stopping the implementation to address their concerns.

This example perfectly illustrates how an optimal, fact-based, data-driven technical solution can be undermined by the power of people. Resolving this means guaranteeing consistent, top-down engagement efforts from the CEO. These actions are quite simple but should not be underestimated—meetings at the organizational level and per functional area, as well as one-on-one conversations, training sessions, Q&A channels, etc., can all be part of a holistic communications plan.

In the case of the global retailer, specifically, this played out to include:

- Selecting champions among the employees to embed operational changes and the vision for the supply chain into the daily reality of the business.
- Technical classes and trainings focused on theory—having a solid understanding of the concepts behind routine tasks proved to be a huge motivation that added pride and meaning for the team.
- A full day of team-building focused on connection and engagement.
- A daily meeting to empower teams and sustain connection—one category was selected per day, giving each team a specific opportunity to share their progress on new KPIs and define actions individually.

In the end, after years of crisis, once all professionals understood and committed to the transformation, the retailer achieved a historic best in OOS percentages, which decreased from 13 to 4 percent on the top 2,000 SKUs over a six-month period.

But the victory was not seamless. After detailing plans for the company's primary DC (down to what trucks would arrive

Although leadership was committed, the employees of the company, having been through years of failure, no longer believed in the possibility of real change.

each day), there was an influential employee who simply wouldn't engage with the new processes. This single person could have destabilized the efforts of dozens if their resistance had not been identified through engaging with people. Importantly, the goal should be to identify issues as much as bring professionals onboard with new objectives. If one-on-one conversations aren't successful or the players aren't forthright, it may be time to think about hard decisions that prioritize the future of the organization.





iii. Pick Your Battles

As discussed in our first missing link, controlling OOS inventory levels and defining replenishment strategies by category is far from easy with tens (or hundreds) of thousands of SKUs in play. While developing strategies by segment is critical, it's simply not possible to control everything. We recommend setting priorities about what demands attention (leveraging data and technology tools to support conclusions) and then picking your battles: our third missing link.

The first question to answer is how OOS items are impacting the business. For example, securing consistency in top-selling SKUs is one option to start generating movement. To identify first-line priorities, the following considerations—which should account for each department's unique perspective—can be used to draw parameters around the issues that are most pressing:

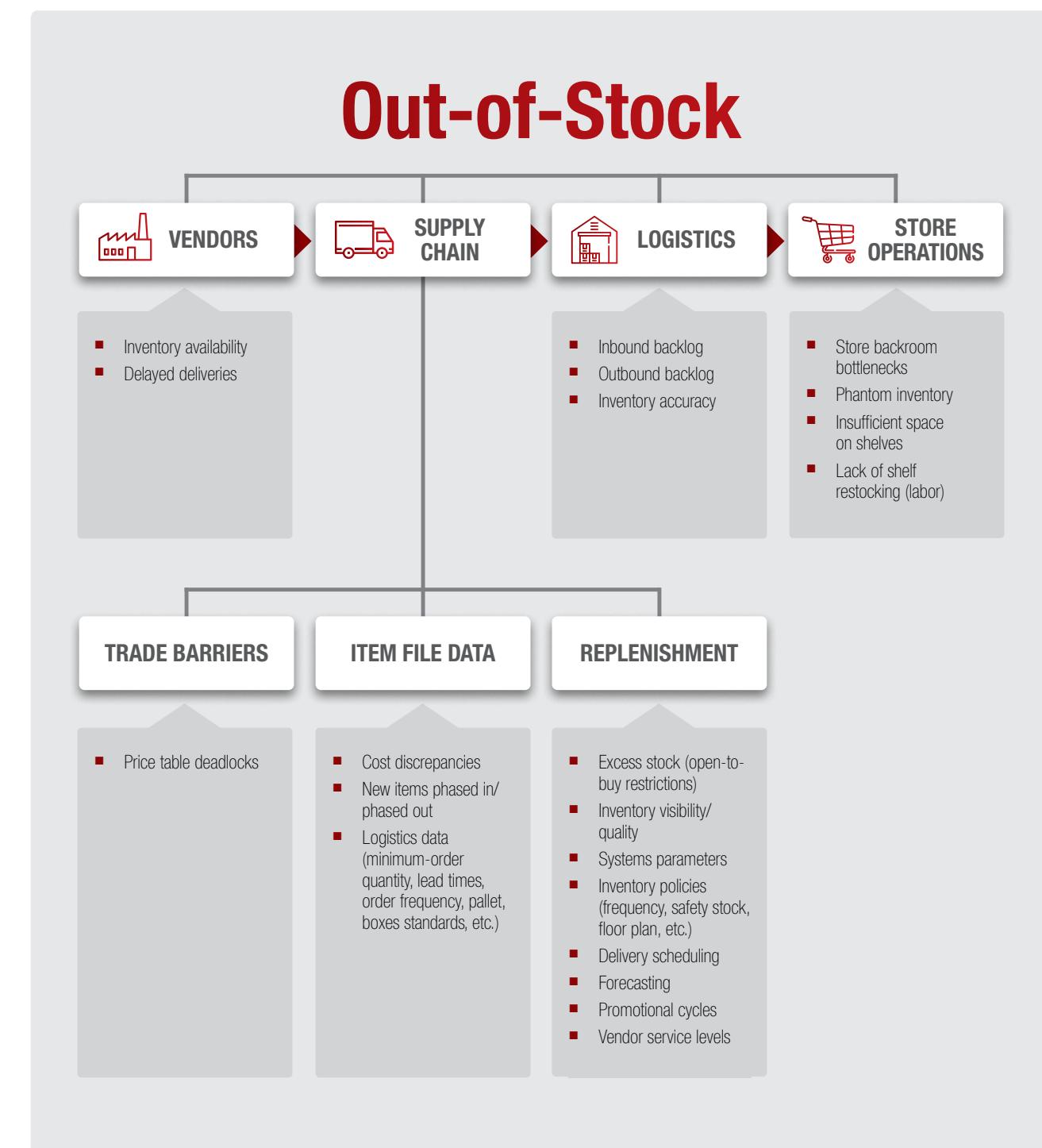


- **What is the biggest problem?** Solving OOS levels vs. shedding excess stock is a common trade-off. It's not always feasible to focus on one over the other, as they are deeply related. But, if you can, it's a good way to begin. For example, if cash flow is tight, targeting excess stock to free up money through mark-downs, reverse logistics, order prioritization and high-order reports that avoid new excess are key actions. At the same time, measures should be taken to protect top store locations and items, and maximize returns from whatever money is available. If cash flow is not restricted, however, restocking OOS inventory will take precedent (assuming you're not raising inventory levels to improve item distribution and meet demand) and may include structural or systems adjustments.
- **Are OOS issues concentrated in one category or format?** For example, do food categories within the hypermarket format require more urgent attention than convenience stores and/or non-food categories?
- **Look to the Out-of-Stock Root Cause Tree (see p.19). Are problems concentrated within a single “branch” of the value chain?** For one retailer we worked with, 80 percent of OOS items in stores were OOS in distribution centers (DCs) at the same time, which made tackling the DC OOS inventory the priority. Even knowing that important opportunities were waiting inside the store, focus was given to rebuilding the DCs and strengthening the value chain quickly, including ordering, adjusting daily routines and system parameters, scheduling deliveries and more.

SEARCHING FOR ROOT CAUSES

With a clear picture of what and where top problems are occurring, it's possible to zero in on the core issues that are causing OOS problems to persist—the root cause. Even with optimal replenishment strategies by category in place, ideal OOS levels won't be achieved if underlying challenges aren't addressed in each area. While not exhaustive, our Out-of-Stock Root Cause Tree – Primary Risks chart highlights key points to investigate and the common pitfalls of each.

The Out-of-Stock Root Cause Tree – Primary Risks



The Out-of-Stock Root Cause Tree traces fundamental problems that contribute to OOS inventory through four areas—Store Operations, Logistics, Supply Chain and Vendors. (fig. 5a)



Additional details about each branch of the Out-of-Stock Root Cause Tree can be found in the [appendix](#) at the end of this report, however vendor relationships are a particularly powerful area of cause-and-effect to explore. They directly influence OOS inventory across the value chain, yet the service levels offered by vendors can also be very difficult for a retailer to control. Consider the following contrasting examples:

Scenario 1: A family-owned textile company manufactures and supplies clothing for the catalog of a department store. Nearly 100 percent of its billing relies on a single customer, making the relationship a matter of survival. This translates to an exceptional level of service between the supplier and customer—"no shows" do not exist and there is no need to threaten contractual fines; the power of the retailer to dictate terms (or seek service elsewhere) is consequence enough.

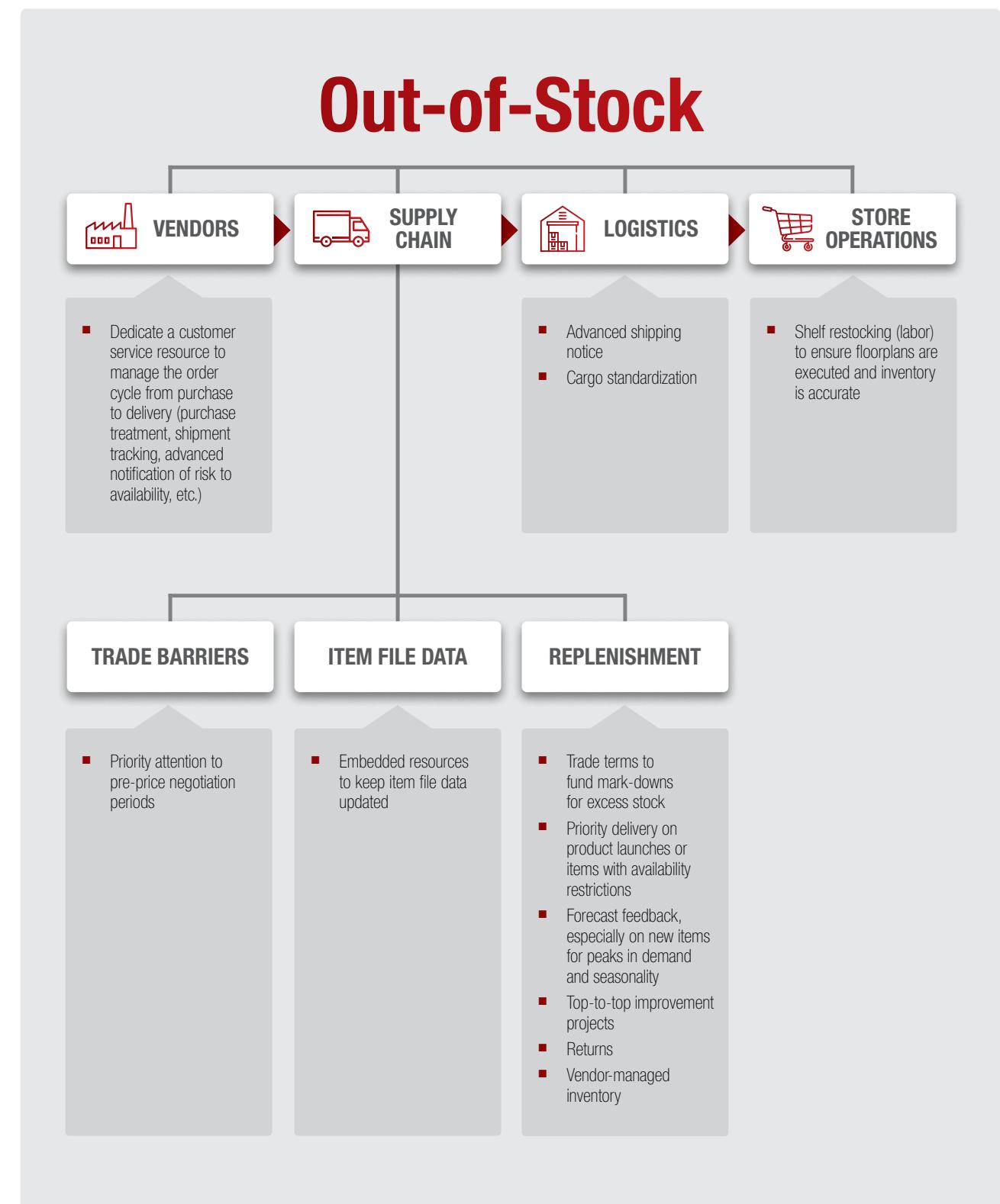
Scenario 2: At the other end of the spectrum, a leading beverage company maintains a supply chain so advanced it's capable of calibrating its logistics network daily. The company can re-plan and remap decisions and deliveries to maximize margins fast enough to choose to *not* service large retailers (who typically squeeze its margins through volume), and instead focus on smaller retailers, who are at times more profitable.

Ultimately, while every retailer can (and should) control vendor-service levels, the ability to do so is a direct reflection of your [commercial leverage](#).

At the same time, it's important to know that suppliers have just as much—if not more—to lose due to OOS items as retailers, who can at least offer alternative brands or products. Asking vendors to directly support you can be a cost-effective solution, especially for those in which your business represents scale. There are several possibilities, ranging from submitting purchase orders on a specific day to leveraging market knowledge or inventory databases to forecast demand and replenishment. A supplier may even embed a professional inside a retail location to make sure their products are well-stocked. Some tactics work better than others and some are still being tested, but collaboration always adds value.

See the Out-of-Stock Root Cause Tree again (p. 21), this time with a focus on the vendor actions that can help each department improve OOS inventory across the value chain.

Out-of-Stock Root Cause Tree – Vendor Actions



Root causes across the value chain contribute to OOS inventory. Above, examples of how vendor relationships can be leveraged to achieve healthy OOS levels. (fig. 5b)



iv. Stay the Course

Among the four most common missing links in OOS management, we've left the hardest for last: maintaining control. It may be true that your company needs to "fix" its OOS inventory levels, but once this has been achieved, the mentality for everyone involved must be one of consistency and discipline—repeat, repeat, repeat. This seems simple, but is arguably the most overlooked aspect of how people must be continuously involved to ensure lasting results.

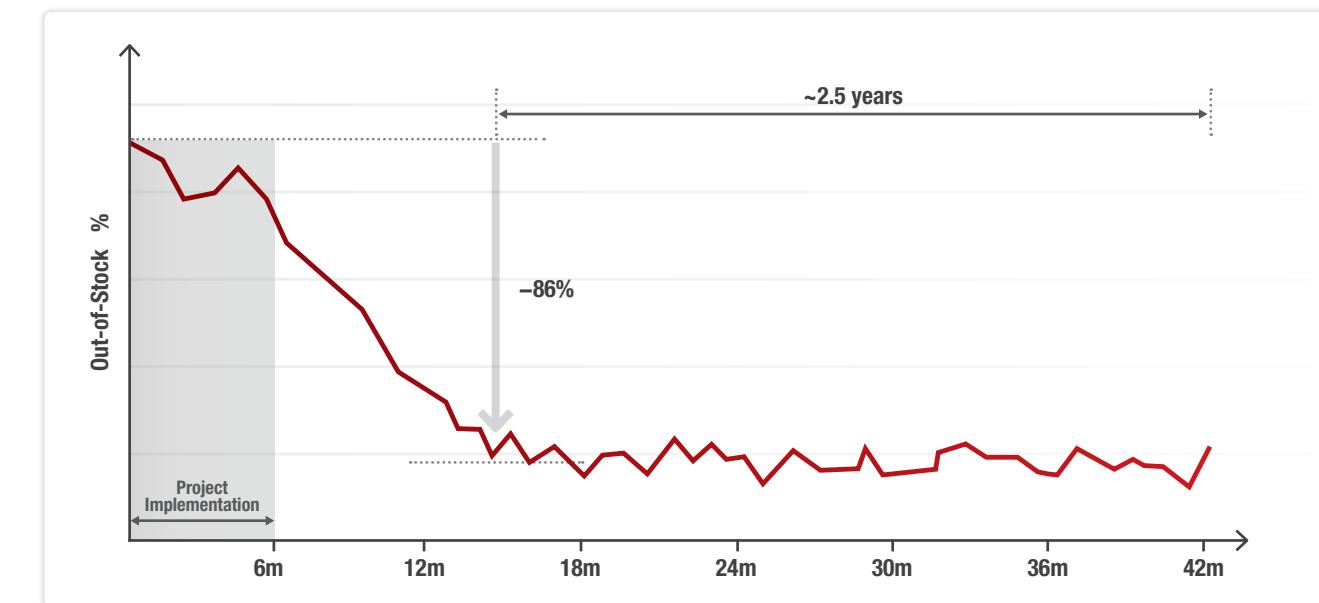
As an example, we have unfortunately witnessed the decline of successful OOS initiatives due to a loss of energy and motivation

over time. Remember the retailer whose real OOS issue was the employees who didn't believe in the possibility of change? For the first three months after implementing the employee engagement work front, the company's OOS inventory levels hit a historic low of 4 percent. Then, as the company added SKUs, OOS items began to rise over the following three months. Fast-forward another six months, which saw more organizational changes and the loss of CEO sponsorship, and OOS levels have since returned to their original high of 13 percent.

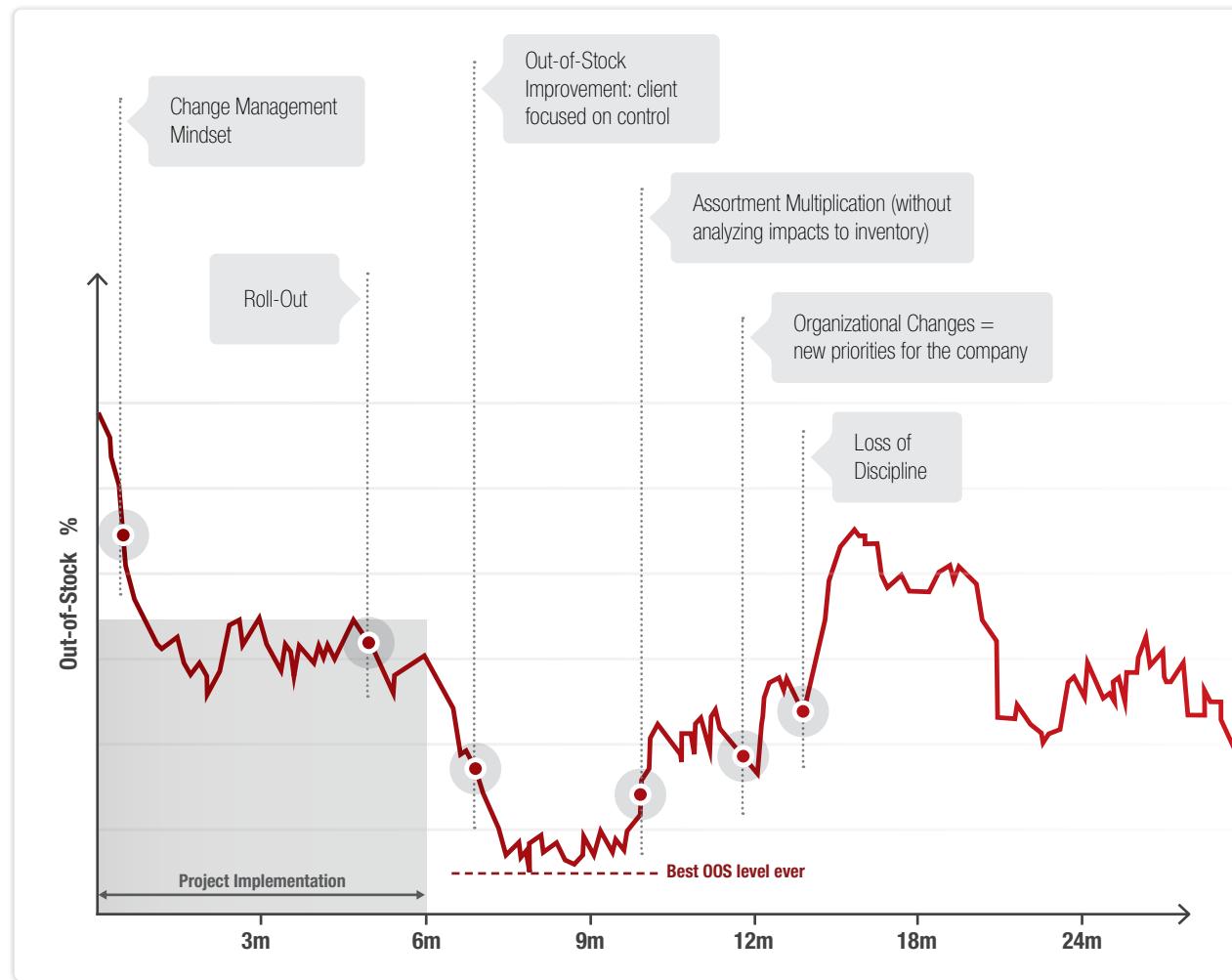
On the other hand, for a retail CEO who made improving OOS inventory levels for continuous-stock items a permanent priority (identified through the steps above), an 86 percent reduction has

been sustained for nearly three years. Interestingly, this was done by concentrating on the top 3,000 most sensitive SKUs, or those that were most deeply tied to the business' value proposition.

Staying the Course with Out-of-Stock – Long-Term Prioritization Live Example



Consistent sponsor unity is frequently the key to sustaining achievements in OOS controls among all departments. (fig. 6b)



Maintaining OOS inventory for the long haul requires continuing to prioritize healthy levels among all areas of the company. (fig. 6a)

Further to the challenge this retailer faced, the store holds approximately 12,000 SKUs, with high seasonal and promotional fluctuations that not only increase volume but change every quarter. Since the initiative began, the company has experienced

a strong uptick in same-store sales, which they attribute to consistent actions that promote the availability of key merchandise on shelves across the organization.

III. Conclusion

As a final example of how all four missing links recently came together for one of our clients, consider the following case: A global retailer was struggling to bring one of its regional networks to the same level of profit and brand reputation the company enjoys elsewhere in the world. The business was misfiring on seasonal promotions and opportunity purchases in several categories in Merchandising, resulting in severe excess stock and purchase restrictions. On-shelf deficits soared to more than 15 percent, generating fear in the Supply Chain department in allowing automatic replenishment orders to go through. The result was heavy reliance on manual overrides, which were impossible to do with efficiency at any scale.

Despite the experience and support of sister operations in other countries, the company finally realized that something different was happening inside this network. Customer preferences and buying habits were different, and so standard OOS inventory measures weren't working.

With the backing of the CEO, OOS inventory was brought into the view of all departments to ensure full visibility and unity. After the scope of on-shelf availability problems were assessed through Store Operations, Merchandising was leveraged to reduce excess stock with discounts and vendor negotiations, enabling reinvestment in OOS items. On the back end, Supply Chain revised its stock policy to even out excess inventory between stores and reestablish confidence in automated ordering. Manual overrides were only allowed for quick adjustments and to prevent large mistakes. Importantly, by focusing exclusively on the biggest problems—top-selling categories, severe cases of excess, discrepancies between stores, etc.—the retailer has since hit an all-time low in OOS inventory, still with plenty of room to grow and sustain its efforts.

Inherent to this example is one final piece of advice: act quickly. Retail is fast-paced. Businesses are naturally close to the demands they serve. This provides opportunities to respond fluidly to ups and downs in trends and consumer behaviors, but it also means a retailer may feel the impact of inaction (or get stuck in the vicious cycle) with surprising speed. Focus on quick-wins and generating momentum, not solving everything at once or waiting to implement an entirely new "perfect" process. Eventually, granular issues may require pulling the trigger on a systems investment, but those don't have to—and shouldn't—prevent

immediate improvements. Among the many retailers we've worked with, a mentality of acting quickly is deeply embedded in those who are most successful.

An approach that connects people to practical actions and optimizes technical solutions is imperative.

Last, as you knock down barriers toward ideal OOS levels, keep in mind that managing OOS inventory is a marathon, not a sprint. Solutions must be sustainable and work for all areas to be truly implementable. This cannot (at least yet) be solved by new processes or technologies alone, and requires the help of many hands. An approach that connects people to practical actions and optimizes technical solutions is imperative. Just keep in mind:

Understand Your Reality. Respecting your DNA makes it possible for OOS levels to support business goals rather than sabotage them. Segment the business and know how Merchandising and Supply Chain must support the demands of each category.

Guarantee Unity & Collaboration. Solving OOS inventory is a complex challenge that requires working together. Secure the sponsorship of the CEO and department stakeholders in aligning KPIs between Merchandising, Store Operations and Supply Chain. Engaging people is fundamental.

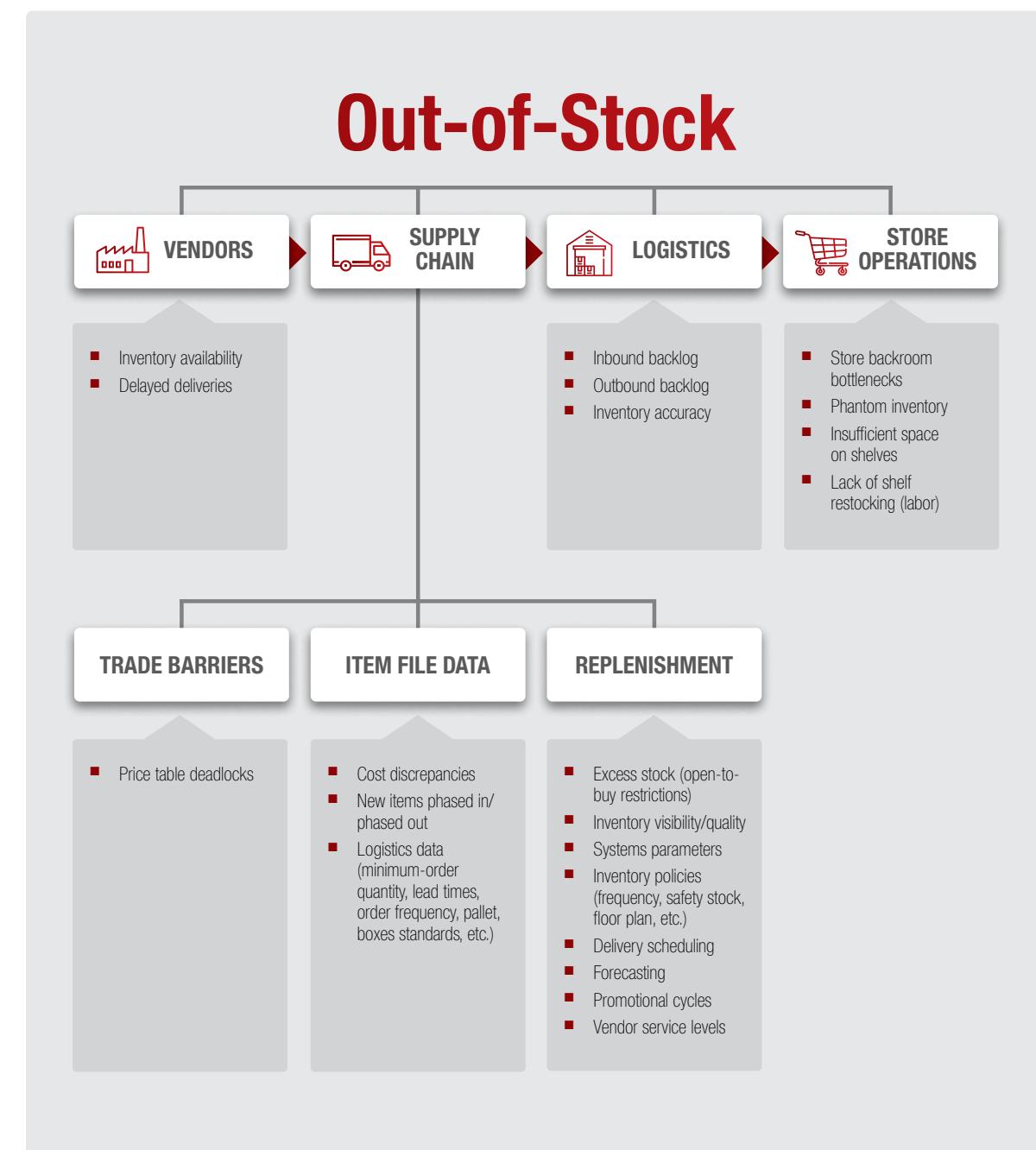
Pick Your Battles. When new issues arise, return to identifying root causes across of the entire value chain. Remember: it's better to zero in on the biggest gaps than tackle the impossibility of all SKUs and challenges at once.

Stay the Course. New initiatives and priorities will naturally compete against the discipline required to control OOS levels. The steps above are imperative to sustaining an OOS inventory initiative, not conquering it. Repeat as necessary. ■

Appendix

The Out-of-Stock Root Cause Tree – Primary Risks chart highlights key points across the value chain. Read further details about the primary risks of each retail department on the following page.

The Out-of-Stock Root Cause Tree – Primary Risks



STORE OPERATIONS

The closer a SKU gets to the shelf, the higher the potential for breakdowns in the supply chain. Root causes of OOS items in this area commonly include:

- Inefficient store organization and/or shelf-mapping
- Underestimating storage repositories
- Underestimating consumption peaks
- Failing to identify disparities in phantom inventory

LOGISTICS

Delays in DC processes and transportation are usual suspects in Logistics—and for good reason. Retail DCs are intricate, multifaceted operations, and any number of errors can create bottlenecks that cause or worsen OOS. The average DC must carefully manage:

- **Diversity** ranging from tens to hundreds of thousands of SKUs in a wide variety of shipping formats, ways of counting units and legal requirements for storage.
- **Product origins** scattered across hundreds of suppliers, with variation in reliability and delivery lead times, as well as how trucks are organized and unloaded.
- **Steep waves in demand**, including peaks in shipping and receiving at the end of the month, and seasonal deliveries that are heavily influenced by promotional items, sometimes at 5-10 times the regular volume of certain categories or more. These shipments are critical for retailers, amounting to 30-40 percent of billing in some cases.
- **Complex division of goods** among stores and/or direct-to-consumer shipping (including case-picking or even broken case-picking).

SUPPLY CHAIN

Due to its essential role, Supply Chain offers rich ground for root causes; it's *only* looking to supply chain that leads retailers to miss influential factors. Nonetheless, an assessment of this area should account for:

- **Excess stock** as one of the most relevant factors. Immobilized revenue from slow-moving products can prevent reinvestment in top-selling items, leading to OOS items (e.g. the vicious cycle). This affects sales and inventory turnover, further reducing cash flow.

▪ **Master data** is another generous contributor to OOS inventory. The ability to manage assortment choices for varied store locations at a high volume is a science—and technologies alone are frequently precarious. We find many retailers whose master data is filled with discontinued items or items that are not being ordered because vendor details (lead time, minimum-order quantity) are missing.

▪ **Promotional cycles**—if master data is a science, conquering promotional cycles is an art. All replenishment DNA types are dictated by consumer demand and volatility, but promotional cycles are additionally aggravated by variations in price sensitivity and spikes in volume. The impact of promotional cycles on a retailer's business will also vary by region and country, requiring strategies that are tailored to the customer profile. Some scenarios will be purely high or low, with thousands of SKUs cycling in and out of promotion each week. Other models are built around a "constant low price," meaning promotions are centered on seasonality and shedding excess stock.

▪ **Order-cycle failures** illustrate why discipline is not trivial and why the value chain has yet to be fully automated. Many retailers would like to assume that if master data is complete, a good technology will generate orders on its own, but few companies—if any—have this capability. For example, phasing products in and out, promotional surges in volume and promotional package deliveries are not well managed by all automated platforms, often requiring some degree of manual intervention. But placing orders is the easy part. Managing suppliers, guaranteeing efficient deliveries, confirming schedules and enforcing corrections on undelivered balances is continuously necessary, with the reality of each retailer shifting dramatically by company and country.

▪ **Trade barriers** often come with the highs and lows of negotiating culture. Lack of a trade consensus, particularly between large retailers and large industries, can result in deadlocks in pricing that harm the fluidity of the supply chain.

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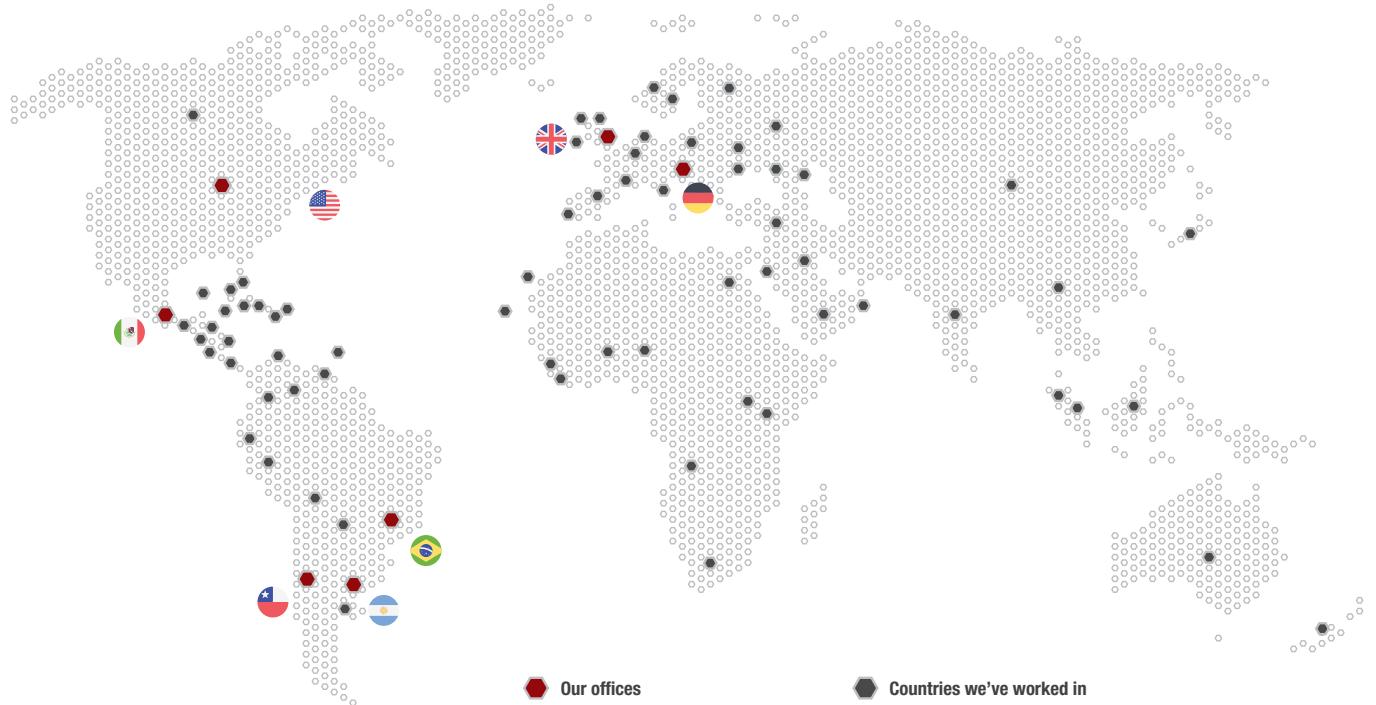
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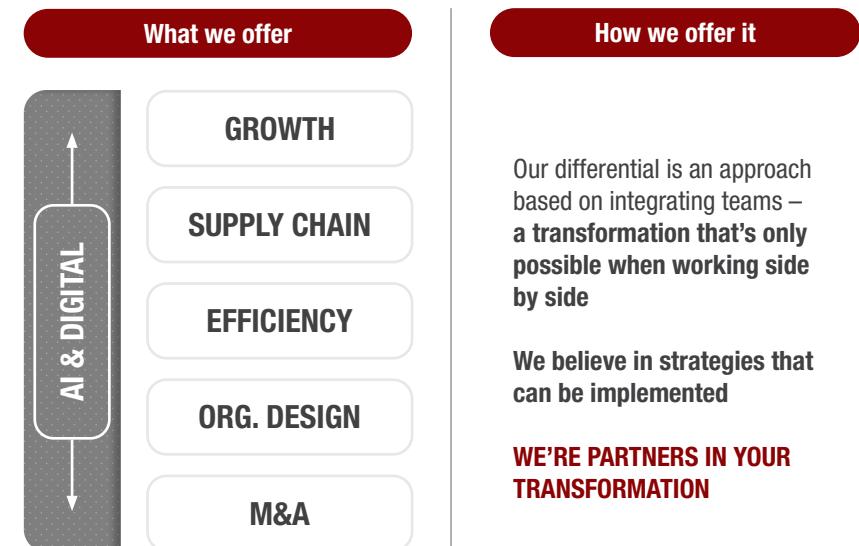
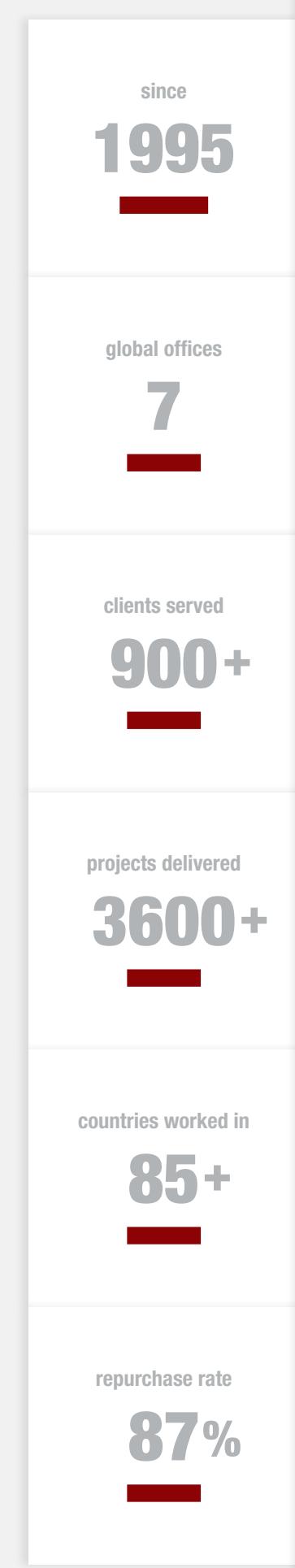
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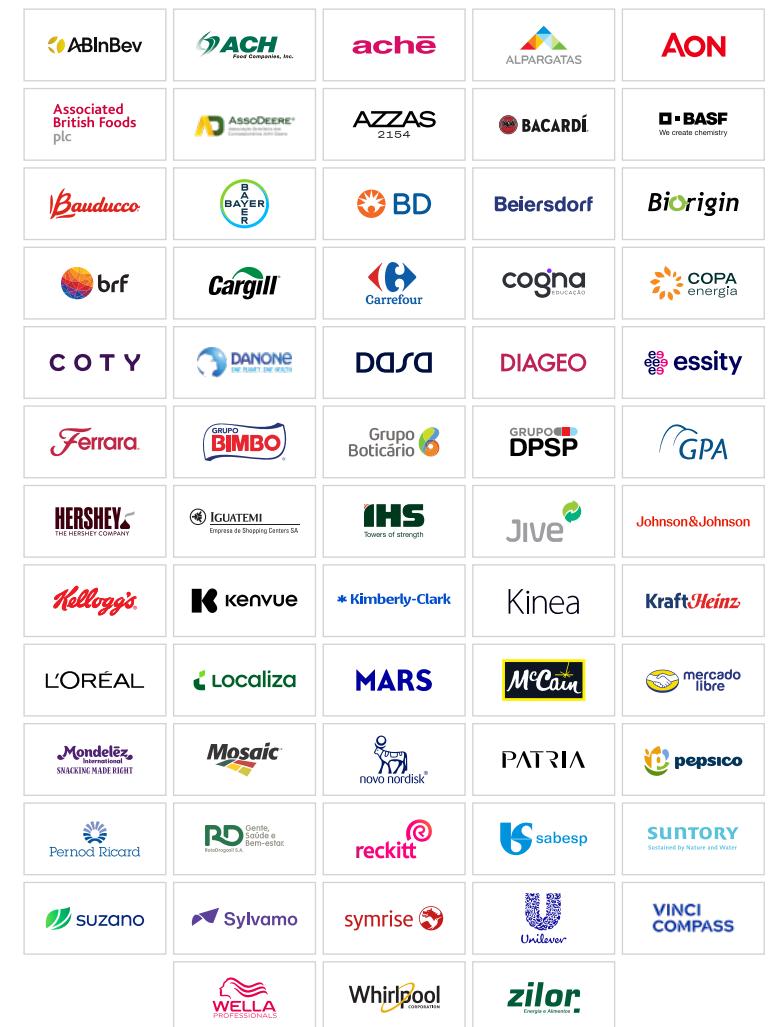
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