

The Global Enabled Supply and Demand Chain Series: Fulfillment and Logistics

By Julie Murphree

Analysts say that ignoring fulfillment and logistics in your company's supply and demand chain will bring certain failure with customers. Find out what is happening in this market segment.

[From *iSource Business*, [June/July 2003](#)] If you want worldwide information technology (IT) spending to return to positive growth this year ... it will, according to a recent IDC forecast.

And while the Framingham, Mass.-based IDC has revised the previously predicted 3.7 percent growth in 2003 down to 2.3 percent the well-known research firm does not doubt the year will end in the positive for IT spend. The company's motivation for lowering the growth number, says IDC, is the economic and geopolitical unrest that has impacted IT spending since the fourth quarter of 2002.

With that said, organizations recognize that fulfillment will be one of the most critical areas of IT spending and enablement in 2003. As proof, in a recent *iSource Business* readership survey, fulfillment is cited as a top area of importance in IT enablement today, along with customer relationship management (CRM). The magazine's April 2003 survey reveals that 80 percent of the 108 *iSource Business* readers surveyed say that fulfillment is important or critically important to their organizations' efforts to enable their supply and demand chains.

Such high recognition of the fulfillment function's value to supply and demand chain management makes sense when you recognize that this function is on "the front lines when satisfying your customers," explains Noha Tohamy, analyst with Forrester Research. She adds that, "fulfillment is the most critical step in gauging how well a business is meeting its customers' needs."

It's not surprising, then, that CRM is also right up there with fulfillment in importance, according to the *iSource Business* survey. In this same survey, readers say they are investing anywhere from \$60,000 to \$5 million on fulfillment applications to further enable that aspect of their supply and demand chains.

Interestingly, the 2003 Readership survey *iSource Business* conducted in February of this year also revealed that 59 percent of readers are in control of their own budgets for IT spending, with 61 percent of them having budget amounts of \$100,000 or more. More than 30 percent of readers have IT spending budgets in excess of \$1 million or more.

What makes the statistics even more intriguing is that 38 percent of the participants in this survey are top-level business leaders from major government, education and transportation and

7 percent of participants in the survey came from information management departments. The statistics run parallel with an AMR Research statistic from "Enterprise Application Outlook for 2003: The Performance Driven Enterprise," January 2003, that shows 67 percent of procurement groups own new software budgets, not their IT departments.

Such leverage and budget commitments may be the very thing that validates business research firm Datamonitor's prediction that global investment in fulfillment software applications by enterprises and logistics service providers will grow to \$2.7 billion by 2005. The firm suggests that most of the investment in fulfillment software will come from enterprises' in-house logistics, followed by third-party logistics providers (3PLs) and courier organizations.

Specific growth in the fulfillment software market for 2003 should be at 33 percent compound annual growth rate (CAGR), according to Forrester Research.

The Force Behind Fulfillment's Growth

The analyst community suggests that enterprises globally are turning to fulfillment software because they need solutions that are fast, accurate, flexible and technologically advanced.

"An efficient order fulfillment process is a great measure of how well a business is managing its supply chain," says Forrester's Tohamy. "A major new play is that the order fulfillment tools follow the fulfillment process within and outside the enterprise. This is easier said than done, since it requires quite a bit of business and technology integration. For example, a fulfillment tool needs to know about inventory in transit to have a full picture of the enterprise's ability to fulfill orders. Collaboration plays a role both on the customers' and the suppliers' side to better forecast supply and demand — all this to get the right product to the right customer on time."

Another area of advancement, notes Tohamy, is the dynamic nature of the order fulfillment tools customers can see on the market today. "This means that while fulfilling an order, a firm is aware of its, and its partners', inventory positions, as well as its current and future customer commitments on a real-time basis."

She adds: "Analytics and optimization to determine best-case scenarios is getting widespread use in the market. When fulfilling orders, users are demanding that fulfillment tools rebalance inventory based on customer priorities and shortages within the supply chain."

Since the downturn, the need to establish clear return on investment (ROI) metrics and business cases for IT implementation projects means that fulfillment solutions are increasingly modularized to address specific pain points, integrate more easily and cost less to implement. This has stimulated the uptake of fulfillment solutions that integrate

"Better integration with solutions like transportation management services (TMS) are integral to the order fulfillment process," states Tohamy.

In addition, she says that fulfillment solutions can ensure flexible, accurate, fast and technologically advanced delivery. "Businesses looking to attract and retain customers are integrating final delivery with CRM, enterprise resource planning (ERP) and inbound delivery processes. The benefits of having effective fulfillment processes include improved competitive positioning, business opportunities and the ability to react to changes in business or economic conditions."

Dwight Klappich, senior analyst with META Group, adds, "In the market, there is a preference to look at a company's current ERP solution first and best-of-breed players only if the ERP system can't address the key fulfillment needs."

With these market dynamics in play, it makes sense that organizations will be making serious and researched investments in fulfillment in the next few months.

The Lay of the Land

There's a lot to see when you look at the fulfillment landscape, as well as some of the major players.

Simply beginning with the ERP players, most easily recognize that J.D. Edwards, Oracle and SAP have clear supply chain management (SCM) offerings enabling the fulfillment aspect of the typical supply and demand chain. SAP, according to the analysts, will show the greatest strength, continuing to take market share from most other niche players in supply chain planning, resulting in more vendor consolidation in this area as evidenced by Viewlocity's absorption of SynQuest in 2002.

In traditional production planning, the best-of-breed providers are always seen as Adexa, i2, Logility, Manugistics, and WebPlan; J.D. Edwards, Oracle, Peoplesoft and SAP are staking their claim, however.

And further talk right now regarding SCM planning states that i2 Technologies and Manugistics are moving more and more into execution as they continue to be battered by market conditions, while IBS, Manhattan Associates, Provia and RedPrairie already have solid, proven capabilities in execution.

Traditional warehouse management systems (WMS) are ramping up for better integration with other systems. Such players as EXE Technologies, Irista and KNAPP Software seem to be taking a lead. Besides the major ERP players' claim to this space, WMS best-of-breed players to watch for include Aquitech, daily.commerce, Highjump, IBS, Lilly Software, Logility and LogiMax.

By the fulfillment players, such as Octopus and Xenter, are right in the game and will be

players like Escalate and Viewlocity are adding functionality.

According to the analysts, transportation has not been a competency for ERP players, but according to AMR Research, "2003 will see them becoming more competitive as they acquire or build TMS functionality and domain expertise." The TMS market will see much consolidation as bigger vendors fill out their product portfolios. But, in general, revenue growth for TMS players shows up with Descartes, G-Log, i2, Manugistics and Schneider Logistics.

In global trade management (GTM) Vastera is seen as the market leader. "GTM is too complex and difficult for many organizations to tackle on their own," says Mike Dominy, senior analyst, Business Applications and Commerce for The Yankee Group. "The majority of those companies will opt to ignore the tremendous market opportunities associated with sourcing and selling internationally."

AMR Research cites Optiant and SmartOps as rising stars in inventory optimization, along with Prescient with its focus on mid-tier consumer products companies. They see G-Log as increasingly replacing Manugistics in the retail transportation sector and expect it to also replace i2 in the 3PL space and Elogex in the domestic retail sector.

And don't rule out maturity. The analysts believe i2 will emerge a much stronger company this year with Manugistics continuing to battle against ERP players, particularly SAP, for market share. Many believe SAP will move to a dominant position atop this market as a whole.

The Six-month Forecast

Yankee's Dominy says, "Expect planning to remain out of favor. When considering all verticals and the dynamics of today's economy, expect most companies to invest in execution-related solutions. They will turn to vendors that have strong fulfillment support capabilities, such as Manhattan Associates, Provia and RedPrairie, from the traditional supply chain execution market. Expect more mergers and acquisitions involving supply chain event management vendors. In addition, expect supply chain execution vendors to penetrate the mid-market effectively through channel partners and hosted offerings."

Regarding SCM planning, AMR Research has a slightly different take. According to the January 2003 "Enterprise Application Outlook for 2003: The Performance Driven Enterprise," report, supply chain planning implementations will be influenced by outsourcing, demand planning and optimized inventory planning. In outsourcing, for example, the report states that, "outsourcing of manufacturing and logistics will continue as a pervasive trend in 2003 as corporations cope with increasingly complex supply chains while seeking ways to reduce costs and improve customer service."

Dominy clarifies the complexity of the supply chain in planning and forecasting: "The interesting thing that is occurring with transportation planning and forecasting is that many

companies are moving to a build-to-order (BTO) fulfillment strategy to reduce finished good inventories," he says. "Companies are accomplishing this through flexible and agile manufacturing operations driven by techniques such as single minute exchange of die (SMED) and theory of constraints. These and other manufacturing strategies tied with Internet technologies have reduced the importance of forecasting and production planning and increased the importance of fulfillment or supply chain execution; at least from a WMS and TMS perspective."

Dominy does add that industries, such as high-tech, that are largely dependent on outsourced manufacturing are still hugely dependent on forecasting and production planning with their fulfillment activities. "Collaborative forecasting between the OEM and contract manufacturer is critical and drives production planning for the contract manufacturer. Expect OEMs to move beyond collaborative forecasting and collaborative production planning into collaborative fulfillment and collaborative supply chain execution, however."

Adds Tohamy: "In this market, total cost of ownership and vendor viability remain high on companies' selection criteria. Because of that, ERP vendors — like SAP and Oracle — continue to gain market share. But these vendors' best strategy must be to make their suite more open to best-of-breed solutions, giving their users more options while still offering a solution that maps to an end-to-end supply chain process."

Of course the bigger market presence of the ERP players is sometimes equated with viability. In many cases this is true, however the greatest area of success for Baan, J.D. Edwards, Oracle, SAP and PeopleSoft in this area is to make sure successful integration can be carried out seamlessly with all the critical aspects of fulfillment.

And when asked where companies will be with fulfillment at the end of this year, the analysts suggest that progress will be made with regard to integration, but there will still be a ways to go.

In the end, enterprises investing in greater fulfillment capabilities are looking to cut costs and improve productivity while getting closer to the customer through reliable customer fulfillment operations. It might seem like a lot to ask for but is an absolute requirement in today's market.

And don't forget the new regulatory demands of homeland security. The core workings of these demands fall right into the fulfillment arena of an organization's supply and demand chain. Technology will be an important tool to improve business processes so that not only will regulatory needs be met, but the management of the end-to-end supply chain will also be greatly improved. Homeland security, in fact, is drawing International Trade Logistics (ITL) and Transportation Management Services (TMS) competencies together, according to the analyst community.

More specifically, in Transportation, META Group's Klannich said his No. 1 fulfillment

year related to transportation issues. "This was driven by a few issues," he says. "First, companies have seen significantly more volatility in transportation over the last several years with fuel prices bouncing around, carriers going out of business and key transportation nodes (for example, the longshoreman's strike) shut down in the supply chain. Companies have also found that they were myopically focused on inventory and did little about other supply chain costs, and as a result the core transportation element of fulfillment is more critical today." As a result, TMS should see significant growth in the latter half of 2003.

In terms of a company's buying patterns in this software market, AMR Research says companies are still "buying more cautiously." As a result, "the software and services have lower price points, with lower relative sales of licenses relative to more focus on services to gain value," according to the firm.

As stated earlier, when you get to the fulfillment part of your supply and demand chain you're looking right into the front lines of the customers' needs. You have to get it right, or you won't get the business at all. Says Dominy: "In my humble opinion, fulfillment can make or break a company. You can have the best plans (demand forecasts, production plans, supply forecasts and much more) and the best products (design and manufacturing), but if you cannot deliver products to customers, you will not be able to bill customers and collect revenue."

For more information on solutions that can help you enable the Fulfillment link in your supply and demand chain, see the [Fulfillment](#) section of the [iSource Business 2003 Global Supply and Demand Chain Directory](#).

For more information on solutions that can help you enable the Logistics link in your supply and demand chain, see the [Logistics](#) section of the [iSource Business 2003 Global Supply and Demand Chain Directory](#).
