E-Com

Online companies just want to feel fulfilled, but that opportunity carries risk for logistics providers

The [e-co]mmerce Promise

E-commerce, e-business, e-tailing, whatever "e" you want to call it, Internet merchandising is booming. However, as Internet-based businesses are learning at great pain, once the sale has been made, the work has just begun. "Putting up a Web site is fine, but let's not forget the real work starts, when you've taken the order," says Srikant Srinivasan, chief executive of online toy store KBkids. "You have to make sure the order gets there, gets there in good shape and gets there quickly."

The lesson for the "e" merchants is that e-commerce begins, ends, lives or dies with e-fulfillment. The recent peak buying and shipping season showed that fulfillment — the business of getting goods from manufacturers and merchants to consumers — was something that many e-tailers failed to consider. Hence, the countless horror stories of online businesses unable to deliver on orders.

By Satish Jindel

E-fulfillment has spawned an entire industry itself and, in fact, must be an integral part of any e-commerce plan. For logistics companies, this awakening marks new opportunity. Logistics firms such as the new UPS e-Ventures, GATX Logistics and ASD Systems are seeking to take the headache of e-fulfillment away from e-tailers — for a fee.

The goal is to allow manufacturers and e-tailers to concentrate on core competencies such as production, marketing and sales while logistics companies provide the critical customer service component and what may turn out to be the only face-to-face encounter a consumer has in a purchase.

Thus, e-tailers face a tough decision. They can outsource their fulfillment operation and sacrifice some cost competitiveness or they can develop and manage a distribution network of their own that is dependent on many variables.

Logistics companies, too, face tough decisions: they must be keenly aware of the goals of the e-commerce companies, their business plans, product characteristics and their needs across a large part of the supply chain.

As e-commerce evolves, the following three models are emerging for distribution of products and merchandize to e-consumers:

1. Manufacturers selling direct to e-consumer (The "Dell model," for Dell Computers)
2. Group of manufacturers supporting an enabler to market and manage the distribution of products to consumers (The "Amazon.com model")
3. Manufacturers working through national and local enablers using brick and mortar facilities for marketing and distribution to e-consumers (The "Webvan model," for the California-based grocery delivery operation).

The optimum e-fulfillment strategy is to develop a distribution network that is best suited to the entire production and distribution process, including manufacturers' capabilities, location of production facilities, product attributes, purchasing patterns of online buyer and socio-economic profile of target e-consumer. To do that, retailers must look at numerous questions:

E-Commerce

Implications of e-commerce distribution channels to manufacturers

Model	Maintain brand loyalty	Provide superior customer service	Reduce supply chain links	Reduce inventory levels	Promote other company products	Transit time between production and delivery to consumer
Dell	**High**	**Low**	**High**	**High**	**High**	**Fast**
Amazon	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**	**Medium**
Local	**Low**	**High**	**Low**	**Low**	**Low**	**Slow**

Product characteristics
- The physical attributes, such as the weight, density, cube, shelf life, perishability, etc.
- The value of goods.

Purchasing patterns of e-consumers
- Is selection driven by brand loyalty or price?
- What is the frequency and predictability of purchases, such as are they impulse decisions for gifts or planned purchase for periodic consumption? What are the implications on delivery density and returns.

Manufacturers' abilities to handle e-commerce dynamics
- Geographic location of facilities by world region.
- Proximity of the facilities to the target e-consumer.
- Production process compatibility to handle merge-in-transit.
- Relationship of production cost to transportation cost.
- Scope of goods produced for bundling of items for a higher total value per transaction.
- Value-added services performed by current distribution channel.
- Profit margin available for brick-and-mortar enablers.

Socio-economic profile of the target e-consumers
- The disposable income of the household.
- Do both spouses generally work away from home?
- Physical characteristics of the neighborhood in terms of density and security.

Each model presents a set of opportunities and challenges to the manufacturers of products, online retailers or current brick-and-mortar stores and to the logistics companies that facilitate the movement of goods between each link.

Implications for Manufacturers

E-commerce is forcing changes in the distribution channels that are requiring all parties — manufacturers, distributors, retailers, consumers and logistics companies — to evaluate their value proposition and develop capabilities that will meet the evolving demands of the Internet age.

Under longstanding distribution practice, manufacturers have largely let an enabler such as a wholesaler or distributor manage the logistics of getting the product from the production facilities to the consumer.

This has created long-term relationships and ties within the distribution channel that may not be most suitable for the future presented by e commerce.

Yet many manufacturers are caught between protecting the current sales channels and their need to change for the future.

The change is even harder for companies that can not see successful examples of e commerce-driven distribution channels in their own industry.

Although the Dell model of direct sales to consumers appears to be most attractive to manufacturers, its application and success depends on a proper match with product characteristics, purchasing patterns of consumers and socio-economic attributes of the consumer.

Other challenges and opportunities of each model include:

1. **Manufacturer sells direct to consumer (The "Dell model")**
   - Protects brand name of the manufacturer from being lost.
   - Provides higher operating margin or lower product price by eliminating intermediaries.
   - Enables bundling of products for greater penetration of customer budget.
   - Provides ability to customize the order to consumer specifications.
   - Reduces role of traditional retailers, as the airlines have reduced the role of travel agents.
   - Could promote mergers and acquisitions in the consumer products industry driven by needs of this new distribution channel.

2. **Manufacturers supporting a national enabler to market and manage the distribution of products to consumers (The "Amazon model")**
   - Gives greater leverage to the enabler in setting product specifications and price.
   - Consumer loyalty may shift from product brand to enabler service and quality image.
   - As the enabler acquires greater influence over consumers, it may promote generic products under its own brand for higher margin over time.
   - Operating margins for enabler will improve at the expense of the manufacturer.
   - Requires an extensive network of distribution centers with ability to warehouse inventory for multiple manufacturers.

3. **Manufacturers working through national and local enablers with brick and mortar stores for joint marketing and distribution to consumers (The "Webvan model")**

Explosive B2B

Air cargo companies pinning their future on business-to-business e-commerce deliveries face a potential gold mine if a forecast by the GartnerGroup proves true.

According to the business technology consultancy, "B2B" e-commerce will grow from $145 billion in 1999 to $7.29 trillion by 2004, when that segment will account for 7 percent of all global sales transactions. That would be a boon to transport providers because delivery companies find such traffic, with its high density of deliveries, more profitable than business-to-consumer deliveries.

"The B2B explosion is imminent, fueled by a combustible mixture of investment financing, IT spending and opportunistic euphoria that is being funneled into start-ups and brick and mortars' e-commerce initiatives," says Leah Knight, principal analyst for GartnerGroup's e-Business Intelligence Services.

The GartnerGroup also predicts that companies that develop Internet-based B2B e-marketplaces within specific industries will drive the growth and account for 37 percent, or $2.71 trillion, of the B2B market by 2004.

This year, the consultancy projects B2B e-commerce sales will grow 278 percent to $403 billion. The group says sales will reach $953 billion in 2001, followed by $2.18 trillion in 2002 and $3.95 trillion in 2003.

— Brendan Sobie

- Requires investment in marketing directly to the consumers to maintain customer loyalty for their brands.
- Rely on consumers' pull for sale of their products.
- Requires brick-and-mortar enablers to function as a distribution center for local delivery and returns, and for regular retail activity.
- The distribution channel and logistics infrastructure remains largely unchanged for products that are either perishable or require contact with the product prior to selection.

Express Battles

The air express carriers that once brandished rate discounting in fierce battles for market share are now using Internet strategy in a bid to get the upper hand.

United Parcel Service and Federal Express have been aggressively embracing the e-commerce banner as they announce supply chain and technology initiatives aimed at the new Web-based economy.

UPS touted its Internet capabilities in announcing a supply chain management deal with Ford Motor Co. aimed at cutting delivery times for Ford cars and even created something called UPS e-Ventures, a subsidiary aimed at incubating e-commerce companies.

In that announcement, UPS transformed its near-century of largely-generic parcel delivery into a "92-year heritage of expertise in operational execution and logistics."

FedEx has focused mostly on its technological expertise, announcing initiatives such as a multi-carrier shipping system for its customers that includes FedEx and its competitors.

But UPS may have delivered the sharpest blow last month at a government-sponsored forum on e-commerce and logistics. UPS Chairman Jim Kelly hosted the event alongside John Morgridge, chairman of Cisco Systems. Aside from making the overwhelming majority of routers that manage traffic on the Internet, Cisco is Federal Express' highest-profile logistics customer.

—Paul Page

Logistified

The changes generated by e-commerce represent equally significant opportunities and challenges for logistics and transportation companies such as GATX, ASD Systems, Logistix, Clickship.com, and a host of others that have sprung up to leverage the capabilities of the Internet.

These companies are aggressively investing in warehouses and logistics software to handle the demands of the e-commerce marketplace. However, to generate the demand, these companies will need to demonstrate to the manufacturers and enablers their understanding of what logistics requirements and capabilities will be important to the successful implementation of the new distribution channel.

To handle the full scope of such services, some logistics companies are developing relationships with other companies. For example, GATX Logistics has a relationship with InterWorld for Web site development and management which can help manufacturers sell directly to the consumer. Similarly, ASD System has capabilities appropriate for smaller online retailers and catalog companies looking for marketing their products on the Internet.

The implications of each model on logistics companies will vary depending on which models are being targeted for logistics support:

1. The "Dell Model"

Dell Computer has been successful implementing its direct sales model with help from logistics companies. Yet these logistics companies have not demonstrated success in adapting the model for other industries and manufacturers.

Few manufacturers of consumer goods, electronics, personal hygiene and beauty supplies have tested or adopted this model, largely because of a lack of logistics expertise. Some that have attempted to use the Internet to sell direct, such as Nike, have struggled. However, companies such as Procter & Gamble, Gillette and Johnson & Johnson represent huge opportunities for application of this model.

This model presents the greatest growth opportunity for logistics suppliers, but it is also the most difficult to design and implement. The lead time to create this opportunity is very long due to institutional barriers such as reluctance to change, fear of upsetting current distribution channel parties, and a fear of failure.

It also may require the greatest investment because of the need to develop a network of fulfillment centers that are optimized for production facilities of manufacturers and the operation network for delivery to consumers.

2. The "Amazon model"

This is the most common model currently in use for online retail sales. It also appears to be the common target for logistics companies looking to participate in e-commerce. It is similar to the traditional retail infrastructure, providing for faster implementation by both online retailers and by logistics companies.

Logistics operators targeting this model will:

- Provide Web-based order management service.
- Manage inbound freight of finished goods.
- Allow for pricing comparison of comparable products.
- Handle merge-in-transit activity for different products from several manufacturers and distribution centers.
- Manage inventory in motion for many different manufacturers.
- Provide warehousing and inventory management services.
- Handle delivery of products through regional or national distribution network depending on the various characteristics for the model.

3. The "Webvan model"

For the growth and ability to realize the potential for Internet-generated demand for delivery from local brick and mortar enablers, the same-day pickup and delivery infrastructure will need to evolve rapidly. The fragmented nature of same-day pickup and delivery service has limited achievement of delivery density, productivity and proper marketing to reduce cost of the service.

Logistics and transportation enablers that can bring the same level of technology, marketing, operational planning, management talent to same-day service that has fueled growth of the express market will find that the pent-up demand for this service with e-commerce models can be greater than what Frederick Smith envisioned for overnight service when he launched Federal Express.

The capabilities needed for this model are:

- Greater investment in the brick-and-mortar infrastructure.
- Handling of inbound freight for finished goods.
- Management of a more traditional distribution network with truckload and less-than-truckload deliveries to local distribution centers.
- Optimization of stores to support customer visits to view new products and to handle exchanges and returns.
- Integration of the existing retailers into the online channel for sales to e-consumers.
- Handling same-day delivery of goods and pickup returns.

Strategic consequences

Since most manufacturers have been slow to develop distribution channels for the new e-commerce age, enablers like Amazon.com have become the Wal-Marts of cyberspace, putting manufacturers' products before an enormous and growing audience of online buyers.

However, over time, these enablers will gain such influence with consumers that the loyalty will shift from manufacturer of product to the provider. That will shift the balance of power for pricing and product specification from the manufacturer to the enabler. This should be of alarming concern for manufacturers that have the potential to adopt the direct to consumer model but who fear disturbing their relationship with the enablers within their current distribution channels.

Brand name loyalty cannot be underestimated. Consider that several Internet companies spent $2 million per minute on recent advertising during the Super Bowl simply to develop name recognition. Procter & Gamble, Gillette and others can capitalize on their already strong brand names for products consumed daily by American households.

By ignoring this opportunity, these companies also risk becoming producers of generic products to be sold under the brand name of Amazon.com, Webvan.com or other such enablers. This is already occurring in the information industry where America Online, an information enabler, is acquiring Time Warner, the producer of information.

Because the world's largest consumer market remains in the United States, the implications are even greater for overseas-based manufacturers with strong brand name awareness in world markets. Companies such as Phillips, Unilever, Nestle, Cadbury and others will need significant assistance in the logistics area to streamline their distribution channels, eliminate non-value-added supply-chain links, and speed delivery to consumers to maintain their market share in an Internet-driven economy.

The Internet recognizes no geographic boundaries, but the fulfillment capabilities of the e-commerce participants will determine whether they can capitalize on consumer appetites for their products.

With modern communications growing faster and reaching more deeply around the world, the ability to generate sales from consumers in far-flung markets may actually prove to be a relatively simple task. The more difficult task will be meeting such demand with the logistics that delivers the promise of technological progress in a timely and cost-efficient manner.

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