Shaking up distribution

Ingram Micro offers to manage virtual inventory for technology vendors.

By Eric Kulisch

Ingram Micro is the world's largest distributor of high-tech products, but company executives are nonetheless redesigning their business model with a major emphasis on logistics in order to stay a step ahead of market changes that threaten the traditional wholesale distribution sector.

A $30 billion company based in Santa Ana, Calif., Ingram Micro is strictly a business-to-business sales and distribution conduit for more than 1,300 technology manufacturers to reach 180,000 resellers worldwide. In North America, the company sells to about 30,000 resellers, like CDW, who in turn provide turnkey computer and office equipment services — including ordering, software installation, networking and maintenance — for 3 million to 4 million businesses and government agencies.

Some large information technology manufacturers have extensive sales organizations that can eliminate middlemen and deal directly with retailers that source products. Ingram Micro, ranked 80th on the *Fortune 500* list of largest companies, caters to companies of all sizes that can't afford to manage procurement and distribution from a huge universe of vendors.

Ten years ago Ingram Micro introduced drop shipping to dealers, educating them on how the process can reduce handling costs and allow them to simply show up at their customer site with a professional services team to set up the product.

Now the wholesale giant is going a step further and proposing to be the master logistics provider for all of a vendor's sales and marketing partners. With net margins for the distribution industry in the 1.5 percent range, the company is also placing more emphasis on value-added logistics — an industry that typically earns profits of about 5 percent.

Its growth strategy heavily rests on developing its e-commerce management and reverse logistics capabilities, Keith Bradley, president of Ingram Micro North America, said at eyefortransport's third-party logistics conference last summer in Atlanta. The company plans to add that scope through organic growth and acquisitions, he said. On Sept. 14, it announced it had bought Belgian distributor interact BVBA.

The publicly traded firm reported a 24 percent increase in second quarter sales to $8.16 billion and a doubling of net income to $67.7 million, compared to the year-earlier period.

Facing Reality. Ingram Micro officials concluded they had to change their traditional distribution model because it requires taking title of products and holding $2 billion of inventory at a time when gross margins are noticeably lower than in the past. The goods it buys from suppliers have to sit in a warehouse — and on its balance sheet — until Ingram Micro can find a retailer to buy them. That approach worked fine, for example, when personal computers cost $1,500 on average and Ingram Micro could make $90, or 6 percent, as its cut for each transaction. The high revenues covered for a lot of operating costs and still allowed the company to make a 15 percent to 20 percent return on invested capital, Bradley said.

Today, PCs cost about $500 apiece and Ingram Micro's sales margin is 4 points, or $20. Meanwhile, none of the physical demands in its distribution centers has decreased and returns on capital are falling below 10 percent.

Under the old business model of pushing products to the distributor, unsold goods "would end up being excess inventory charges on my profit-and-loss statement" and easily cancel out any slim profit, Bradley said.

"The answer to that is having manufacturers continue to own the inventory, but place it with a master logistics provider for the distribution channel," Bradley said in a follow-up interview. "So, then multiple resellers and distributors could be accessing that virtual pool of inventory. That would have two major benefits for the vendor: a), it would reduce the amount of inventory in the channel and b), increase their ultimate sales because now everybody could access the same inventory."

The typical industry metric for maximizing sales is to have five weeks of inventory in the system. A supplier can be fooled into thinking it is adequately prepared to cover all of its customers' upcoming orders at a macro level, but in reality that inventory may not be perfectly balanced between its own distribution centers and its multiple distributors, each of whom may have high supplies of some products and low stocks of others. The situation could lead to lost sales for the vendor if a reseller doesn't find what it is looking for in its distributor's inventory and goes to a competitor to buy a similar product produced by another company instead of placing a back order, Bradley explained.

Other distributors in the technology field include Tech Data, Synnex Corp., Avnet and Arrow Electronics.

The master logistics provider concept operates with a single pool of inventory, "and then you're feeding the different channels as demand signals come up. That's a big value add," said William Sanders, vice president and general manager of Ingram Micro's logistics arm.

Here's how it would work. Ingram Micro buys about 30 percent to 40 percent of the inventory in its warehouses for its distribution needs. The supplier also places inventory with Ingram Micro for Synnex, Tech Data and dealers, but still retains ownership of the product as happens under a normal 3PL relationship. Ingram Micro Logistics processes orders on behalf of Synnex or Tech Data so they don't have to take inventory themselves. That IM Logistics is shipping the product instead of the manufacturer or a neutral third party, is transparent to the other distributors and resellers.

The distributor is trying to convince technology makers to adopt the new approach, which executives believe is applicable to other industries as well. Ultimately, it's up to the manufacturer to decide whether to operate with a single pool of inventory instead of shipping product itself through multiple indirect, direct, and e-commerce sales channels, Ingram Micro says.

"There are many industries that have distributors and sub-distributors. As the IT industry leads the way, I think other industries might be interested in this model as well," Bradley told *American Shipper.*

Keith Bradley
president,
Ingram Micro
North America

"Manufacturers will end up holding a bit more inventory, but way less than the amount now between us, them and other distributors. But in aggregate the industry will hold less and that's good for the industry."

The company's North American chief said manufacturers have an incentive to use a master logistics provider because then the distributor, motivated by higher margins resulting from its lack of inventory-carrying costs, will focus more effort on selling product than a competitor that hasn't made the change.

"Then I have no capital tied up in our relationship. So, now I'm making an infinite return on invested capital," he said. The new goal is to have the company's accounts receivable equal its accounts payable.

Bradley acknowledged that moving to the master logistics provider model will be disruptive at first for the technology industry and Ingram Micro itself.

"Manufacturers will end up holding a bit more inventory," he said, "but way less than the amount now between us, them and other distributors. But in aggregate the industry will hold less and that's good for the industry."

The company's big distribution centers will be a little less full if it doesn't win master logistics contracts, but Bradley predicts that even with some customer losses the company would still come out ahead because of the huge savings associated with eliminating inventory.

And Ingram Micro has the analytics tools to support the whole demand-pull selling model, Bradley insisted.

"I can tell you more about end-user profiles and demand generation than the IT industry and probably anybody else could. I'm even convinced I could sell that data line time feed to hedge funds that would be making investment decisions on some of my larger IT vendors," he said, before quickly disavowing such a move.

Asked who will be the losers if Ingram Micro's plan takes off, Bradley said, "We actually believe it's a win-win.

"I think we'll win a disproportionate share of this opportunity as the model migrates to this new method. But I also think it's good for the rest of the distributors because their balance sheet will improve because they no longer have to invest in a month's worth of inventory and therefore they have less capital invested in their business."

Competitors would also benefit in other ways, Sanders added. IM Logistics, for example, would drop ship to a Tech Data customer, giving Tech Data greater control of its inventory, eliminating extra touches and transportation, and allowing it to focus on sales and marketing.

Bradley said Ingram Micro has implemented the master logistics provider for two *Fortune 100* companies, resulting in

E-commerce logistics market

(In $billions)

	2009	2013
E-commerce market	$156	$229
Outsourced fulfillment	$35	$52
3PL service fee	$2-3	$4-5

Source: Ingram Micro, Inc.

a significant reduction in inventory and increased sales levels. "We believe their top customers include Apple, Wal-Mart and Amazon.com," Matt Sheerin, a senior analyst covering the technology distribution sector for Stifel Nicolaus, said.

The Logistics Play. Replacing physical distributors with a master logistics role opens up a huge logistics opportunity for Ingram Micro's logistics division, officials said.

The change in customers' logistics needs and a desire to maximize infrastructure utilization led the company 10 years ago to set up a separate logistics business. It doesn't take title to goods but rather charges customers a fee for its shipping service.

IM Logistics has about 45 manufacturers and retailers as customers, including toymaker Hasbro and others that are not involved in technology.

It operates on the principle that any new customers have to be supported by taking advantage of the existing high-tech systems without hiring extra employees.

IM Logistics' shipment volume for logistics customers now exceeds the volume shipped by Ingram Micro as a wholesaler, Sanders said.

The division has been able to take advantage of its mass shipping volumes to obtain next-day, instead of two-day, ground parcel delivery, from Los Angeles to San Francisco and Phoenix, and from Harrisburg, Pa., to Boston, he added.

At the heart of Ingram Micro's operation are 103 highly automated and mechanized distribution centers that efficiently sort, pack and ship orders. There are seven of these advanced logistics centers in North America — Mira Loma, Calif.; Dallas; Chicago; Memphis, Tenn.; Toronto; Vancouver and Harrisburg, Pa.

Last year the company shipped 26 million orders in North America and 80 percent of them directly went to end users, thereby eliminating a step in the supply chain. Sales outlets benefit from drop shipping because they don't have to hold the inventory and reship it. Ingram Micro is even able to put the reseller's logo on the shipping labels so the end user assumes it came direct from the reseller.

But the shift in inventory management practices has meant smaller order sizes and increased use of more expensive parcel shipping for the distributor. That, along with margin compression at the point of sale, has placed pressure on profits and a premium on achieving maximum productivity at these advanced logistics centers.

The company's distribution centers are built to accept pallets, store boxes on shelves and use conveyor belts to ship products out as single packages. Ingram Micro has also invested more than $40 million in IM First, its proprietary warehouse management system (WMS), to accurately receive, store and control the flow of goods according to each retailers' requirements. All 103 DCs operate on the same global WMS.

IM Logistics also offers transportation and accounts receivable management, inventory tracking, as well as value-added assembly and postponement services such as applying labels, performing final assembly, building retail displays, package configuration and packing so manufacturers can customize their product at the last moment prior to store delivery.

Its reverse logistics operation includes testing and re-boxing undamaged returned goods for sale, refurbishment, returning goods to suppliers, reselling open box and refurbished goods through discount channels, auctions, liquidation and destruction.

Ingram Micro's advanced logistics centers are in campus settings, which may include a less-than-truckload cross dock, a value-added configuration building, and a returns processing facility and a primary warehouse that ships out parcels, all sharing inventory as needed. Ideally the buildings are all located on the same footprint, but in some situations warehouses are off-site, but nearby.

"It's kind of like a hub-and-spoke model within a five-mile radius," Sanders said.

All logistics centers are linked by the same IT infrastructure, enabling IM Logistics to quickly ramp up shipping operations for new customers and give them consistent pick, packing and transport services anywhere in the world.

Sanders said a big service differentiator for the company is its wireless DC network. Servers are located in the primary campus warehouse and connected to the central WMS through a T-1 cable. When a new customer comes on board, IM Logistics is able to remotely update its WMS system in a campus with the customized routing information and other requirements. If IM Logistics needs extra capacity outside its real estate footprint, it looks to lease an available facility within a few miles and can wirelessly import the WMS and start operations within days. Using a commercial off-the-shelf system usually takes longer because a 3PL has to obtain licenses and customize the program. The off-site

Taking a bigger byte

Distribution channel benefits manufacturers, trade group says.

The use of middlemen in the technology industry is increasing because manufacturers are realizing that two-tier distributors are the most cost-effective way to reach the business-to-business market, according to the Global Technology Distribution Council.

A February 2009 study commissioned by the trade association showed that higher costs for price protection and marketing were more than offset by reduced costs for shipping, handling, warehousing, returns, accounts receivable, financing and other administrative costs. The study relied on 13 expense types provided by nine large IT companies.

"When you add them up, for B2B, as a manufacturer it's absolutely more expensive to set up your own warehouse, credit department," customer service and sales, said Tim Curran, the council's chief executive officer. The indirect sales model also allows vendors to get their money immediately.

Manufacturers typically offer to protect a distributor's purchase price from future discounts offered to the broader market. A distributor will report back how much stock they have of an item purchased at the higher price and receive a credit for the difference. Suppliers also pay distributors extra to run events promoting their products.

Most IT products are sold in bundles with peripherals and software from different manufacturers. "So if a manufacturer wants to set up its own direct sales force it needs logistics, a credit department, bank relationships, to be prepared to cover bad debt. So they can offload all that to a distributor," Curran said.

Not having to invest in all that overhead is especially important when sales volumes drop, he added.

"The technology distributors are the most efficient managers of inventory" among all U.S. industries, Curran said. Commerce Department data shows monthly inventory to sales ratio in the sector at 0.8 compared to a general average of 1.15 — an indication that inventories of IT products are turning more than once per month, he noted.

During the recession, it took a long time for the economy to draw down inventories. Inventories of technology products, however, were already low "because manufacturers and distributors have developed extremely effective forecasting and inventory allocation models to analyze demand patterns," Curran said. "They've done a phenomenal job of managing inventory at a low level and providing very high order fill-rates, in the high 90 percent area, through the downturn."

Large manufacturers may sell direct to their biggest and best clients, but are relying more on distributors for the bulk of their sales, Curran said.

Dell, which previously only sold computers directly to consumers, is among the companies that have turned to distributors to reach the corporate world.

Many vendors are also using two-tier distributors to fulfill sales through their Web sites.

And large retailers tend to have direct relationships with a handful of major suppliers, but often utilize two or three distributors to source from secondary and tertiary suppliers.

IT distributors have reached and exceeded the highest sales levels achieved before the economy soured, the Global Technology Distribution Council reports. Members achieved worldwide revenues in excess of $100 billion last year and monthly sales are running above the peaks in early 2008. Second-quarter U.S. hardware revenue increased 10 percent from the first quarter this year, and by 20 percent compared to the second quarter of 2009. Year-over-year sales in Europe were up 15 percent but have stabilized more during the current calendar year.

The sales rebound is driven by companies replenishing dated desktop computers, laptops and mobile devices and by a new trend of hotels and other businesses purchasing consumer products, such as flat-screen TVs, for professional settings, Curran said.

facility is still considered part of the local logistics campus.

The wireless capability helps the company quickly flex its warehouse capacity as needed without investing a lot of money to hardwire each building. A top-tier WMS system supplied by a software vendor can cost as much as $2 million to install per location, although some can be had for less than half that price.

E-commerce Fulfillment. In the e-commerce space, Ingram Micro wants to leverage its logistics assets to help online retailers interested in outsourcing sales, order and payment processing, and shipping. Bradley said the company studied other segments that had similar parcel distribution challenges and zeroed in on dot-com retailers.

Electronic retailing is a $156 billion market and is projected to reach $229 billion by 2013. Ingram Micro's research shows that only 20 percent of e-tailers have outsourced fulfillment, with the rest believing they can convert a corner of a distribution center, typically designed to move pallets and containers to stores, and successfully ship out parcels, Bradley said.

"So you're trying to do dot-com fulfillment in a DC not built for singles. It's very expensive and it's not scalable," he said.

Ingram Micro officials say they've already built that parcel fulfillment network and have the capacity for Web retailers to jump onboard. The company's DCs can process 100,000 to 360,000 orders per day.

"It's a huge differentiator to be able to flex and service customers, whether it's labeling, packaging, picking or gift wrapping. That's why the e-commerce pillar is so important because it feeds into that engine that services Ingram's distribution" network, Sanders said. IM Logistics can begin shipping products for an e-commerce retailer within weeks, he added.

Ingram Micro estimates the market for e-commerce outsourced fulfillment at $35 billion, growing to $52 billion by 2013. Within that arena, 3PLs have an opportunity to make up to $3 billion in fees now and $4 billion to $5 billion by 2013.

IM Logistics' services include building and operating Web storefronts, providing analytical reports on customer behavior and access to the company's customer call center in Buffalo, N.Y., in addition to order fulfillment and transportation management. The system enables warehouse personnel to personalize orders by gift wrapping, engraving or adding other touches.

One of IM Logistics' new customers is eBags.com. The online retailer has enhanced its Web site with 5,000 consumer electronics offerings, such as power cords and adapters, from Ingram Micro's catalog without having to carry the inventory itself. The minute a buyer clicks the item, Ingram's systems behind the scenes immediately sells it to eBags to sell to the end customer. IM Logistics then processes the order and arranges delivery.

IM Logistics similarly has placed 20,000 catalog items on the Web site of a big retail customer.

In this variation of the master logistics provider for retailers, IM Logistics holds their inventory of non-electronic goods for distribution through all sales channels, much like a regular 3PL, while allowing the customer to piggyback on its catalog and tap the Ingram Micro inventory of electronic goods. Using its efficiencies and scale, the company can also take advantage of outbound less-than-truckload shipments to a retailer's distribution center and stores to load a consumer's Web order for store pickup, Sanders said.

"What's neat about this model is that the customer can use our space as they need it" and pay as they go, he said. The ability to have a variable amount of warehouse space as needed differs from the typical 3PL situation in which a shipper pays for a minimum amount of dedicated square footage, and is charged a premium for going over the amount during the contracted period.

Sanders said that what sets IM Logistics apart is that it originated out of the distribution business, whereas competitors tend to enter logistics from a transportation background.

"Most 3PLs don't have that customer touch experience," said Sanders, who previously worked at UPS Supply Chain Solutions, Exel and Kuehne + Nagel.

Ingram Micro is scanning the landscape for potential acquisitions, but any deals must be integrated within one or two quarters, Bradley said. The new policy, at least in North America, is the result of lessons from acquisitions over the past two years that were poorly executed. In those cases, Ingram Micro bought companies for their additional competencies, but left them to run as separate entities.

"That was a big mistake. We weren't able to integrate our culture, implement controls" and gain transparency into how they operated, he said in Atlanta.

Earlier this year, Ingram Micro named Robert Gifford to the new position of executive vice president of global logistics, with a charter to grow the logistics business. The company said the move would centralize its distribution centers, sourcing, transportation and outsourced logistics functions under one organization instead

Ingram Micro estimates the market for e-commerce outsourced fulfillment at $35 billion, growing to $52 billion by 2013. Within that arena, 3PLs have an opportunity to make up to $3 billion in fees now and $4 billion to $5 billion by 2013.

of answering to each region, benefiting customers who want a global supply chain manager for inbound and reverse logistics.

Gifford's arrival also underscores the level of importance Ingram Micro is placing on its logistics division. Sanders said the company is trying to get to the point where IM Logistics stands on its own "because we envision a day where Ingram Micro is just another customer." The company at one point even considered creating a new name for IM Logistics, but discarded the idea because of the sales openings created by being associated with Ingram Micro, he said.

Jettisoning the approach that made Ingram Micro the world's biggest electronics distributor is a risky strategy, but Bradley contends that standing pat carries more risk.

"If you're looking to grow and transform your business at multiple times, you have to innovate and challenge your business process," he said in Atlanta.

Manufacturers can muddle along using multiple 3PLs and having multiple handoffs, "but if you really want to focus on obscene market share gain, you've got to change your business model. And I encourage everybody to put all their inventory in one location, and align all your sales and marketing entities all over the world to have access to that virtual pool of inventory and then enable it using technology" and business intelligence, he added.

"I would challenge shippers," he continued, "to look at their vendor model and turn it upside down. If you're just going to look at it in a traditional way, you're going to grow at market. If you're looking to grow above market, you've got to transform your business and take some risk. And we'll enable it for you." ■