7 Trends Driving New Thinking in Distribution Design

Broad changes in technology, global economic conditions, and customer expectations have had (and will continue to have) a direct impact on distribution. Following are seven trends and technologies that have us thinking differently about distribution as an enabler of competitive advantage.

1. **Rising Oil and Gas Prices**

Many of the distribution networks in existence today were designed when gas prices were below $2 per gallon. At that rate, the trade-offs between freight and warehousing were tilted heavily toward freight. And many distribution-intensive businesses built large central or regional distribution centers for economies of scale. As oil and gas prices rose over the past several years, the equation tilted back toward warehousing, leaving distributors trying to reduce total logistics costs by building smaller facilities closer to the customer base to minimize transportation costs.

2. **Rising Service Expectations**

It is notable that in mature distribution-intensive industries (maintenance supplies, automobile parts, mass-merchandise, etc.), distribution becomes more customized and complex over time. Price and product are replaced by speed and specialization as differentiators. In the earlier stages of maturation, central and regional facilities are designed for larger orders, longer lead times and less frequent shipments. They are also designed to minimize handling and maximize throughput. As industries mature they move towards smaller, more frequent shipments and value added services. Highly efficient flow-through facilities minimize handling costs and inventory in the facility, but can result in too much inventory or too little of the right inventory at the right time at the right place. Holding inventory at facilities nearer to the customer until needed allows you to leverage your inventory in new ways. For businesses that compete on speed, localized facilities can create competitive advantage by allowing same day or next day delivery to a critical mass of customers.

3. **Growth of Multi-Channel Distribution**

In a world where customers have more ways to interact and transact with your company—mobile, website, brick and mortar store, etc.—designing a facility for a single distribution channel can be very limiting. Although facilities with a single channel focus are more efficient to operate, that may not be a justifiable investment for every one of your channels. The rise of ecommerce and direct-to-consumer channels has companies scrambling for ways to enable facilities designed for full case picking to accommodate same day shipments of...
each picks and broken case picks. And, as multichannel merchants seek to leverage distribution space and organizational overhead, it’s becoming increasingly common to intermingle wholesale, retail, and ecommerce operations under the same roof. The opportunity for a company to reduce overall inventory levels by leveraging all of its inventory and drive it into whatever channel necessary is a big part of the business case for doing so, but running multiple channels through a single DC is not without its challenges.

4. Increasing Need for Flexibility

The increasing need for speed and flexibility balanced against the ongoing need for efficiency has a direct impact on distribution facility design. Business needs can change rapidly, so the design solutions must be flexible enough to allow for future changes in business requirements. This means rationalizing and right-sizing the level of automation and the use of space in a facility. In today’s complex multi-channel distribution environments, companies often do not know from which channel the next wave of growth will come. So distribution operations must be designed for maximum flexibility and scalability so that they can adjust to changing demand regardless of channel or order profile. Distribution environments may be designed for averages but need to be able to scale quickly to handle shifts in order profiles and peak volumes.

5. Greater Need for Product Data Accuracy

The analytical tools available to help marry product dimensional data with detailed order volume history and inventory records have greatly improved the ability to optimize forward and reserve inventory storage design. But with more robust toolsets comes greater dependence on product data accuracy, particularly good product dimensional data. Operational dependence on the accuracy of product information is not a new trend, but the level of importance it is receiving has grown, particularly in industries with hundreds of suppliers and thousands of unique SKUs. Warehouse management systems have always been dependent on accurate unit of measure data (e.g. units/case). And operational efficiency and inventory accuracy are harmed when this data is incorrect. But, product weight and dimensional data takes on additional importance when designing for products with a wide variety of product storage and handling characteristics. More accurate dimensional data is necessary to design and operate a space- and labor-efficient facility.

6. Broader Perspective on Business Case

Distribution is the vital link between your business and your customer. For all the work you do to attract customers, distribution is where your words become action. Inevitably, the growth of your business depends on the strength of this vital link. Businesses can no longer afford to assess distribution investments solely based on cost savings. Companies are taking a broader perspective on the business case to include considerations of the opportunity cost of doing nothing and potential revenue gains as a result of investment. For example:

What is the cost of doing nothing?

- Will we have sufficient capacity to sustain growth expectations?
- Will we lose or simply maintain market share?
- Will our distribution costs remain competitive?
- Will our service performance suffer if we don’t do this?

What benefits does this investment enable?

- Will we grow a current stream of revenue?
- Will we enable a new stream of revenue?
- Will we leverage underutilized assets or resources?
Ultimately, distribution investment decisions are no longer solely dependent on estimates of the impact on the income statement and balance sheet. Although return on investment analysis is still important, investment decisions should be viewed in the broader perspective as a reflection of how essential distribution has become to business sustainability and growth.

7. Increased Risk of Failure

As the expectations and value of distribution grow, so too does distribution complexity and the risk associated with failure. Complex distribution operations often rely on a number of systems and vendors—materials handling suppliers, software vendors, labor consultants, and strategy and implementation consultants. A key to reducing the risk of failure of large change initiatives is to find experienced partners who understand this complexity and embrace the value of a true partnership approach. It is possible to hire best of breed vendors who will implement their part of the project well, but without integration and accountability for the overall business case, what you can end up with is several well-implemented pieces that do not work together to deliver the promised results. A better approach is to work with a single partner who will take ownership for the business case and who can be held accountable to those results.

These 7 trends are making distribution more and more complex. And that can either enable or impede company performance. The good news is that they represent an opportunity to create competitive advantage out of innovative distribution facility and network design. Consider how these trends are impacting your distribution operations and whether it is time to give more thought to how you can take advantage of the opportunities they provide.

About Fortna

Fortna is a professional services firm helping companies with complex distribution operations meet customer promises and competitive challenges profitably. We develop a solid business case for change and hold ourselves accountable to those results. Our expertise spans supply chain strategy, distribution center operations, material handling, supply chain systems, organizational excellence and warehouse control software.

How Can We Help?

Fortna helps companies develop business cases for supply chain investment, including Material Handling systems. To learn more, ask to speak with one of our consultants.

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