

“Outside the Box” Distribution

How to deliver best-in-class distribution performance



Product distribution is critical to top-line growth and bottom-line performance for manufacturers and their channel partners across virtually all industries. An efficient and competitive distribution operation can increase profits, while an inefficient operation can inflate costs and depress top line potential. Companies that achieve best-in-class distribution are more flexible, can realize a 15 to 30 percent cost advantage over average peers, provide customers with better quality and lead times, and are more able to adapt to change.

When Toys "R" Us entered the online retail business in the late 1990s, it lacked the requisite distribution capabilities and experience to support the new channel. The company tried various distribution operating models, beginning with in-house distribution, then migrated to an outsourced relationship with Amazon, and finally parted ways with Amazon in 2006 to partner with Exel, a third-party logistics provider. Today, comfortably delivering products via its online channel, the toy company still bemoans "the lost years" when it was unable to achieve its top line e-commerce market penetration goals.

Home Depot also had its share of distribution headaches. The do-it-yourself behemoth spent 20 years opening new stores and establishing regional store clusters supported by a direct-to-store delivery (DSD) model. Never getting a total store network perspective, by the mid-2000s its fragmented supply chain was harming profits and causing customers to shop at com-

petitor Lowe's. Since Home Depot migrated its DSD network in favor of in-house distribution, the results have been positive—plus the company has leap-frogged the conventional stock-and-pick distribution model to go with a flow-based model.

How did these companies finally succeed after years of distribution setbacks? Both companies learned to think outside the box and thus improve their distribution performance.

Thinking in Three Dimensions

What allows certain companies to deliver best-in-class distribution performance while others deliver average performance or fail altogether? From our work in this area, the leaders in distribution—those that deliver on a defined set of quality and service levels at the best possible cost—consistently think "outside the box." They push their competitiveness to an efficiency frontier, achieving a 15 to 30 percent distribution cost advantage

over competitors while delivering equal or better levels of service. Some of these leaders go a step further to improve performance across the entire value chain—from demand planning, to inventory and logistics—both to improve the top-line and unlock additional savings. For example, restructuring delivery programs can reduce inventory carrying and freight costs.

We call this “3D” outside-the-box thinking because it requires the following three dimensions:

1. Benchmark Beyond Industry Boundaries

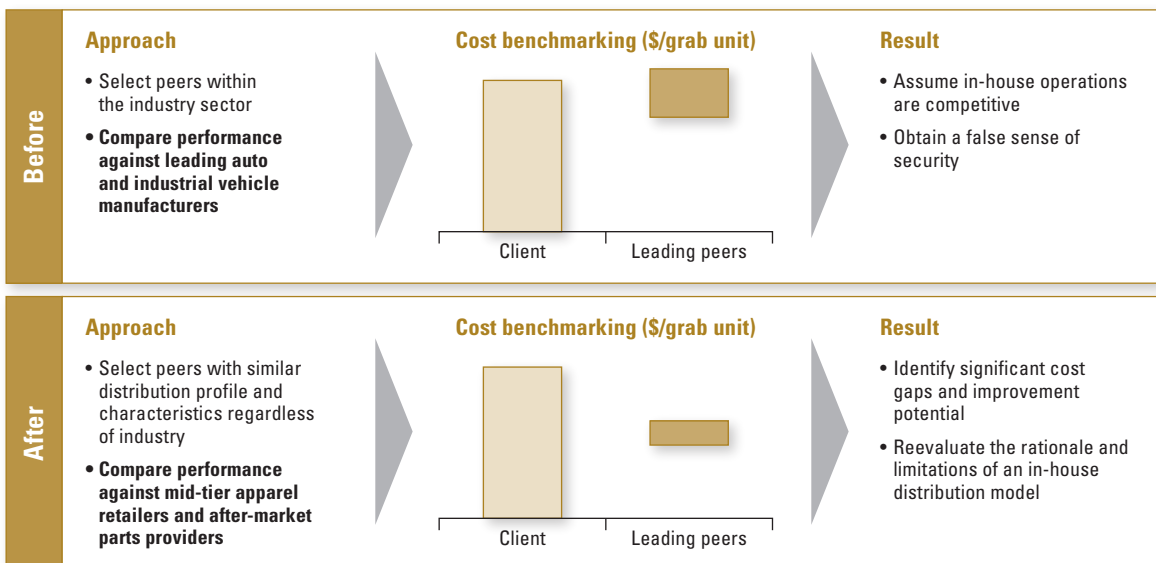
Solid distribution requires first establishing an accurate picture of your distribution competitiveness vis-à-vis true peers. The leaders establish a competitive gap assessment whereby they neither underestimate their distribution capabilities (devoting valuable resources without an adequate return on investment) nor overestimate their performance and get lulled into a false sense

of complacency. The leaders understand their true peer group and compare their distribution performance against these peers.

Determining which companies are your true peers can be somewhat difficult, however. It is not unusual to find after years of benchmarking that you’ve been comparing performance against the wrong peer group. For example, a firm in the motor-vehicle sector historically benchmarked its after-market distribution against the automotive industry and ranked its cost-to-serve in the top 90th percentile. This is illustrated in the top panel of figure 1. Was this motor-vehicle firm really performing in the 90th percentile? We didn’t think so. This company, like many others, was mistakenly defining its peer group largely by its overall business profile rather than by its after-market business requirements. When benchmarked against firms in other industries with similar distribution requirements—mid-

Figure 1

Benchmarking against the right peer group is essential to informed decision making



Source: A.T. Kearney analysis

scale apparel retailers and after-market parts firms—the company discovered its distribution performance was lagging well behind others. The results are shown in the bottom panel of figure 1.

Rather than rely on proxies for selecting a peer group for benchmarking such as “what industry do I play in?” or “who are my direct competitors?,” distribution leaders use segmentation metrics to identify the correct benchmark peer group. Figure 2 illustrates some possible dimensions and metrics to look for in peer selection: scale, order handling, product and service profiles, and even the geographic region the customer base is in. The segmentation variables should have sufficient detail to: capture the key operational dimensions that characterize the underlying distribution requirements, and align with the company’s overall business strategy as well as customers’ needs.

2. Challenge Preconceived Views

Determining what is the right level of technology, or whether or not it makes sense to outsource or insource (make versus buy) are key decisions that

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affect distribution. The right solution in fact has both components: technology and a make-versus-buy assessment. Let’s discuss each:

Selecting fit for purpose technology. Distribution technology includes a holistic suite of

Figure 2
Dimensions and metrics to consider in peer selection

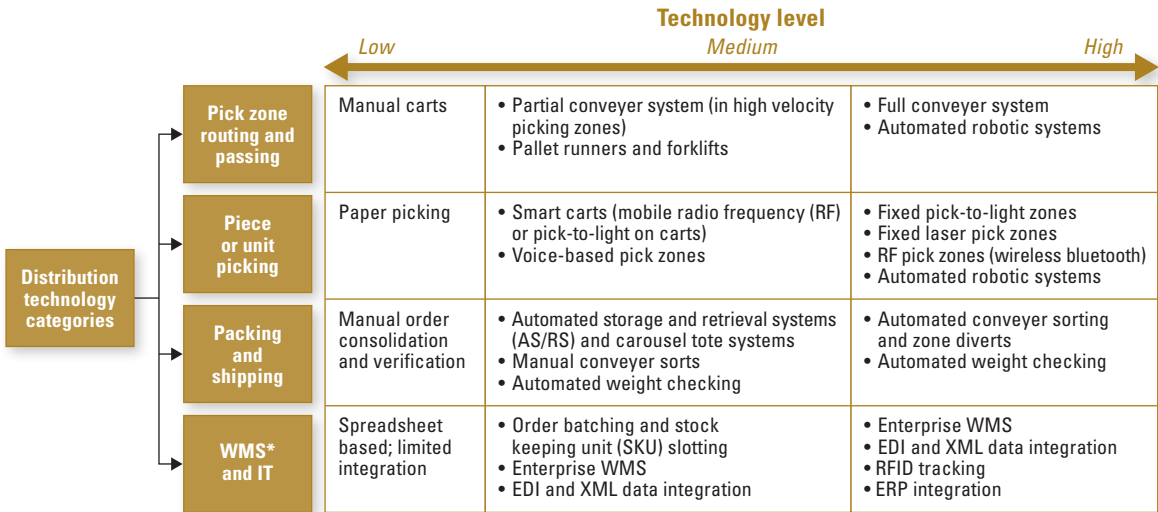
Dimension	Associated metrics	Rationale
Scale	<ul style="list-style-type: none"> Number of outbound order lines per year* 	<ul style="list-style-type: none"> Creates baseline for total outbound labor handling requirements
Order handling	<ul style="list-style-type: none"> Distribution of outbound orders across picking/packing handling categories, namely: full case picking, break pack unit picking, break pack pre-packed picking 	<ul style="list-style-type: none"> Determines labor requirement for picking, packing and shipping orders
Product profile	<ul style="list-style-type: none"> Number of unique stock-keeping units (SKUs) SKU distribution across the high-, medium- and low-velocity profile Physical dimension of SKUs 	<ul style="list-style-type: none"> Gauges how product size and dimensions affect productivity and labor requirements across all activities
Service level	<ul style="list-style-type: none"> Percentage of outbound orders across lead time cutoffs (for example, next-day air or three-day guarantee) 	<ul style="list-style-type: none"> Assesses how service level affects order lead time requirements
Customer geography	<ul style="list-style-type: none"> Number of customers segmented by geographic regions 	<ul style="list-style-type: none"> Considers freight mode versus lead time tradeoffs

Note: *An order line is an SKU-based line on the order receipt

Source: A.T. Kearney analysis

Figure 3

Issues to consider when determining appropriate level of distribution technology



Notes: *WMS is warehouse management systems; EDI is electronic data interchange; XML is extensible markup language; RFID is radio frequency identification; ERP is enterprise resource planning

Source: A.T. Kearney analysis

warehouse automation, material handling systems and warehouse management system (WMS) software that collectively enable distribution, from product receiving to shipping (see figure 3). Determining the appropriate level of distribution technology, or whether or not you need it at all, requires considering several trade-offs, including capital investments, productivity, and longer term flexibility. To illustrate, executives of an industrial machinery company asked whether they needed an automated system and decided against it. Instead, the firm implemented a largely manual distribution center (DC) solution. When pressed for an explanation, the main decision makers said it was primarily because of the company’s corporate policy of rationalizing capital investments in “non-core” competencies. Their decision, however, was not the right one.

Indeed, there was sufficient evidence to suggest an automated solution would have been

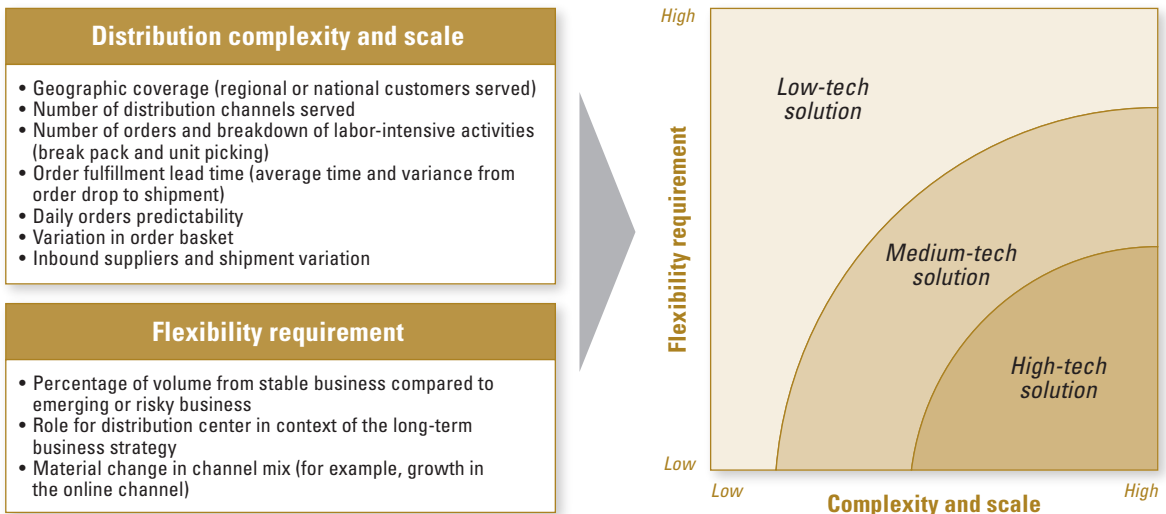
smarter: The company plays in an industry with well-defined customer segments characterized by large-scale orders and a significant amount of complexity. There are multiple stock-keeping units (SKUs) per order and few opportunities to consolidate orders. Therefore, an automated process would offer a better cost-value tradeoff.

What is the lesson from this example? There is a long list of issues to consider when making a distribution technology decision. The technology should align with the distribution requirements as dictated by order profiles of current and future customer segments. The key considerations are the complexity that a given distribution center must support and the need for flexibility. Figure 4 depicts the key criteria to inform the degree of flexibility versus the degree of complexity.

Note that the optimal configuration may not require a homogeneous solution across the entire distribution network. Certain network nodes

Figure 4

Mapping distribution center technology to distribution requirements



Source: A.T. Kearney analysis

(or distribution centers) can have a less automated, less technological setup while others can have a more automated high-tech configuration.

Performing the make-vs.-buy assessment.

Distribution gaps can be closed by tapping into the external market for key capabilities. For example, third-party logistics providers can help reduce costs and allow companies to offer differentiated services.

We can use another example from the motor vehicle industry to illustrate this. This vehicle company handles distribution in-house, and while executives have considered using a third-party provider for distribution, strong internal hurdles such as a unionized workforce always prevented it. The recent economic downturn provided an opportunity to perform a make-versus-buy assessment, and executives jumped at the chance. They found that by outsourcing aftermarket distribution, they could save more than 20 percent in DC opera-

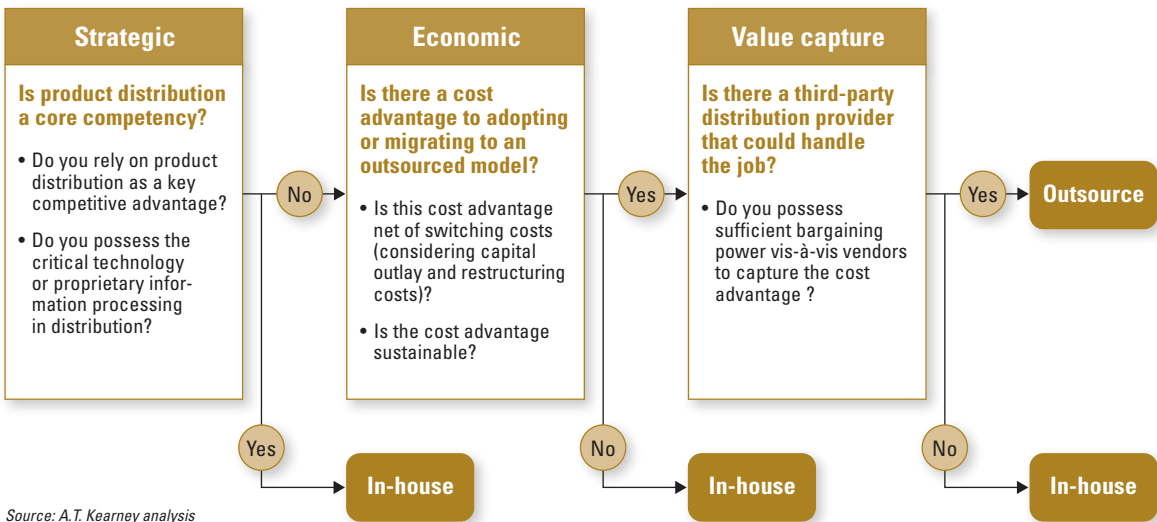
tions and improve delivery time. In addition, by expanding their distribution network, they could also lower freight costs as a portion of outbound orders could switch from air to land parcel (due to closer proximity to customers).

Finding the optimal make-versus-buy balance and then executing an outsourcing initiative requires the following:

Adopt a strategic view. Before dismissing outsourcing as too risky or embracing it as a silver bullet to achieve best-in-class competitiveness, the risks and the benefits should be systematically weighed, as shown in Figure 5 on page 6. The three main questions to answer: Is product distribution a core competency? Is there a cost advantage to outsourcing? Is there a third-party provider that could handle the job? Answering these questions will help develop a good understanding of the cost benefits and risks associated with outsourcing.

Figure 5

The framework for making a “make versus buy” decision



Understand the third-party logistics market trends and capacity early. Third-party logistics provider, also called 3PL, capacity must be understood at both the industry and individual levels. A provider with limited capacity could drastically temper a firm’s bargaining power during negotiations or may even rule out outsourcing as a viable option. Performing a capacity assessment early on—before launching an official supplier bid process and due diligence—can save significant time and resources and better inform downstream bargaining power, which is crucial to capturing cost advantages from outsourcing.

Recognize technology differentiation in the 3PL market. Although all large integrated third-party logistics providers possess broad capabilities and can arguably play across the entire technology spectrum, many tend to have a technology “sweet spot.” Figure 6 shows the leading 3PLs and their core technology sweet spots. Rather than go with

the low-cost or the most high-tech provider, the ideal 3PL has a solution and technology that is aligned with your distribution requirements.

Consider strategic fit in the due-diligence process. During 3PL selection and due diligence, the intangibles matter—looking at the strategic fit of your business through the lens of the 3PL. There are a few questions to ask: Are my distribution requirements and capabilities a focus area for the 3PL? How will my business affect the 3PL’s overall revenue base? Is my industry vertical a key sector for the 3PL? Answers to such questions will not only provide a stronger bargaining position but also ensure that the 3PL continues to be responsive and flexible after the contract is signed.

Given the high switching costs and steep learning curve associated with outsourcing distribution operations, doing a rigorous 3PL due diligence and selecting the right partner is pivotal to success.

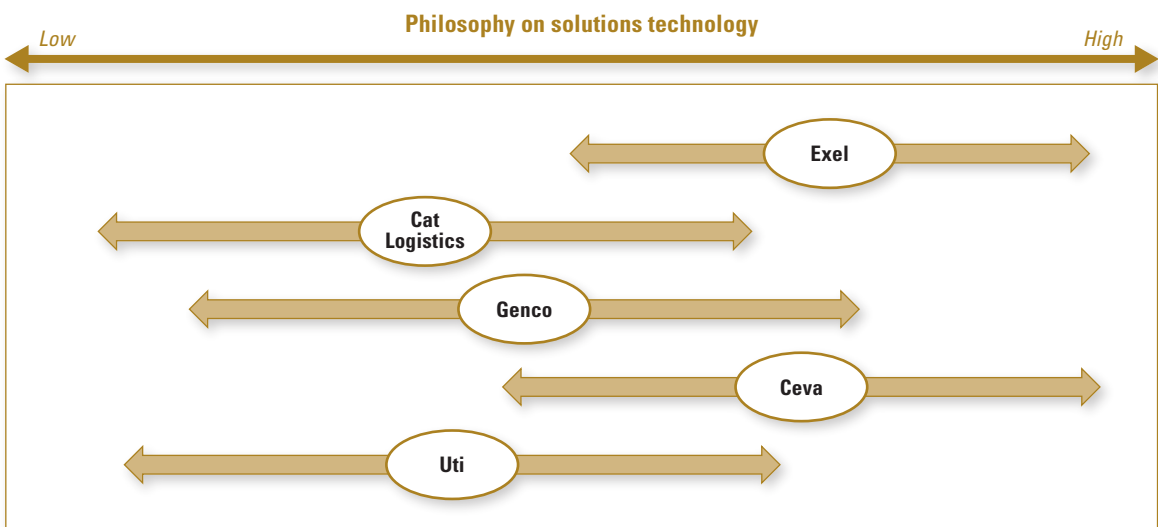
3. Trigger Chain Reaction in Supply Chain Optimization

Early successes in distribution can be a catalyst for change. Transformational change usually requires first getting past organizational impediments such as silos where key decision makers sit in different functions and departments and there is very little collaboration among the groups. Focusing on a particular activity such as distribution can create a “wedge” to break down organizational and functional silos and drive broader transformation across the entire supply chain—from demand forecasting to inventory and freight management. We have created situations in which the inventory management group is brought in to discuss the implications of footprint redesign on inventory stocking and carrying costs. This conversation leads to other questions and uncovers additional opportunities in inventory management that can dwarf the original distribution opportunity.

Figure 7 on page 8 outlines some of the implications of inventory carrying costs discovered while redesigning a distribution network. It could reveal poor inventory turns and inaccurate cycle counts as underlying root causes of supply chain inefficiencies, or inventory problems could be symptoms of poor compliance of inbound shipment suppliers. Going through a simple exercise can uncover improvement areas in the overall supply chain and encourage cross-functional collaboration.

A recent client example will help explain this point. This company consistently grappled with a 75 to 100 percent gap in inventory turns compared to its top competitors. Executives blamed the poor performance (and inability to fix it) on organizational constraints and supply chain complexity. The organizational constraints essentially put the logistics group in charge of distribution and logistics, while the product group managed

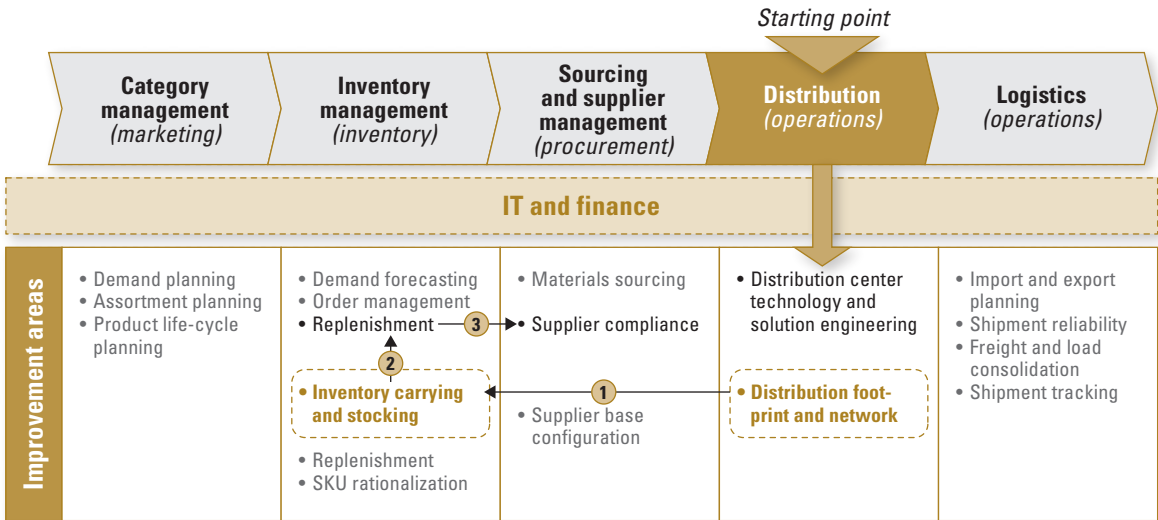
Figure 6
Core technology “sweet spot” for leading third-party logistics providers (*illustrative*)



Source: A.T. Kearney analysis

Figure 7

Distribution can be the catalyst for a value chain transformation



Source: A.T. Kearney analysis

inventory policies. The reasons for the problems were becoming clear. The logistics group could not improve its distribution operations since they were so tightly intertwined with inventory (for example, the tradeoffs between number of distribution centers in a network versus inventory carrying costs), and the product group was not that interested in improving inventory turns. The steering committee used a DC improvement initiative as a catalyst to improve total operations—expanding the scope of this one initiative to launch a holistic distribution network restructuring that included revamping inventory carrying policies.

Challenging Entrenched Perspectives

As companies continue to enter new market segments, create new channels to markets, and roll out additional products and services, distribution will always be essential to profitable growth. Best-in-class performance requires thinking outside the box and challenging entrenched perspectives. Benchmarking across industry boundaries to identify true distribution gaps and potential, conducting rigorous assessments of technology needs and make-versus-buy decisions and closing performance gaps can drive broader transformations across the entire supply chain.

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