

Top 10 Strategic Supply Chain Trends for 2008 and beyond

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We kick off the New Year with a 'top-10' list of supply chain trends for you to keep an eye on to seek out your opportunities for this and coming years, and to be careful of the 'watch-outs' at the same time. This is a list that was inspired by our good friend Gene Tyndall, who many in the industry know, is an enterprising and inspiring thought leader, and currently president of *Supply Chain Executive Advisors* (<http://www.sceaglobal.com/about.html>). We caught up with Gene recently in Rio de Janeiro, Brazil, where we dined together overlooking the magnificent 'Sugar Loaf' mountain, one of the fabulous local attractions. We spent a great deal of time discussing these 'top-10' trends that we have been observing as emerging leading thoughts and practices in the global supply chain landscape. So, without further ado, let's talk about these top-10 global supply chain trends that we see.

#10 – The Greening of Supply Chains

New laws will require supply chains to be more environmentally friendly. There will be another dimension on which supply chain owners and operators will need to optimize their supply chains besides total cost, lead time, inventory working capital, and service – and this dimension will be a new supply chain metric that is reflective of the supply chain's 'carbon footprint'. Measuring manufacturing emissions will be supplemented by measuring transportation fuel consumption and emissions in order to 'optimize' networks (carbon footprints extend to logistics). New (and initially probably more expensive) packaging materials will be mandated by industry, customers, and consumers (recyclable RFID tags?!). Recycling gets even more integrated with reverse logistics and becomes a necessity as much as forward movement to customers (significant cost and infrastructure impact) – companies become accountable for bearing the cost of recycling their own products (birth to re-birth cost optimization required), such as what companies like HP are already doing with their used printer cartridges. Imagine companies like Proctor and Gamble being responsible for recycling their bottles of Tylenol, Nyquil, and Frito-Lay for their aluminum in their potato chip bags. New product / labeling standards showing an '*environmental index*' will be a requirement for consumer products and electronics in the years to come. All this increases the demand for logistics service providers (LSP) to become even more efficient and smart about how they are doing business. The concept of 'lanes' will evolve into something different – not just a mode of transportation on a particular route, but more dynamic, as there could be a carbon footprint concept involved, and providers will have to buy 'rights' for emissions along these routes in a world of emission quotas along transportation lanes instead of just manufacturing zones.

#9 – Use of information & technology to drive competitiveness

Today, with all the advances in data capture, categorization, classification, and analysis, we find that companies (shippers, providers, producers) are sitting on mounds of information but using very little of it. Whereas it has become an 'information-race' perpetuated by the likes of the ERP vendors, implementing big systems that generate vast amounts of data has become the norm. However, we find that precious little is being done with this information that actually enables better service to be delivered, predictably, and better anticipation of issues. This data and information needs to be converted to analytics; technology as the means to convert information to analytics – analytics is the new basis of competition between companies not products. Analytics drives supply chain design and execution; it drives investment decisions, tradeoff decisions, and decisions of how to get more competitive using existing or new resources and products. Technology trends towards more of a service than an asset deployed in the business – technology becomes more of 'Software-as-a-Service' (SaaS); Infrastructure investment becomes redundant as network speeds increase, hosting security increases, and costs drop. We like to quote an example from a customer advisory board workshop we did recently, for a global logistics service provider where

the customer said "it's not enough that you tell me with 99.9% accuracy that my shipment is going to be late, I need you to have anticipated this, and also provided me with a few options (cost-out with risk profiles) with what to do about the problem." We agree with this customer's position.

#8 – Hard infrastructure becomes a priority

Whereas companies have scaled up in size and scope across the world, the next bottleneck has become the infrastructure of the country. Examples include the port of Long Beach, which is at 95% utilization and often peaks to 100%. Ports around the country and in the world are becoming more congested. Carriers have no more capacity and are barely able to keep up with the global demand. Transportation cost is rising and utilization is at peak levels. As globalization increases, more significant investments will be required to expand lanes, canals, roads, ports, and associated resources. As countries are loathe to invest in this sector, it will be up to companies to create alliances and pick up the tab – expect some big numbers or some innovative solutions such as increased regionalization (vs. concentration). We are already seeing venture capital come into play here, with more dollars being used in more inventive ways to convert non-competitive and stagnating public sector investments into dynamic, money-making ventures through the use of new money, new technology, business model innovation, and the escalating levels of collaboration between government and business.

#7 – Outsourcing becomes a way of life

Process-oriented repeatable work (e.g. Accounts Payable, Accounts Receivable, Call Centers, etc.) is already being outsourced to different countries across the world. We expect that value added services in supply chains are next. We, as Equus Group, LLC, are already taking on clients to perform core analytics work, as well as piloting doing demand planning (non-promoted sales forecasting) and supply planning (inventory policy development, run strategy development, and network production planning) work for some clients. Expect demand planning (e.g. baseline statistical models) to be the next wave of outsourcing, in conjunction with model development for sophisticated pricing optimization, revenue management, promotions modeling, and other advanced applications to be packaged and possibly sent overseas. Outsourcing moves to different locations around the world and becomes more time-zone friendly (e.g. Brazil instead of India, for US clients) as clients tradeoff price for convenience. Outsourcing becomes another functional management responsibility for supply chain leaders – e.g. *Director of SC Outsourced Services*. While outsourcing has already been given a head-start, a second possible wave of outsourcing becomes what we call '2G outsourcing' – where outsourcing companies need some content expertise, and the employees who might have been displaced due to the original move towards outsourcing are back in demand because of the valuable 'business insight' that they provided, which outsourcing companies will probably never have. These 'ex-employees' know the products, the market, and the customers, which outsourcing companies do not, and frankly, shouldn't – as this is not their core strength.

#6 – S&OP becomes more prevalent and global

Sales and Operations Planning (S&OP) was invented as a 'supply chain thing', and has evolved to a 'business process', and will evolve further into a 'global process'. S&OP is the process by which a business can put together all the different functional pieces of information and intelligence through functional processes and make cross-business decisions on the basis of this information for both the short and long term. We recently teamed up with Martin Jarvis, President of *Integrated Business Planning*, and formerly VP for the Global S&OP Programme at Unilever, on a project in Asia, who strongly believes that S&OP is the one business process that truly integrates an enterprise, and allows and enables its people to make decisions from the lowest level planners to

the highest level executives in a truly integrated fashion. S&OP becomes the forum in which global, regional, and local tradeoffs are made. Expect S&OP to be the way that the Global company leaders run the business. New tools and techniques to make S&OP more streamlined will be required, which enable the process to work more efficiently and link in real-time and synchronize with ERP and APS applications / services. This has already started coming true, with major players like Oracle having acquired emerging solutions like *Interlace Systems* recently, for their S&OP functionality, which Oracle envisions embedding within their business solutions portfolio. Focus changes from absolute decisions to relative decisions and tradeoffs – knowledge of finance must embed all functions to make valid decisions. S&OP becomes mandatory – not optional – those who do not embrace it are at risk. We see logistics providers being part of the overall discussion and debates within the S&OP process of the enterprise, since they provide a critical service to the companies.

#5 – Global sourcing drives network redesign & optimization

Pricing pressure will continue to drive global sourcing as it has in recent years. Network optimization will be driven by new 'global hubs' such as Dubai due to their significant capacity and infrastructure investments. Unlikely candidates hitherto, such as regional hubs, transform into global hubs as congestion on common lanes increases even more. Different types of network optimizations will be driven by product characteristics such as volatility, predictability, and volume (shorter lead times and more reactive networks for more unpredictable products). More 'manufacturing' (customization) work will be done during distribution steps while product is in transit to final destination, necessitating a freeze-point-delay mindset starting with product design groups.

#4 – Global visibility and decision-making becomes a necessity

The first wave of globalization has hit during the last decade – manufacturing. Sourcing globally doesn't mean being blind to what's happening in the other country or having to rely on 'agents' or 'brokers' to provide you second hand information about the business. Next waves are focused on information visibility, transforming information to insights in real-time, collaborative global decision making in real-time. Speaking the same *business* language with the same definitions ('*planned order*' should have a universal definition, in all languages) becomes critical. Uniform executive dashboards, managerial views, operational views, across all operating companies with staff trained globally how to search for insights into this information will become essential. '*Agent technology*' surfaces and becomes more relevant as the magnitude of information just becomes too overwhelming.

#3 – Supply chain collaboration requires more touch-points

The overall number of physical touch-points in the supply chain increases as material is transformed to finished product that are sourced globally – this is what we generally take into account when discussing collaboration, but we underestimate it's complexity and magnitude. When considering information touch-points, these too increase with the proliferation of services being outsourced, from demand planning, inventory management, supply planning, warehouse management, transportation management, order management, and accounts receivable, to name some key ones – each of these could be conceivably managed by an independent service provider, who is plugged into the 'portal' of the manufacturing company. This requires more collaboration between more touch points, as more information needs to change hands at the right time, with 100% accuracy, and with no failures. Collaboration processes, technologies, services increase in scope & importance.

#2 – SC risk management becomes even more critical

As the number of nodes and dependencies grow dramatically, the supply chain is exposed to the risks at each node, which when multiplied are staggering. Delegating the management of risk at each node becomes more of a necessity for companies, and needs to be an essential part of each service level agreement (SLA) between service users and providers. Risk management becomes an essential function for supply chain leaders to be managed pro-actively, and not just something to be managed if / when it occurs. Look at recalls of Chinese products, to be traced through a myriad transportation carriers, global warehouses, global ports, global, regional, local customers. Mitigation strategies and contingency planning is part of new job descriptions within the realm of global supply chain management – actuarial sciences and mathematical modeling of risk becomes a necessity within supply chains.

#1 – Talent, skills, knowledge badly needed and immediately

We referenced this issue in our last month's column, but we can't stress it enough. Fragmentation of supply chain management has led to specialization without a thorough understanding of the connectedness of the webs within the supply chain network. 'Job-longevity' is a big issue, with annual in-job turnover as high as 30% constantly means that critical functions keep 'forgetting' the issues, which keep recurring. Starvation in a time of plenty – surrounded by internet resources, supply chains are still starved of essential, usable, relevant, and specific benchmarking information. Sufficient in-depth skills in the different supply chain functional areas are lacking in graduating students - "...they haven't gone wide nor deep – they're stuck in an in-between zone where they're somewhat useless" – SVP Supply Chain, Global SC Consulting firm. Inconsistent training, skills development, tools specific training vs. conceptual training, and no SC modeling experience are some of the issues within this space.

Over the course of this year, we will elaborate more on each of these trends, and provide shippers and service providers with insight as to how to develop, tailor, and execute their strategies better for competitive advantage.

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