

Welcome to the September 2, 2008 issue of Theory and Practice. We publish every two weeks, examining recent events and offering opinions on key trends in manufacturing processes. Please feel free to forward this newsletter to colleagues or others who might find it relevant. And, we welcome your feedback on our newsletter, please email info@manufacturing-insights.com to provide any commentary.

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IT Budget Outlook for the Rest of the Year.

Bob Parker, Joe Barkai, Simon Ellis

Not surprisingly, the economic environment took center stage in discussions around our predictions for 2008. We took the position that our core clients, large manufacturing firms, would weather the storm pretty well and wouldn't impede IT spending plans to any great degree. This conclusion was based on the fact that manufacturing firms in the large enterprise class took between 60% and 70% of their revenue from outside their home country. This proportion was particularly important for US manufacturers (still the most important influence on overall manufacturing activity) because the weak dollar would make their products more price competitive in foreign markets and help stem the impact of rising raw material and energy costs.

For manufacturing companies in other mature regions like Japan and Western Europe, the global nature of their revenue mix was also important because they were not as dependent on their home markets or the US market for their success. The central question was whether an economic slowdown in the states would metastasize into a worldwide problem. We believed that the global economy had evolved to the point where it was no longer the case that when the US sneezed, the world got a cold and that the phenomenal growth in emerging regions would continue – not necessarily unabated, but certainly not stopped.

There were some exceptions to this relatively sanguine outlook for 2008. Anything too closely tied to the downward vortex of the economic situation, residential construction, would have tough times including materials, small tools, and capital equipment. The automotive industry, always one of the first segments impacted by tough economic times, was saddled with the wrong inventory and the wrong production capacity as consumers shifted their preferences to fuel economy. We also predicted that smaller manufacturing firms, those tied to domestic activity in particular, would be hurt most deeply and this forecast has been borne out by a draconian reduction in IT spending in that demographic.

Excuse the self-congratulatory tone, but these predictions have largely played out as we discussed to this point. However, there is a palatable unease about where the economy goes from here and, as such, a genuine reluctance to commit to fully executing on 2008 spending plans. Companies are stuck in a "stay or go" quandary and are further paralyzed by mixed economic signals. Manufacturing Insights believes that companies should ignore most of the data they are being inundated with and focus on three key areas to make their determinations:

- First in, first out. Housing and automotive went into decline early in this downturn. If historic patterns are any guide, they will also be the first industries to recover so watching these two segments is important. The June housing numbers showed a 21% reduction in home inventory which is encouraging but could be a one month "dead cat bounce". If the inventories continue to drop, average prices should recover, and, at some point, new housing starts will begin to turn positive. That is the point that will signal the beginning of a recovery. Auto sales in the US may have found a bottom in June with seriously negative results even at Toyota (down 21%, 39.5% in truck sales). We will need to see at least three consecutive months of gains before we can talk about the beginning of a recovery.

- Purchasing power. There is much hand wringing over inflation and it is the first order of priority for regulatory bodies like the federal reserve. Tracking total cost of living expense increases, including energy and food, in the context of wage levels and overall employment levels is important. With producer price indexes on the rise and a new heating oil season on the horizon, lost consumer purchasing power is perhaps the most serious threat to recovery.
- The health of foreign markets. Growth has remained good in emerging regions which as helped bolster manufacturing firms across all segments. However, inflation could be the rain on the parade here as well. Even the official government numbers from China show significant annual increases. Watch this situation closely for signs of inflation impacting consumption.

In a recent article in *The Times* of London, Anatole Kalensky opined that the US is having a financial crisis rather than an economic crisis, pointing to generally positive data in consumer spending, trade deficit levels, and GDP. This perspective is interesting and raises an important opportunity for manufacturing firms who, generally, are sitting on historically high levels of cash. Manufacturing Insights sees it this way – a relatively weak native currency means that there is more incentive for companies to invest those dollars in capital projects that can bring returns that stay ahead of declining currency values while the financial crisis inflicted credit crunch means that smaller or less cash rich competitors can't keep up by using leveraged funding. Not all manufacturing companies will take advantage as some will have a bunker mentality that drives them to continue to hoard cash in fear of not having debt vehicles available if needed. These "rainy day" strategies will fail as those cash reserves lose purchasing power. Winners will put that cash to work in projects that outpace inflation and IT has a proven track record of delivering tremendous productivity benefits to the manufacturing industry.

Even if companies move ahead and spend their full 2008 budget, that doesn't necessarily mean that the areas of investment need to also hold according to plan. In fact investment should shift from hygienic (e.g. laptop refreshes) to the value producing like:

- Business intelligence investments that improve and speed both decision making and corrective action. These investments will be critically important in improving the reaction time to unforeseen market changes.
- Supply chain execution applications particularly transportation, for offsetting rising fuel costs, and global trade management, to support rising exports. These investments should include an element of modernization – integrating advanced data acquisition technologies like RFID, Sensors, and GPS.
- Product lifecycle management applications with an emphasis on better data management and more streamlined collaboration. Remember the objective is to improve decision making, not just to automate processes.
- Digital manufacturing investments that allow for greater global visibility and more flexible production capability. With credit tight, it is important to make your existing assets perform at higher levels.
- Revenue management for improved pricing, promotion, and channel management. The industry environment, even in emerging regions, is not about a revenue land grab, but about intelligent growth.

Our summary advice to technology buyers may be counter intuitive to some. Don't stop or slow your 2008 investment plans as the productive use of capital will be a critical success factor for your company. And, if the three economic indicators we discussed show signs of real recovery, we would recommend that investment be accelerated. Manage your IT investment portfolio and spending in the context of being in a financial crisis, not an economic one and, if your company has the cash reserves, invest accordingly.

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Profitable Proximity for Product Sourcing Decisions in the Modern Supply Chain.

Simon Ellis

The current myopic pursuit of "low-cost country sourcing" as a primary cost-mitigation strategy is coming to an end. Most consumer demand projections show a significant amount of the global growth coming from current low-cost regions, thus moving them from low-cost countries to emerging markets with consequentially increased expectations for a "globally-fair" wage. The need to better balance cost and service has forced many companies to take a more strategic "customer service" view in their global network design and sourcing processes. But there's another key reason as well. While low-cost manufacturing proves seductive initially, a "total supply chain cost" perspective offers a far more sensible approach to making sourcing decisions today — particularly as distribution costs grow as a percentage of total cost.

At Manufacturing Insights we have dubbed this strategic approach "Profitable Proximity Sourcing." This concept resonates with manufacturers who look to balance total cost and service. That's because business continuity planning and global supply network design, along with the strategic balancing of cost, quality and lead-time, remains a challenge for many supply chain organizations who have not found exactly the right mix. Throw in growing global demand and diversifying customer and consumer requirements, and you have a recipe for instability unless a company adopts profitable proximity as its sourcing strategy.

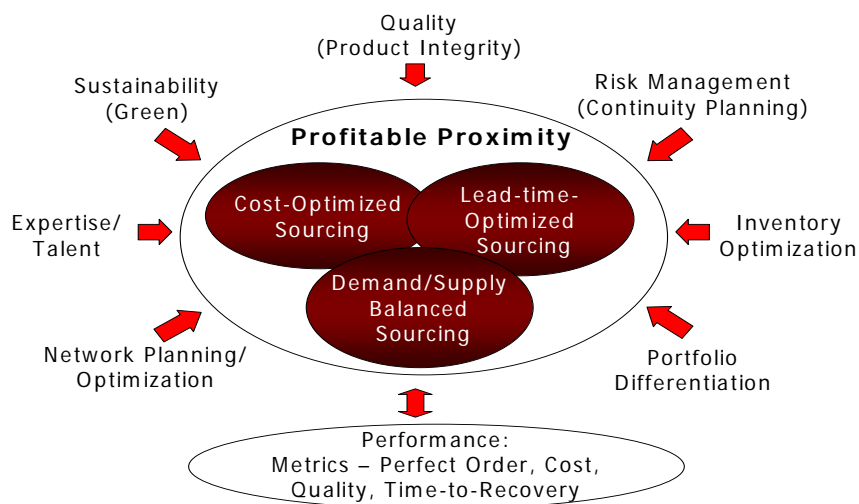


FIGURE 1 - PROFITABLE PROXIMITY CONSIDERATIONS

Source: Manufacturing Insights, 2008

It is important to point out that profitable proximity sourcing does not dissuade 'low-cost country sourcing.' It's possible that in some instances it will still make sense as part of a diversified sourcing portfolio. In the above graphic, we illustrate the 'tug of war' that goes on within profitable proximity, as well as the multiple external influencers that affect the strategy. Although the predominant trade-offs are graphically shown

within the central bubble – cost, lead-time and proximity to demand – it is worth a quick discussion of some other factors:

Sustainability continues to grow as a factor, particularly as climate change concerns grow. A strategic sourcing strategy will have to consider environmental impact, especially as these types of regulations proliferate.

Quality and brand equity remain high on business scorecards. Maintaining acceptable quality standards (balancing manufacturing cost of quality with warranty expenses) and the challenges of counterfeiting (and the protection of IP) are causing some companies to re-think how and where they source. Although sometimes difficult, quantifying poor quality needs to be a key input to the strategic sourcing strategy.

Risk Management, or business continuity planning, is a hot topic in supply chain management in 2008. We are seeing more and more companies add metrics like ‘time to recovery’ to their corporate scorecards in an effort to better measure the cost of protracted service failures. This becomes central to balancing the cost versus lead-time equilibrium and a key input to the sourcing strategy.

Although inventory optimization is a standard component of cost, the availability of sophisticated multi-echelon (components, WIP, finished goods) planning tools have allowed companies to take a broader perspective on the cost of inventory and how it can be optimized across distributed supply networks. We now see companies using these tools in the network planning process, not just as an optimization engine for an already-established network.

Portfolio differentiation becomes relevant as global demand diversifies geographically and the potential grows for product types individualized for a region and nation. Coordinating the supply of regional or national variants with corresponding demand may seem like an obvious requirement, but optimizing this balance can be tricky and needs to be part of the strategic sourcing strategy process.

Expertise/Talent turns out to be an important consideration and relates strongly to both quality and business continuity planning, but it is often overlooked in the pursuit of low cost. Our inclusion here is simply a reminder that reliability and consistency is as important as cost.

Given the inexorable rise in longer-term energy costs, companies will have little choice but to consider sourcing closer to their key customer markets. They should make that decision after a thorough examination of all the factors involved. Such an examination will lead them to embrace the concept of Profitable Proximity sourcing as a way to service consumers in different regions of the world while at same time balancing total costs with shorter adequate lead-times for product delivery.

At Manufacturing Insights, we have written extensively on the topic of Profitable Proximity. Please feel free to join our complimentary web-cast on the topic scheduled for later this week or contact me at sellis@manufacturing-insights.com.

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[Latest Research](#)

EMEA, Automotive and Discrete Manufacturing Industry Update: April to June 2008

Authors: Lorenzo Veronesi, Pierfrancesco Manenti

Document # MIVC56Q Published August, 2008

This Manufacturing Insights quarterly update analyzes the business environment and trends for the discrete manufacturing sector in Europe (EU 27 + EFTA countries are considered in the analysis).

EMEA, Consumer Product Manufacturing Industry Update: April to June 2008**Authors: Lorenzo Veronesi, Pierfrancesco Manenti****Document # MIVC58Q Published August, 2008**

This Manufacturing Insights quarterly update analyzes the business environment and trends for the CPG manufacturing sector in Europe (EU 27 + EFTA countries are considered in the analysis).

EMEA, Consumer Product Manufacturing Industry Update: April to June 2008**Authors: Lorenzo Veronesi, Pierfrancesco Manenti****Document # MIVC58Q Published August, 2008**

This Manufacturing Insights quarterly update analyzes the business environment and trends for the CPG manufacturing sector in Europe (EU 27 + EFTA countries are considered in the analysis).

EMEA, Process Manufacturing Industry Update: April to June 2008**Authors: Lorenzo Veronesi, Pierfrancesco Manenti****Document # MIVC59Q Published August, 2008**

This Manufacturing Insights quarterly update analyzes the business environment and trends for the process manufacturing sector in Europe (EU27 + EFTA countries are considered in the analysis).

Leveraging IT in Building Green Businesses**Authors: Meredith Whalen, Jill Feblowitz, Kimberly Knickle, Jeanne Capachin, Leslie Hand****Document # MI214016 Published August, 2008**

This study looks at how businesses within the manufacturing, retail, energy, and financial services sectors are working to create more sustainable business practices. In its most basic definition, sustainability means meeting the needs of the present without compromising the ability of future generations to meet their own needs. Our research applies the term sustainability primarily to include company initiatives or policies related to environmental or green issues. As these organizations seek to become green, we expect to see greater investments in IT to aide their efforts. This study identifies those technologies we believe will see the biggest uptake from organizations engaging in sustainability efforts.

JDA Acquires i2; Does the End of an Era in Supply Chain Applications Signal the Beginning of a New Market Landscape?**Authors: Bob Parker, Simon Ellis****Document # MI213883 Published August, 2008**

This Manufacturing Insights Perspective discusses the acquisition of i2 Technologies Inc. by JDA Software Group Inc.

Engineering-Oriented Value Chains 2Q08 Industry Update and Product Management Strategy Guide**Author: Bob Parker Document # MI213704 Published August, 2008**

This Manufacturing Insights report looks at engineering-oriented value chains (EOVCs), which are characterized by segments that are driven by complex, heavily engineered products such as in automotive, aerospace, industrial machinery, farm/construction equipment, diversified companies, and other discrete manufacturing. Overall, the value chain has a segment, aerospace, that is very healthy; one that is doing well, machinery; and one that is in the doldrums, automotive. Manufacturing Insights expects IT spending in automotive to be severely constrained while aerospace accelerates projects.

LiveCycle: The Key to Adobe's Vertical Strategy**Author: Benjamin Friedman Document # MI213815 Published August, 2008**

This Manufacturing Insights Perspective examines Adobe's LiveCycle offering. At its recent analyst event, Adobe presented a balanced mix of technical capabilities and tactical messaging concerning its go-to-

market strategy and future technical direction. The message revolved around its LiveCycle offering, which is a document-centric workflow application development and runtime platform. Particularly helpful for those in attendance were case studies that outlined business problems that the LiveCycle collaboration platform has helped address.

Brand-Oriented Value Chains 2Q08 Industry Update and Product Management Strategy Guide

Author: Bob Parker Document # MI213698 Published August, 2008

This Manufacturing Insights report looks at brand-oriented value chains (BOVCs), including the most recent data for industry performance, and provides a detailed analysis of product life-cycle innovations. Brand-oriented value chains are characterized by branded products that serve consumer markets. BOVCs include segments such as health and beauty, food and beverage, and apparel.

Asset-Oriented Value Chains (AOVCs) — 2Q08 Industry Update and Product Management Strategy Guide

Author: Bob Parker Document # MI213703 Published August, 2008

This Manufacturing Insights report provides analysis of trends in the asset-oriented value chain segments based on our Global Performance Index. AOVCs are characterized by segments that produce base materials at asset-intensive production facilities such as in chemical, metals, pulp/paper, construction materials, and textiles.

Sustainability 2Q08 Update: Adding More Definition to Sustainability

Author: Kimberly Knickle Document # MI213708 Published August, 2008

This Manufacturing Insights update is the second in an ongoing series of updates on sustainability and "IT for green" as part of our Emerging Agenda program. This document provides a summary of meaningful events, trends, and/or case studies related to IT's role in supporting sustainability initiatives in product life-cycle economics and the supply chain.

Global and North American Supply Chains 2008 Top 10 Predictions: An Interim Report Card

Author(s): Simon Ellis, Kimberly Knickle Document # MI213733 Published August, 2008

This Manufacturing Insights Perspective looks at the Top 10 Supply Chain Predictions for 2008 and where they stand at the midpoint of the year.

Attitudes and Trends Toward the Greening of the Automotive Supply Chain in the Asia/Pacific (Excluding Japan) Region, 2008

Author: Christopher Holmes Document # AP667107Q Published August, 2008

This Manufacturing Insights report provides a detailed analysis of the most recent data for industry. This Manufacturing Insights report illustrates the increased importance of environmental concerns across automotive manufacturers. With governments increasingly introducing legislation to protect the environment, auto manufacturers now not only have to comply with new legislation, they also have to satisfy customers that are demanding increasingly Green products, as well as manage an environment where the impact of increased costs of raw materials and consumables are becoming more evident. Companies are increasingly looking to IT to support their Green initiatives, whether it is from investing in new applications or seeking the support of the vendors to assist them in deploying applications to support Green initiatives.

Technology-Oriented Value Chains (TOVCs) — 2Q08 Industry Update and Product Management Strategy Guide

Author: Bob Parker Document # MI213502 Published August, 2008

This Manufacturing Insights report provides a detailed analysis of the most recent data for industry performance of product life-cycle innovations. TOVCs have a physical flow of goods that are dictated by the iterating cycles of key underlying technology (e.g. processors), and they include segments such as semiconductors, electronic manufacturing services (EMS), high tech equipment, and consumer electronics. These value chains can have high levels of variation in supply, manufacturing, and demand.

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Upcoming Webcasts

Profitable Proximity: Adjusted Strategies for Balancing Product Sourcing and Planning

September 4th at 2:00 pm Eastern US

Join **Simon Ellis**, Practice Director, Supply Chain Strategies and **Kimberly Knickle**, Practice Director, Emerging Strategies as they look at the evolving supply and network design strategies that are referred to as "profitable proximity." In the context of our Modern Supply Chain architecture, they will review the new decisions that are facing supply chain organizations in their quest to deliver on both their cost and service obligations.

Machine-to-Machine: The Next Generation of Wireless Communications

September 10th 11:00 am Eastern US

Sponsored by KORE Telematics

Join **Teresa Bozzelli**, Managing Director of Government Insights, an IDC company, to explore how this technology is enabling government to more effectively execute its mission and improve service delivery through real-time data collection and remote control. Whether it is a fleet management application that reduces fuel consumption, real-time asset tracking for better in-transit visibility, remote sensors for environmental monitoring, smart meters to reduce energy consumption, or ubiquitous surveillance for improved security, M2M applications are driving innovation and delivering results.

Missed a Webcast – Download a Replay

Technology's Role in the 'Green' Supply Chain – Presented August 27

Green Business: How Businesses are Reducing their Carbon Footprint and the Technologies they are Using - Presented July 23

Running IT Like a Business: Creating the Architecture of Architectures – Presented July 9

IT for Green: Impacting the Triple Bottom Line – People, Planet, and Profits – Presented May 21

Designing Your Business & Products for Machine to Machine (M2M) Communication – Presented April 30

A Closer Look: The CGT and IDC Shared Strategy Study - Presented February 28

EMEA Supply Chain Top 10 Predictions 2008 – Presented February 19

Asia/Pacific Supply Chains 2008 Top 10 Predictions – Presented January 31

Worldwide Manufacturing 2008 Top 10 Predictions – Presented January 8

Industry Insights Predictions for 2008: Cross Industry – Presented January 7

Global and North American Top 10 Supply Chain Predictions for 2008 – Presented December 13

Meet Our Analysts at an Upcoming Event

Aerospace Manufacturing and Automated Fastening Conference & Exhibition

September 16-18, Charleston, SC

Join **Bob Parker**, VP Research, Manufacturing Insights as he presents at this bi-annual SAE event focussed on multiple aspects of manufacturing and fastening.

[The Changing Rules of Manufacturing Today](#)

September 14, Portugal

Join **Pierfrancesco Manenti**, EMEA Research Director at this local event.

[ICIDO Summit](#)

September 25-26, Millenium Hotel, Stuttgart Germany

Join **Joe Barkai**, Practice Director, Manufacturing Insights at this premier event devoted to application-oriented virtual reality in Europe.

[4th Annual European Manufacturing Strategies \(EMS\) Summit](#)

October 6-9, Swissôtel, Dusseldorf, Germany

Join **Pierfrancesco Manenti**, EMEA Research Director at this local event.

[CSCMP Conference 2008](#)

October 5-8, Denver, CO

Join **Bob Parker**, research VP, Manufacturing Insights as he presents a session on why manufacturers must continue to look for ways to drive down the cost of information

[PLM Summit - North America](#)

October 13-14, St. Augustine, Florida

Join **Joe Barkai**, Practice Director, Manufacturing Insights at this premier event for global PLM practitioners as he presents his research findings during this conference.

[Next Generation Manufacturing & Supply Chain Summit 2008](#)

October 30, Milan, Italy

Join **Pierfrancesco Manenti**, VP Research, at this joint IDC/Manufacturing Insights event.

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