


SupplyChainDigest™

The Top 10 Supply Chain and Logistics Technologies and Strategies for 2007

Below we present our first annual list of the top supply chain and logistics technologies and strategies for the coming year. The list, from number 1 to number 10, was based primarily on an assessment of the relative "pain to gain" ratios that most companies seem to experience when pursuing each category.

We tried to focus as well on areas that still have a relatively low level of adoption. So, for example, while companies with no demand planning/forecasting tools can benefit greatly from new technology support, we deemed this category too mature for inclusion in our list.

Agree or disagree? We'd love your thoughts at feedback@scdigest.com

1. E-Auctions

What: Use of technology tools to drive on-line contract bidding for a growing array of both indirect and indirect materials. Suppliers are first "qualified," and then an on-line event (sometimes called a "reverse auction" because the bidders are hoping to sell, not buy) takes place in which the qualified suppliers bid against each other for the business.

Why: The scope of goods and services successfully being procured through e-auctions continues to grow. Once mostly limited to indirect goods, companies such as Hallmark and Rubbermaid have enormously expanded the reach of these tools into direct (production) materials, services and virtually anything that can be procured.

Pain: Relatively low, once buyers get their heads around the new approach.

Gain: Savings of up to 30% on purchased goods and services as a result of the auction process is not uncommon. Just think about it – why wouldn't this work?

Resources:

Supply Chain Digest's on-demand Videocast "Spend Management Vision at Hallmark" (http://www.sctvchannel.com/webinars/videocast.php?cid=734)

Article: Newell Rubbermaid Sees Prices Decline 11-47% Through On-Line Auctions: http://www.scdigest.com/assets/NewsViews/03-12-02-2.cfm

2. Labor Management Systems in Distribution

What: A combination of software, engineering and mindset change to improve logistics productivity. Labor management systems are typically built on discrete, engineered standards for specific tasks in a distribution center, plus detailed reporting at the individual operator level against the resulting dynamic goal time calculations for the day's work. More advanced deployments include detailed labor requirements planning, use of incentive pay, and sophisticated reporting regarding productivity across the enterprise.

Why: Adopters consistently report overall productivity gains of 7-15%, and often much more in specific areas like order picking. Labor management systems also have the advantage of being very predictable (the actual result generally comes very close to the expected value), and low risk (if there are problems you just don't get hurt very badly). This is one of the first things we would do if we were running a medium or larger DC.

Pain: Some significant change management is required, especially at the supervisor level, and developing standards takes time and effort, but those challenges are fairly contained, and after the lessons of the first DC, the rest usually go much easier.

Gain: Double digit productivity/throughput gains are common; reduced overtime; faster ability to train new/temporary operators. The consistent feedback – much more manageable, predictable DC operations.

Resources:

Supply Chain Digest's on-demand Videocast "Workforce Management Success at DCS Logistics." (http://www.sctvchannel.com/webinars/videocast.php?cid=732)

The Supply Chain Digest Letter – March issue on labor management – subscribe here: http://www.scdigest.com/letter/

3. Spend Management Visibility

What: Software that provides greatly improved visibility to what a company actually spends, where, and with what vendors.

Why: It's no different than a spending at home – when companies see where the money is really going, there are almost always opportunities to reduce spending levels. The visibility/attention alone has benefit, as well as providing a platform for consolidating purchases, improved negotiating power, and corralling so-called "maverick spend."

Pain: This is not a trivial IT task, requiring integration across many systems, and changing the way a company thinks about spend management requires strong leadership from the top, often in the face of organizational resistance.

Gain: Even small percentage reductions in overall spend can drive millions or, for larger companies, even hundreds of millions to the bottom line.

Resources:

Supply Chain Digest's on-demand Videocast "Spend Management at Johnson & Johnson" (http://www.sctvchannel.com/webinars/videocast.php?cid=735)

4. Demand Management/S&OP

What: A process, generally supported by some level of technology tools, of aligning the sell side and the supply side of the company around a unified financial and operations plan. While many companies have nominal sales and operations planning processes in place, the consistent feedback is that most are far from optimally effective. In parallel with the growth of S&OP is the concept of ***demand management***, in which sales, marketing, finance and the supply chain work

together to drive demand and sales that maximize profitability, rather than simply reacting to forecast demand.

Why: In far too many companies, there is still a large chasm between sales/marketing and the supply chain. Lack of such alignment, the use of multiple forecasts within a corporation, and a lack of trust are among the most common complaints we hear from supply chain executives. As companies such as Dell, Hershey Foods, Bacou-Dalloz and many others have shown, rigorous S&OP processes can dramatically change corporate effectiveness.

Pain: To do S&OP right, and to move into a "demand management" mode, is a major corporate undertaking. Interestingly, we continue to hear examples of supply chain executives launching the initiative, but then insisting an exec from sales or marketing lead the process on a go-forward basis. If the CEO or COO isn't behind it, however, S&OP is unlikely to be successful.

Gain: Company alignment and execution across a consistent set of strategic goals, and a shared set of forecasts and objectives, is essential in today's hyper-competitive global markets. Companies that successfully implement S&OP react faster to opportunities, more consistently meet financial goals, and do so with less inventory and fewer out-of-stocks.

Resources:

Article: Balancing Supply and Demand – a Long Way to Go:
http://www.scdigest.com/assets/FirstThoughts/06-08-31.cfm

Article: Thinking about Demand Management:
http://www.scdigest.com/assets/FirstThoughts/05-03-17.cfm

Expert Insight: S&OP's Future – The Top Management War Room:
http://www.scdigest.com/assets/Reps/Expert-Insight-Wallace_05-11-17.cfm

Expert Insight: Sales & Operations Planning – The Bang for The Buck:
http://www.scdigest.com/assets/Reps/Expert-Insight-Wallace_05-09-29.cfm

Article: Why Is Sales & Operations Planning So Hot?:
http://www.scdigest.com/assets/Reps/Expert-Insight-Wallace_05-09-23.cfm

The Supply Chain Digest Letter – April issue on S&OP – subscribe here:
http://www.scdigest.com/letter/

5. Supplier Portals

What: The technology has existed for some time now to relatively easily integrate suppliers through increasingly functional web portals. The scope of activities is very broad, from purchase order management, to providing demand visibility, to advance ship notice and bar code label generation, to generating dynamic inbound shipment requirements. JC Penney and QVC, at the high end, and Stage Stores, in the mid-market, are examples of retailers who have profited enormously from such dynamic inbound programs.

Why: It's all about supply chain integration, and supplier portals today make it fairly easy to accomplish. Still, many companies have only taken baby steps, or none at all.

Pain: Compared to EDI, this is a breeze. Yes, there is effort to train and get suppliers on board, but companies that take a disciplined approach, and invest in training, find it's not nearly has difficult as many think.

Gain: The benefits depend on the scope of the initiative and a company's specific situation. Significant reduction administrative costs can be achieved by going electronic in terms of purchase order management. Inbound receiving costs can be reduced by as much as 30% though receipt of advanced ship notices. Taking control of inbound freight and use of dynamic routing can reduce transportation costs substantially.

Resources:

Supply Chain Digest's on-demand Videocast "Spend Management at Johnson & Johnson" (http://www.sctvchannel.com/webinars/videocast.php?cid=735)

QVC Case study: http://www.scdigest.com/assets/NewsViews/06-06-08-3.cfm

Stage Stores Case Study: http://www.sctvchannel.com/PDFAccess.php?cid=860

JCPenney Case Study: http://www.scdigest.com/assets/NewsViews/05-05-19-2.cfm

ADP Supplier Portal Case Study: http://www.scdigest.com/assets/NewsViews/05-01-06-1.cfm

Article: The Less Sorry State of ASNs: http://www.scdigest.com/assets/FirstThoughts/06-09-21.cfm

6. Network Optimization

What: Use of network optimization software to find the optimal balance between costs and service in the configuration of a company's supply chain network. Increasingly, these tools are being used more tactically than in the past, supporting global sourcing strategies, more short term inventory planning decisions, new product introductions, and even sales and operations planning.

Why: The environment is increasingly dynamic, meaning that the "optimal" network of today loses optimality faster than ever, like a new car driving out of the parking lot loses resale value. Globalization and the interest in outsourcing/offshoring add further complexity. There are millions of dollars to be gained by more frequently re-tuning the network, and improving medium term planning with the support of optimized recommendations and "what if' analyses.

Pain: There is some pain, which is why too many companies shy away from the effort. The pain comes in two forms: (1) the effort to get the data and build the models to use in the optimization; (2) the supply chain change required to execute the new strategies. On the first, the tools are increasingly easy to use, and data from datawarehouses and ERP available to support the model building. On the second, the move to more integrated supply chain organizations helps eliminate some barriers to cross functional trade-off execution.

Gain: Dell estimated that use of network optimization tools has probably saved them something like $100 million in supply chain and logistics costs the past few years. Grocer A&P reduced its delivered cost by almost 50 cents per case after implementing new network strategies. Hershey Foods found, somewhat to its surprise, that the lowest hanging fruit was not moving production offshore but in re-optimizing its existing production lines. An increasing number of companies are saving money consistently, not just in a one time re-optimization, by using the tools to support on-going supply chain decisions.

Resources:

Article: Supply Chain Network Design in an Era of Dynamic Costs:
http://www.scdigest.com/assets/FirstThoughts/06-03-02.cfm

Article: Building a Flexible Supply Chain Network:
http://www.scdigest.com/assets/NewsViews/06-03-08-1.cfm

The Supply Chain Digest Letter – February issue on network optimization – subscribe here: http://www.scdigest.com/letter/

7. Transportation Management Systems (TMS)

What: Software systems that enable shippers to automate planning and execution, connect electronically with carriers, and reduce freight costs though optimal mode selection, optimal carrier assignment, shipment consolidation, and use of continuous moves.

Why: Despite a slight current reprieve, transportation costs have been rising dramatically, and capacity has been extremely tight. In addition, companies have become increasingly aware of the role of transportation in overall supply chain strategies. TMS improves transportation performance and generally delivers an outstanding financial payback.

Pain: TMS implementations are similar to any major software project – there is a decent effort in set up, configuration and integration. On-demand solutions offer the promised of reduce implementation scope, but sometimes at the cost of reduced capabilities. Change management can be a challenge, especially when going from decentralized to centralized operations, as many TMS initiatives support.

Gain: The benefits of centralization are many and clear, and it is almost impossible to move to a centralized transportation strategy without the support of a strong TMS. Heavy LTL shippers generally have large opportunities for consolidation, and many benefit simply from optimal mode and carrier selection. We're giving it three dollar signs, but for some it can easily be four or even five, depending on their current level of freight spend, automation and opportunity for consolidation.

Resources:

See the December SCDigest Letter on TMS resource page for a wealth of information, case studies, vendor listings and tools:

http://scdigest.com/letter/TMS_06_12.cfm

8. Strategic/Global Sourcing

What: Use of a more integrated, consolidated approach to supplier selection and procurement, including evaluating total supply chain costs, and consolidating purchasing power. Rapidly, strategic sourcing is also tightly tied to offshoring and global sourcing strategies. We probably could have moved this up on the list, but the opportunities vary dramatically company to company.

Why: Many companies have saved many millions through a more strategic approach to procurement. Global sourcing is becoming a nearly ubiquitous strategy, though for many the gains haven't fully materialized. Still, as we've written, to succeed as a company today, when it comes to the global supply chain, you better be good.

Pain: These are long, multi-year initiatives, which can involve a high degree of risk. Companies implementing global sourcing strategies are sometimes frustrated that the projected savings aren't as substantial as estimated do to challenges in execution. That said, for some purchase categories, strategic and global sourcing can be relatively easy.

Gain: Very dependent on company specifics, but the opportunities for reduce procurement costs can be huge for many companies.

Resources:

Supply Chain Digest's on-demand Videocast "Low Cost Country Sourcing Revisited" (http://www.sctvchannel.com/webinars/videocast.php?cid=736)

Article: Columnist Says Wide Gap Between Global Supply Chain Needs and Current Technology in Most Companies:
http://www.scdigest.com/assets/NewsViews/05-03-10-1.cfm

SCDigest White Paper: Global Commerce Management - The Executive Business Case for Operational Excellence:
http://www.scdigest.com/archive-reps.cfm

Expert Insight: Lean, Agile and Adaptable Global Organizations Part 1 – An Information Technology Perspective:
http://www.scdigest.com/assets/Reps/Expert-Insight-Blinco_05-12-01.cfm

9. Wireless in the Warehouse

What: While use of radio frequency/wireless terminals in distribution centers is at one level a highly penetrated and mature market, we continue to be amazed at the number of even fairly large companies that are still using paper-based systems in their DCs.

Why: Moving to a paperless, real-time environment just makes sense. RF reduces labor and administrative costs, reduces errors, and can enable further productivity gains with more interactive system direction from a WMS. Virtually no one who implements wireless in the warehouse can imagine going back.

Pain: It used to be fairly hard and expensive. Not any more. With advances in technology and standards, the pain is almost inconsequential.

Gain: The return isn't amazing, but generally solid, and it's just the way a DC should be run.

10. Yard Management Systems (YMS) and Dock Door Scheduling

What: Software tools, implemented either stand-alone or in conjunction with a WMS or TMS, that provide visibility into yard inventory and optimize appointment scheduling and execution on inbound and outbound dock doors. The category has enjoyed substantial growth in the past two years.

Why: Too many companies are still fairly blind to inventories in their yards. Hours of service rules and detention charges make it more necessary to crisply execute at the dock, as do lean and JIT/synchronized supply chain strategies.

Pain: Very low. The issue has always been payback, and the changes above make it easier and easier to justify.

Gain: The return isn't amazing either, but should be justifiable for companies with lots of trailers in the yard or large, complex dock operations. We recently heard a transportation exec at Target stores note that while they had trouble justifying YMS in the past, it keeps looking better and better.

We strongly considered a few other areas that just didn't make this year's list. These include:

- Voice picking in the warehouse
- Carrier bid optimization
- Technology that helps optimize trailer loading to decrease total transportation costs (see on-demand supply chain videocast "Optimizing Transportation and Distribution Performance" (http://www.sctvchannel.com/webinars/videocast.php?cid=865)

Again, we welcome your feedback: feedback@scdigest.com

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