Inventory in Motion—
a direct alternative to global fulfillment

UPS Supply Chain Solutions℠

Our Insight.
A UPS Supply Chain Solutions
White Paper

Logistics visionaries have talked for years about eliminating—or, at least, drastically reducing—the role of inventory in modern supply chains. The most efficient, slack-free supply chains, after all, wouldn't require any inventory buffer, because supply and demand would be in perfect sync. This vision certainly has its appeal: The death of inventory would mean dramatically reduced logistics costs and simplified fulfillment.

There's no need to write a eulogy for inventory just yet. Most companies haven't honed their networks and technologies well enough to eliminate the need for at least minimal inventory. Logistics managers have to perform a daily, delicate balancing act: balancing transportation costs against fulfillment speed, inventory costs against the cost of stock-outs, customer satisfaction against cost to serve, new capabilities against profitability.

What's more, two accelerating business trends are making it even harder to synchronize supply chains.

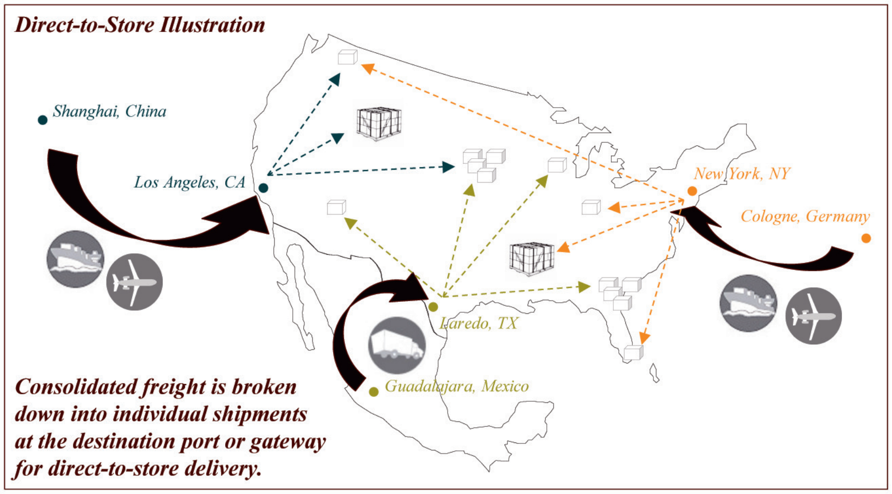
First, global sourcing is forcing supply chains to stretch farther across borders. World merchandise trade—which reached $8.8 trillion in 2004—has more than doubled since 1990.[1] The goods people consume are increasingly made in some other part of the world, particularly in Asia. This acceleration in global sourcing changes the logistics equation. When goods cross borders, considerations such as fulfillment speed and inventory costs get more complicated.

Second, powerful retailers and other end customers with clout are starting to push value-added supply chain responsibilities further up the supply chain. More customers are asking manufacturers or third-party logistics providers to label and prepare individual items so the products are ready to go straight to store shelves. With added responsibilities, of course, come added costs. So upstream suppliers are always looking for ways to squeeze more costs out of other areas of the supply chain, such as transportation and distribution.

[1] "WTO Sees Strong Growth," CNN.com, April 5, 2004, quoting WTO; "World Trade is the driving force behind growth," International Chamber of Commerce; "Developing countries' good trade share surges to 50-year peak," WTO April 1, 2005, Press Release.

A Direct Approach

A growing number of companies are overcoming these barriers by taking a more direct approach to global fulfillment. This direct-to-store approach—also known as distribution center bypass or direct distribution—keeps inventory moving from manufacturer to end customer by eliminating stops at warehouses along the way. Because companies can shrink the fulfillment cycle and eliminate inventory costs, direct-to-store can offer a good balance between fulfillment speed and logistics costs.



What accounts for the emergence of the direct-to-store model? Global sourcing and the upstream migration of value-added logistics services are certainly primary drivers. But other pieces of the puzzle have fallen into place in recent years to make direct-to-store shipments feasible.

Internet-enabled electronic links between supply chain partners have allowed better coordination and collaboration among the various supply chain segments. Meanwhile, at the front of the supply chain, increasingly sophisticated point-of-sale systems can capture product-demand patterns. This information can then be fed up the supply chain to manufacturers and components suppliers. More-accurate sales-forecasting tools are also taking some of the guesswork out of production and reducing the need for large inventory safety stocks. There is also greater availability of tracking and tracing tools that can follow orders across borders and through the hands of different supply partners.

In short, companies no longer need as much inventory gathering dust in warehouses because they can better synchronize production and distribution with demand. Direct-to-store lets them keep inventory in motion—across borders and around the world.

Is Direct-to-Store Right for You?

The direct-to-store approach is not necessarily the appropriate model for every company—or even every product line within a single company. It requires additional coordination further back in the supply chain, including more-accurate demand forecasts and precise delivery allocation planning. And the complexity of managing the process makes it even more necessary to have sophisticated tracking and tracing tools in place to provide detailed supply chain visibility, even as shipments change hands and hop from one mode of transport to another. It also requires a higher level of coordination among functional groups such as inbound and outbound transportation and warehousing.

Still, many kinds of companies—not just retailers and their vendors—can benefit from direct-to-store. Products don't necessarily have to be delivered to "stores"—they can go directly to consumers or even local distribution centers. And most companies probably have at least some product lines or channels that can benefit from direct-to-store. The key is identifying which product lines are the best candidates.

In fact, direct-to-store is a good alternative for product lines that meet one or more of the following criteria:

- **Timeliness.** Products whose value expires or diminishes past a certain date can be good candidates for direct-to-store. These include perishable items such as food or flowers; trendy items that can quickly go out-of-fashion, such as clothing and electronics; or items tied to specific events, such as promotional items and collectibles.
- **Seasonality.** Products tied to specific holidays or seasons are virtually worthless once the holiday or season is over. Direct-to-store can ensure that products arrive just when they're needed without having to rely on costly temporary warehouse utilization.
- **Allocation predictability.** With direct-to-store, you have to know the precise product allocation—which products are going to which locations—some time between manufacturing and final delivery. For example, a department store must identify how many sizes of a certain style of a woman's summer shoe should go to each store.
- **Higher-value goods.** Shrinking the order-to-cash cycle is more lucrative when the products are of relatively high value. The higher the value of the goods, the more important fulfillment speed—and direct-to-store—becomes.
- **Emergency/back orders.** Direct-to-store can provide invaluable time savings when items are out-of-stock and must be replenished directly from the factory.

- **High-growth companies.** Companies experiencing rapid growth might be unable to build additional distribution centers but still prefer to reduce strain on existing infrastructure. Direct-to-store can help them save time and enormous capital outlay.
- **Custom-manufactured products.** Direct-to-store is ideal for orders customized to individuals or companies—such as monogrammed clothing—that can be shipped in bulk but deconsolidated and shipped directly to customers.

Direct-to-Store Spotlight: Idea Group

The products: Idea Group markets date-sensitive promotional products for business events such as trade shows and sales conventions. Idea Group was introducing a new product: printable foam sandals.

The challenges: Took 10 weeks to get products from manufacturers in China through customs, past processing at California warehouse and out to multiple customers throughout the United States. Late deliveries to events render products worthless.

The solution: Consolidated shipping and customs clearance via UPS Trade Direct℠ Ocean, a direct-to-store solution. Enabled Idea Group to bypass its California warehouse and have UPS deliver individual sandal orders directly to different event coordinators and promotions companies.

The benefits: Shaved one to two weeks off Idea Group's fulfillment cycle. Reduced inventory costs, capital expenses and administrative costs. Gave Idea Group a new competitive dimension: order-delivery speed.

Risks and Rewards

A growing company that is near capacity in its distribution center can leverage the advantages of a direct-to-store model. Keeping inventory out of warehouses offers some compelling business advantages—but also some risks.

When there's no inventory buffer, there's always the danger of running out of stock. This can be particularly problematic when manufacturing is done overseas. Also, inaccurate orders—the wrong products, the wrong varieties, the wrong sizes—can create bigger problems in a direct-to-store scenario with no safety stock.

Direct-to-store doesn't have to be an all-or-nothing proposition. A company can apportion some percentage of their product-lines shipments to distribution centers—perhaps in situations where precise allocation of all products is not known—and the rest direct to stores.

Still, for companies willing to face these risks, there are bigger rewards waiting, particularly with respect to cost reduction and fulfillment speed.

Direct-to-store offers cost savings in a number of areas:

- **Capital investment savings.** No need to invest in expanding current warehouses or building new ones.
- **Improved network efficiency.** Companies can respond to seasonal and peak demand without having to overbuild distribution capacity that might remain idle during nonpeak times.
- **Reduced inventory-carrying costs.** Without the need for warehouse processing and storage, companies can eliminate warehousing and carrying costs, which are estimated to represent about 3.8 percent of sales.[2]
- **Reduced material-handling costs.** Direct-to-store can provide significant savings in labor and product-handling costs—both for receiving and outbound shipping.
- **Lower administrative costs.** Simpler direct-to-store consolidates management of supply chain functions, so fewer management resources are needed.
- **Lower damage costs.** Fewer touch-points and less handling mean less risk of damages to shipments.

In addition to these cost benefits, bypassing warehouses also offers some distinct speed advantages:

- **Faster fulfillment.** One of the biggest challenges facing traditional logistics networks is the high number of transportation segments—and the time it takes to get products from manufacturers to end customers. Once goods arrive in the destination country, delivery to distribution centers alone can take from 3 to 10 days. Receiving and sorting at the distribution center can take 7 more days, meaning that direct-to-store can shave over 2 weeks off the fulfillment cycle. Use those time savings to delight your customers with quick delivery.
- **Option for air.** The inventory-cost savings offered by direct-to-store can be used to justify faster transportation options. For example, air delivery rather than slower ocean or ground transportation can be used for higher value or high-demand goods to speed fulfillment.
- **Faster order-to-cash.** Faster fulfillment should mean faster payments, resulting in an accelerated order-to-cash cycle.

[2] "Logistics Trends: Achieving Supply Chain Integration," Denali Consulting.

Direct-to-Store the UPS Way

Direct-to-store solves many cross-border logistics issues, but it can raise others. For instance, companies must manage multiple vendors with no single point of accountability. Multiparty direct-to-store networks can create disjointed tracking systems and large gaps in visibility across the supply chain. And there are always the accounting issues of sorting through multiple vendor invoices.

Companies must determine if they have the expertise, financial resources and distribution network to manage a direct-to-store model. After all, skipping the distribution center doesn't mean companies can skip responsibility for managing international transportation, freight forwarding, customs clearance, labeling/kitting and supply chain visibility systems.

One emerging alternative is to let third-party logistics providers provide and manage the direct-to-store network. UPS®, in fact, offers a multimodal, international, turnkey, direct-to-store service called UPS Trade Direct℠ that provides shipment and customs consolidation with visibility across the entire supply chain.

Designed primarily for shipments that start out as packages or freight, Trade Direct provides transportation, customs clearance and direct delivery to multiple addresses in the destination country—all from a single source.

There are three Trade Direct services that correspond to three transportation options: UPS Trade Direct℠ Ocean, which offers affordable direct-to-store for less time-sensitive shipments that cross the ocean on ships; UPS Trade Direct℠ Air, designed for higher-value, time-sensitive shipments by air; and UPS Trade Direct℠ Cross Border, designed for ground-based shipments between the United States and its NAFTA partners: Mexico and Canada.

Like other direct-to-store models, Trade Direct bypasses distribution centers and keeps shipments moving from manufacturers to end customers. But the UPS approach offers a few differences:

- **Single-source management.** The entire shipping cycle is under the management of one logistics provider—one point of contact and one bill. UPS picks up the packages and freight from the manufacturer or supplier and delivers the products to multiple destination addresses.

- **Shipping and customs consolidation.** Once UPS picks up the freight in the country of origin, it is sent to the nearest UPS container freight station or retail-ready center. Here, orders destined for multiple stores are consolidated into a single shipment, with a single set of customs documents. Clearance through customs is managed by UPS customs brokers. Once it arrives in the destination country, this consolidated shipment is cleared once through customs, saving time, brokerage costs and paperwork.
- **Shipment deconsolidation.** In the United States (or destination country), once the goods have been cleared through customs (either upon arrival or immediately after bonded transfer to an inland destination location), they are sent to a UPS facility near the port or gateway, where the shipment is deconsolidated into individual orders and placed in the UPS package delivery or less-than-truckload system.
- **Value-added labeling and packaging.** UPS can apply store-ready labeling, provide special packaging, kit—even perform light assembly between pickup and delivery. These value-added services can be performed either at select consolidation stations or upon deconsolidation. Many UPS Trade Direct Ocean clients request that UPS apply destination shipping labels in the destination country, because this postponement capability gives them a few more days to determine precise product allocation.
- **End-to-end tracking/visibility.** Trade Direct customers can track the movement of shipments down to the item/SKU level with a UPS software visibility tool called Flex® Global View. The tool provides 24x7 visibility across borders, across third-party transportation providers and across transport modes—even providing proactive alerts if there are unexpected delays in the shipment. Shipments can be tracked through each milestone within the supply chain, giving you the highest level of visibility, improved customer service and more control over resource allocation and forecasting.

Other UPS services—such as Supplier Management and Returns Management—can be integrated with Trade Direct to provide a more comprehensive direct-to-store solution. For example, companies sourcing from multiple vendors in Asia rely on the eyes and ears of UPS Supplier Management services personnel to manage and synchronize orders and delivery schedules. UPS Supply Chain Solutions can also provide retail-ready services to prepare orders for direct-to-store delivery and return and repair services at the back end to complete the cycle.

Direct-to-Store Spotlight: Precision Dynamics

The products: California-based maker of electronic identification wristbands for use in concert events, hospitals and law enforcement.

The challenges: Biggest clients—event producers—can't afford to have wristbands arrive one day late. A new manufacturing plant across the border in Tijuana, Mexico, meant that Precision Dynamics had to coordinate separate trucking, customer brokerage and freight forwarding companies.

The solution: UPS Trade Direct℠ Cross Border offers direct-to-store delivery and consolidated management of freight forwarding, customs and trucking from Mexico to the United States—so inventory stays in motion.

The benefits: Reduced transit times by 2 days, eliminated warehousing costs and simplified administrative requirements.

Direct Impact

The direct-to-store model isn't for everyone. But leaders in supply chain management should be willing to try new logistics models—and face limited risks—in order to build a better, faster and cheaper mousetrap. For innovative companies and products that fit the profile, skipping the warehouse and keeping inventory in motion can have a direct—and lasting—impact on global business success.

The death of inventory has, as they say, been greatly exaggerated. The vision for perfectly synchronized supply chains with no need for inventory has still not been fully realized. However, a direct-to-store logistics model takes companies one step closer to this supply chain Nirvana.

About the Author

David Zamsky, a senior director of marketing for UPS, managed the design, development and implementation of the UPS Trade Direct portfolio of products.

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