Theory & Practice

Manufacturing Insights

Welcome to the November 13, 2007 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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IBM Acquires Cognos: Consolidation Continues

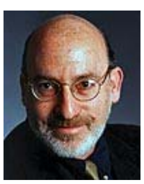
Bob Parker

In the October 15th issue of Theory and Practice (Arming for the Next Big Thing: Large Vendors Accumulate the Tools to Create Collaborative Decision Environments, document # MI209356), I wrote about how large vendors were consolidating the business intelligence market to better serve the growing number of decision re-engineering projects at large enterprises. The trend continued this week with the announcement of **IBM's** intention to acquire **Cognos**.

The agreement was announced at $5 billion, pending shareholder and regulatory approval, and the deal is expected to close in the first quarter of 2008. On a call with industry analysts, Group Vice President Steve Mills declared that IBM is now the market leader for BI software and services.

In the aggregate, this statement, particularly with the inclusion of services, is true. However, the leadership comes from a collection of software tools that are not individual category leaders. True sustained leadership will come from a cohesive approach to helping companies build collaborative decision environments as we described in the last article. The good news for IBM is that their portfolio is comprehensive and the acquisition of Cognos (with projected revenue to exceed $1B for fiscal year ending in February) brings a great incremental revenue base.

Many manufacturing firms count Cognos among their vendors, although few see them as strategic to the portfolio. As we stated in the previous article, IBM services bring the necessary process domain and industry expertise to assist with decision re-engineering projects, regardless of the underlying software. For manufacturers that aren't overly invested in alternative software platforms, combining those services with IBM software can become compelling once the *Information on Demand* vision is fully integrated across the point products.



Which Way is UP? – More Consolidation in PLM

Joe Barkai

On October 31, **PTC** announced it has entered into an agreement to acquire German PLM software company **CoCreate** Software GmbH for approximately $250 million. CoCreate is a privately held company and boasts more than 5,000 customers worldwide and annual revenue of approximately $80 million.

Users of traditional MCAD tools, such as PTC's *Pro/E*, parametrically define design features such as geometric shapes, holes, pockets and bosses. The modeling software creates the 3D model by capturing the design intent: the sequence in which geometric shapes and attributes were defined and modified. However, CoCreate MCAD modeling tools use non-parametric modeling. By contrast, the CoCreate tools let the user directly manipulate geometry without regard for the construction parameters. There are dedicated user communities for each approach, and the acquisition would broaden PTC's portfolio and offer its customers a comprehensive range of MCAD modeling techniques.

Existing CoCreate customers will benefit from PTC's market position and viability and from a broad suite of PLM applications such as visualization and dynamic publishing.

Consolidation in the product lifecycle management (PLM) space is strong. After the wave of ERP and CRM consolidation has subsided, and the market has hopefully reached equilibrium, PLM seems to be the next acquisition battlefield not only for PLM vendors, but also ERP companies, as evident by the recent acquisitions by **Oracle** and **SAP**. It is quite obvious, although not stated in PTC's press release, that PTC is after the Small-to-medium enterprise (SME) market that has been the bread and butter of CoCreate (and competitor **AutoCAD**). Manufacturing Insights research shows that the SME segment is growing 2 - 3% faster than the overall PLM market, and ERP and PLM companies look to be more relevant and shape the demand in this fast growing sector.

Still, the acquisition of CoCreate is puzzling. While it may enhance PTC's position, especially in the MCAD space, it does not do much to strengthen the company's position as an enterprise player, something it desperately needs. Manufacturing Insights' conversations with manufacturing executives show that they view PLM as a strategic approach to product management, and as a key capability to manage innovation, reduce business and compliance risks, and accelerate time to market. They talk about the need for better global collaboration capabilities to improve end-to end-process visibility and increase capacity for robust decision-making.

The acquisition of CoCreate appears very tactical, focusing on CoCreate's customer base for short-term return, aiming to boost the company's size toward the $1B goal that CEO Dick Harrison has set for the company, and bringing PTC closer to the size of its competitors.

Even the customer base may not be a sure thing. A week after the announcement by PTC, one of CoCreate marquee customers, Canon, announced it would standardize its PLM tools on **Siemens PLM Software** (**UGS**)' *Teamcenter* software suite. I am not suggesting that Canon made that decision because of CoCreate's new ownership; Canon may have not been aware of the acquisition when they made the decision. Rather, it is likely that Canon, with approximately 17,000 engineers worldwide and at least as many other knowledge workers that would benefit from access to *Teamcenter*, requires a global product collaboration and lifecycle management platform it can integrate with other enterprise processes and scale as needed. Siemens can be very effective in engaging the manufacturing organization's leadership and the CIO team to share a common long-term vision and road map. CoCreate, even under its new ownership, will continue to face this hurdle when trying to sell to the enterprise.

The acquisition of CoCreate is unlikely to help PTC compete with major PLM vendors and better respond to the increased pressure from Oracle and SAP as they continue to broaden and deepen their footprint in PLM. Mature organizations no longer view PLM as a loose collection of engineering tools; they are transitioning to a strategic view of PLM as an essential element in empowering the business to make unified and timely information-driven decisions. As a result, PTC must demonstrate its ability to support the enterprise and focus on strengthening PTC's position as an enterprise solution provider.

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The Manufacturing Insights Perspective from HP's Worldwide Analyst Conference 2007

Christopher Holmes, Randy Sng, Debashis Tarafdar, Jill Feblowitz

This Manufacturing Insights Perspective highlights key messages and takeaways from the recent **HP** Worldwide Analyst Conference 2007 in Houston, Texas. The two-day conference was designed to convey HP's successes, new initiatives, future directions, and strategies in manufacturing and distribution industries (MDI) to the industry analysts present at the event, as well as provide opportunities for interactive discussions with key executives who drive HP's global MDI strategy. The four key verticals that the MDI team seems to be putting its bet on, are Automotive and Aerospace, Electronics (High-tech and Consumer Electronics), Distribution (Consumer Goods, Retail and Logistics), and Energy.

From a solution provider perspective, HP is quite strongly positioned in the infrastructure space. No surprise that a strategy with a sound infrastructure foundation would be HP's springboard for venturing into vertical offerings – as apparent from the various presentations and discussions during the conference. However, how effectively HP can drive business solutions stemming from a traditional infrastructure play will determine the success of HP. So far, as it seems, the results are quite positive.

In terms of focus, HP concentrates on five key areas: Partner Collaboration, Operational Management, Performance Management, Demand/Supply Management, and Optimization. Underlying the above offerings, an adaptive framework of high performance computing and storage management provides the foundation to build resilient solutions supporting today's business needs. Having said that, manufacturers are primarily concerned about deriving business value, which, in our opinion, HP could articulate in terms of specific solution sets targeted at each of the above verticals.

Automotive and Aerospace

HP really sees its future approach as 'closing the loop.' This encompasses three key areas. First in the supply chain, HP is looking toward providing supply chain visibility across the entire supply chain. In addition to supporting OEMs and larger Tier 1s, this includes extending its offerings to what it sees as growing OEMS and smaller Tier 1 suppliers and into Tier 2 organizations.

Secondly, with the growth in engineering and development, HP is keen to leverage its own internal knowledge and share this with customers; however the overall strategy on engineering is still very much partner-based. As a manufacturing company itself, HP does provide the confidence to other manufacturing companies in that it has tried and tested a number of these products in-house already. This is indeed the case for the warranty and quality management offering, intended to allow companies to be able to view what is happening when there is an issue with the product after it has been sold. The information can then be interrogated to understand the key points and the information fed back to design and / or manufacturing to take action, hence closing the loop.

The third and final closure of the loop comes from the continuing focus on IT cost reduction and risk reduction. HP's own transformation gives confidence in the marketplace 'bridging the gap between functional silos and IT.' The focus is to reduce the costs associated with running the traditional IT systems and to allow companies to move that focus towards innovation and collaboration – whether it be process or product.

Electronics

Electronics is one of the largest manufacturing verticals and a truly global industry. Design teams, engineers, manufacturers, suppliers, and distributors work collaboratively round the clock to support an unending supply chain across the regions. HP is no stranger to the electronics industry, operating one of the largest electronics supply chains in the world serving about a billion customers each year. This is the testimony. No company can do it alone – it is through the collaborative effort of HP and its partners in supply management, outsourcing, retail, distribution, logistics and services that HP can meet the customers' needs. In all, the demand and supply chain need to be aligned and synchronized in real time to work.

HP's strategic approach to the electronics industry is by way of serving business needs through innovation, collaboration, and execution initiatives designed to mitigate risk, lower costs, and accelerate business growth. To move projects ahead, HP partners with IT (systems, tools, and solutions) in order to achieve the desired result of profitable growth. The key to profitable growth is understandably the "IT" that HP and its partners bring to the electronics manufacturers. So it is paramount for HP to have an eco-system of partners that fit nicely with the different tiers of customers.

Distribution (Retail, Consumer Goods, Logistics/Transportation)

The fact that HP itself is one of the largest consumer goods manufacturing companies serving the largest retail chains lends credibility to HP's strength in these industries. While challenges in different product supply and retail chains are inherently different, there is enough commonality in areas such as supply chain visibility, demand/supply management and collaboration, business intelligence, compliance and regulations, retail store and promotion management, ERP strategy, and asset tracking through emerging technologies like RFID. HP's primary value proposition is around its expertise in delivering SAP-based offerings, in conjunction with several niche add-ons like store management, targeted marketing and promotions management, and more. The increasing trend of outsourcing non-core IT management should give HP and its partner ecosystem the ability to help large global customers manage not only their projects, but also on-going operations – the integrated value-oriented offering that most customers would like to consider.

Energy (Oil and Gas and Utilities)

HP has been quite successful in the energy industry with HP estimating its direct revenue growth in the sector at 16% from November 2006 to July 2007. HP attributed growth in utilities to the sale of hardware to support deregulated markets and the trend toward upgrading EMS and SCADA systems that run on HP servers. Energy Insights' recent revenue estimates of the top 50 IT vendors in the oil and gas industry put HP on top with an estimated $2.9B of revenues attributable to the oil and gas industry. It is no surprise, then, that the venue for this meeting was in Houston, where analysts could hear from representatives from Valero and Marathon Oil about their experience with HP.

In upstream oil and gas, HP has correctly identified the drivers for investment in the industry – the needs to increase reserves, reduce time to oil, and reduce the cost of operations. In downstream, issues that are top of mind in the industry are asset uptime, health and safety, and optimizing the supply chain to be more responsive to demand. Energy Insights would also add shortage of skilled labor to these drivers. HP's technology is certainly applicable to address these business issues. Of note are high performance computing, remote collaborative and visualization capabilities – particularly important due to the shortage and geographic dispersion of experts, services for reservoir simulation, secure service clusters, master well data management, software to manage large data volumes, and 3-D visualization (with partners). The acquisition of Knightsbridge, with its experience in information management related to wells will be important in tackling the largest issue currently faced in the industry – data modeling and management. Marquee customers are Eni, TnkBP, Lukoil, Marathon Oil, Shell, Repsol, Chevron and Pemex.

In utilities, HP's focus is on reliable operations, decreasing the meter to cash cycle, and managing demand. Of particular interest is the *Trusted Compliance Solution for Energy*, an appliance that has been developed specifically to comply with the standards of the North American Electricity Regulatory Council (NERC). HP has set its sights on smart metering, where business service management software that allows a utility to manage the performance of the meter-to-cash process. HP has not thought as deeply about utilities' business needs, partly because of its success on the hardware side. For utilities, customers of note include China Light and Power, FirstEnergy, Duke, Ontario Power Generation, Consolidated Edison, HydroOne, Pacific Gas & Electric, E.ON and Electricity de France.

Advice to Manufacturers

- The productivity gains in global organizations have outpaced market growth. In order to grow further, organizations must look beyond the four walls and realize benefits by integrating the supply chain, the financial chain, and the information chain, through consistent, optimized and collaborative processes
- Continue to look for ways to drive down cost while improving agility and resilience
- Connect execution to strategic goals through collaboration, business intelligence and integrated decision models
- Choose appropriate IT services as an operating leverage, and re-define core capabilities if needed
- Adopt best practices that address finer segments of the manufacturing processes rather than broad sector-specific functionalities

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Details on Emptoris' User Conference and New Product Release for Sourcing and Supplier Management

Kimberly Knickle

Last month in October 2007, **Emptoris** held its International User Conference in Boston and announced the release of *Emptoris 7*, the company's software suite that combines contract management, sourcing, spend analysis, compliance, and supplier performance management. The new release adds functionality in integrated performance and compliance management, best value sourcing including optimized auctions, and global program management, as well as features that make the product easier to use and encourage adoption.

For supplier performance management, *Emptoris 7* expands the contract compliance parameters, including contract violation reporting based on dates, payment amounts, payment terms, quantities, rebates and discounts. The information, combined with supplier spending patterns and other performance details, is valuable in deciding how to reallocate (and renegotiate) spend. However, part of the ongoing business challenge is developing longer term, more collaborative supplier relationships. With trend analysis and formula-based alert capabilities, *Emptoris 7* can identify vendor performance issues that need attention before they have a significant negative impact. Access to information and a supplier interaction portal enables the supplier to be an active participant in the relationship, with best practices templates, project-related performance and milestone tracking, a supplier's strengths and opportunities, ranking relative to their peers, and more. Emptoris' global program management adds broader language and currency support and better visibility into savings and project tracking with more metrics, such as division, category, project, and event type, in the context of industry best practices. We continue to see companies challenged by global sourcing initiatives, not just with currency issues, but also in evaluating their success. Emptoris' new release also adds features that make the product easier to use and encourage broader adoption, including the product's availability in Software as a service (SaaS) delivery.

In Emptoris' Thought Leadership Luncheon at its conference, several Emptoris users talked about the challenges of bringing users up-to-speed. Most of the implementations were successful for a very obvious reason always worth mentioning - share the credit for adoption with the application users, not just the procurement organization. Training is another obvious component, and one manufacturer emphasized broad training programs aren't necessarily successful for every employee. The manufacturer is complementing its initial training programs with 1:1 education to allow users to learn at their own pace, not in a group situation. Basically, the more users who are using the application beyond a beginner level, the more benefits the company can gain in cost-savings and implementing consistent processes and policies.

The basic functionality in sourcing and supplier management applications such as *Emptoris 7* usually focuses first on realizing cost savings by effectively bringing the procurement department into an organization's day-to-day operations. For example, individual buyers in the business units can more easily take advantage of already negotiated contracts with preferred (and/or compliant) vendors, and the procurement organization still ends up with the data it needs to manage the supplier relationships and then renegotiate contracts or reallocate spend appropriately. But on a higher level, we look to this application category to play a critical role in supporting better decision-making in an increasingly complex and global supplier network. Although not necessarily designed to support sustainability policies, we expect these applications to be a necessary component in the sustainable supply chain in the future, where green priorities can be defined and monitored. Just as important is the role these applications can take in supporting manufacturers as they build up the information they need to choose between low-cost country sourcing and what we call profitable proximity, where sourcing decisions are made based on total costs, including transportation, import costs, and even supplier management costs, not just the cost of an item. But as Emptoris' customers already recognize - the applications can't deliver these benefits until more workers are using the applications.

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Noteworthy

- **4CS**, a provider of warranty management software applications, announced that its *iWarranty* software has been selected by Vermeer Manufacturing Company to help drive Dealer/Customer satisfaction, vehicle quality, cost reduction and profitability.

- **Retalix**, a provider of software applications for distributors and retailers, has added transportation management capability to its Supply Chain offerings including inbound traffic, yard management, and dock scheduling for grocers and distributors. The suite includes *Traffic Management* for inbound freight management, *Dock Scheduling* for appointment-scheduling functions and *Yard & Dock Management* for automating the yard and dock management processes.

- **SchemaLogic**, a provider of metadata management software, announced the availability of *SchemaLogic Enterprise Suite* (SES) for Microsoft SharePoint 2007. The application is intended to enable employees to find and share corporate information assets stored across multiple SharePoint sites.

- **Motorola**, Inc. announced that the Montreal Transit Authority (AMT) selected a Motorola RFID solution to track its bus fleet and help increase the use of its transit system. Together with Motorola authorized reseller, Eminencia, AMT has deployed Motorola radio frequency identification (RFID) readers, tags and antennas, as well as wireless LAN (WLAN) access points and client bridges. This integration of RFID and WLAN serves to seamlessly deliver AMT's bus riders with real-time arrival and departure information, reducing passenger confusion and making travel more convenient and comfortable even in inclement weather.

- **RightNow Technologies** and **Demandware** announced a combined on-demand customer relationship management and ecommerce bundle. The joint product provides multi-channel retailers and consumer brands with integration between their online and offline businesses, with the goal of improving customer experiences across channels.

- **IFS** announced that VARZ-400 has chosen *IFS Applications* to manage its business processes. VARZ-400 Maintenance Repair & Overhaul Center is a part of Vnukovo International Airport holding company. It has Russian and International certificates for aircraft repair and maintenance as well as aircraft engines, systems, assemblies, and parts. It also provides rework and upgrading services along with project engineering.

- **MicroStrategy**, a provider of business intelligence software, announced that Interstate Batteries has selected MicroStrategy for reporting and analysis of financial and sales data. Interstate Batteries is a leading automotive replacement battery brand in North America, selling close to 15 million batteries a year. With the implementation of MicroStrategy, executives at Interstate Batteries will be able to obtain timely insights into the company's financial performance with at-a-glance information dashboards. In another manufacturing win, the company announced that Sanmina-SCI Corporation has selected MicroStrategy as its business intelligence provider across its organization. Sanmina-SCI provides leading technology companies with design, manufacturing, and logistics solutions. Sanmina-SCI selected MicroStrategy to gain enhanced visibility into critical areas of its business, including sales, marketing, procurement, financial operations, and supply chain systems.

- **EDS** announced an expanded relationship with SAP whereby SAP will support EDS in the strategic expansion of its global SAP application-based consulting practice. By collaborating with SAP on client engagement training and techniques that will drive the long-term growth of its consulting practice, EDS hopes to enhance its existing SAP capabilities and bring SAP consulting and systems integration to the market by early 2008.

- **IQS**, a provider of quality management software, has announced that a large defense contractor, responsible for manufacturing armored trucks for the Unites States military, has chosen IQS to automate quality procedures in order to automate their operations, reduce defects, and improve visibility.

- Siemens PLM Software, formerly UGS, announced in-kind software grants with a commercial value of US$725 million to top educational institutions and training centers in Japan to help produce a ready-made employment base for Japanese manufacturers. The company also announced that Canon has selected Siemens PLM Software's technology as its product development platform to be deployed throughout the Canon group, including overseas sites and affiliates. The software is currently used in Canon Image Communication Products Operations. Canon will utilize *NX* software for digital product development and *Teamcenter* software for product data management

- **ILOG** announced *CPLEX 11*, the latest version of ILOG's optimization software with faster mixed integer programming performance. The enhanced performance enables the software to address complex real-world business requirements involving larger, more complicated problems that were often unsolvable by previous generations of optimization software. The company also announced the expansion of its ongoing strategic partnership with **Software AG** relative to their *webMethods* product suite. Full integration of the products is expected in 2008.

- **Autodesk** announced that it has signed an agreement to acquire **Hanna Strategies**, an engineering services firm that offers software development with centers in Shanghai, China, Atlanta, Georgia and Pune, India. In 2006, Autodesk purchased an ownership interest in Hanna Strategies and is now acquiring the remaining ownership. Terms of the transaction were not disclosed.

- **Connectbeam**, a provider of social networking software applications, announced the release of *Social Computing Appliance* version 2.0, an integrated social bookmarking and social networking applications appliance for enterprise environments. The product is intended to help firms add social computing capabilities to their existing IT and business environment to improve information worker productivity and business innovation.

- **Siemens Communications** announced that Hutchinson Sealing Systems (HSS) in Auburn Hills, Michigan, has chosen Siemens to upgrade its company-wide communications system. The implementation will centralize HSS's communications resources, and improve collaboration among employees at HSS's facilities and those of its affiliates in the United States and Mexico. A leading supplier of automotive weather stripping, HSS wanted to explore implementing a Voice over IP (VoIP) communication application to reduce its spending on long-distance toll calls between its facilities, which accounted for half of its total spending on long distance calls.

- Oracle had a busy couple of weeks before its annual *OpenWorld* conference. It announced the availability of a new *Business Accelerator Authoring Tool* and enhanced *Business Accelerators* for *JD Edwards EnterpriseOne 8.12*. Oracle also announced the latest release of *Contact Center Anywhere*, Oracle's multichannel IP contact center application. The first deployment of the product was done by LiveXchange Corporation. Additionally Oracle announced the new *Siebel CRM Mobile* for the *BlackBerry* platform, the latest offering delivering applications to *BlackBerry* smartphone users. This offering is available to existing Siebel Wireless customers.

- **Vertica Systems** has partnered with HP and **Red Hat** to deliver a software/hardware bundle for managing analytic data marts. The product is targeted for companies of any size that have large, fast-growing data stores of business information such as call detail records, stock quotes, customer service history, clickstream logs, radio frequency identification (RFID) and more.

- **Plextronics**, a provider of printed electronics technology, announced that it has received a strategic investment by Applied Ventures, the venture capital arm of Applied Materials. The investment will help Plextronics to expand its product development and manufacturing capabilities, as well as increase its investment in sales and marketing activities. This investment follows Plextronics' recently closed $20.6 million Series B financing, led by Solvay North America Investments with participation by Birchmere Ventures, Draper Triangle Ventures, Firelake Capital Management and Newlin Investment Company. An additional investment in the Series B round was provided by the Sustainable Energy Fund (SEF) of Central Eastern Pennsylvania. This was the second investment in the company that SEF has made this year. Plextronics has raised a total of $41 million in equity capital over the last five years.

- **Apriso**, a provider of manufacturing management software, announced Amcor Flexibles’ selection of *Apriso FlexNet* for global deployment, integrating with Amcor’s existing SAP system. Implementation will initially include more than 20 locations to improve operations performance by providing visibility to the firm’s production environment and supply chain network.

- **Antenna Software**, a provider of business mobility applications, and Oracle announced the availability of *AMPower SALES* for *PeopleSoft Enterprise CRM*. Developed on the *Antenna Mobility Platform* (AMP), the application is designed to extend *PeopleSoft Enterprise CRM* business processes for mobile sales organizations using *BlackBerry*, *Palm*, or *Windows Mobile* devices.

- **Synopsys**, a provider of software for semiconductor design and manufacturing, and **UMC**, a semiconductor foundry, announced the release of a 65-nanometer hierarchical, multi-voltage RTL-to-GDSII reference design flow. The flow is based on Synopsys' *Galaxy Design Platform* and has an IC Compiler place-and-route capability and the *Design Compiler Ultra* for design implementation support. Features of the reference flow include support for power management with multi-voltage design and power gating, as well as design-for-manufacturing capabilities with the addition of critical area analysis.

- **JasperSoft**, a provider of open source business intelligence software, and **Noetix**, a software provider that generates BI content from enterprise applications, announced the general availability of *Jasper4Oracle E-Business Suite, Powered by Noetix*. The offering features a set of reporting objects (metadata), delivering business views of the underlying Oracle applications database, which is intended to provide *Oracle E-Business Suite* customers with affordable, web-based, ad-hoc BI. The application enables business users to drag and drop familiar business terms for simplified self-service reporting and business intelligence.

- Microsoft announced that Midas, one of the world's largest providers of automotive services, has selected *Dynamics GP* to support its corporate business management systems. Midas' headquarters in Itasca, Ill., recently switched its financial management and general ledger reporting systems to the application. Midas will move its remaining financial management systems to Microsoft applications over the next two years.

- **Dyadem**, a leading provider of quality management software, announced a new deal with Maidstone Bakeries, a joint venture between IAWS Group and Tim Hortons. Maidstone has had a successful Six Sigma program which has been supported by Dyadem's *FMEA Pro-7 Risk Management Software*. Maidstone produces more than 60 million donuts per week and wanted to ensure top quality while making sure its production operations were as efficient as possible.

- **CSC** and **First Consulting Group** announced that they have entered into an agreement and plan of merger through which CSC will acquire First Consulting Group (FCG) in an all-cash transaction for $13.00 per share, or approximately $365 million. The transaction is expected to be neutral to reported CSC earnings and accretive to free cash flow within the first 12 months.

- **Kronos** announced it has acquired **Deploy Solutions**, a privately held company headquartered in Newton, Mass. Deploy has talent management software that helps organizations increase applicant flow, reduce costs, and improve quality of hires. Financial terms of the transaction were not disclosed.

- **Invistics**, a provider of lean planning and scheduling software for high-mix industries, announced that chemical manufacturer CP Kelco, a J.M. Huber company, has signed an enterprise license for the latest release of Invistics' *MachSix* product. The product includes tools to help plant managers and manufacturing executives in specialty chemical, consumer goods, pharmaceuticals, electronics, and other high-mix industries bridge the gap between ERP applications and plant floor execution systems to enable performance improvements including reduced inventory and cycle times and improved throughput and customer service.

- **Kinaxis**, a provider of supply network coordination software, announced that *RapidResponse 9* has achieved “Powered by SAP NetWeaver” status. SAP has certified the interface between the product and SAP applications. The company also announced that John Deere has chosen to deploy *RapidResponse* across all five manufacturing plants within its Consumer and Commercial Equipment (C&CE) division. John Deere hopes to increase the flexibility of its manufacturing plants, minimize inventory risks and reduce manufacturing time fences and lead times.

- IBM announced new software and services to help ensure clients' success in creating a healthy IT environment based on a service oriented architecture (SOA). Dubbed the "*IBM SOA Healthcheck*," these new services and software are intended to help clients with SOA health issues resulting from performance issues, which could be the result of partnering with inexperienced or proprietary information technology vendors. The healthchecks cover six common areas that can impact the success of an SOA strategy, including application reuse, governance, security, middleware, and workload and service management.

- HP announced new high-performance computing (HPC) technologies that help users analyze large amounts of data and perform increasingly complex simulations, helping them to make better decisions. The new *HPC Accelerator* and enhanced *Multi-Core Optimization Programs* are the first in a set of programs HP plans to introduce to address the challenges facing customers with intensive computing requirements. Accelerators are alternative technologies – such as general purpose graphical processing units, field programmable gate arrays, and custom ASICs – that help applications run up to 20 times faster so customers can speed up research and design while minding costs. HP also announced an expanded portfolio of offerings that help enterprise customers modernize and manage their SAP application environments. The latest services from HP help customers consolidate, migrate and optimize their SAP application infrastructure; upgrade to the latest version of *SAP ERP*; and, establish a roadmap that uses SOA to innovate future business processes.

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Manufacturing Insights Latest Research

Chemical Manufacturing Industry Update, 3Q07

Kimberly Knickle, Jony Moe, Jay Holman
Document # MI209373 – November 2007

This Manufacturing Insights update reviews the status of the chemical manufacturing industry for 3Q07. This update presents an overview and analysis of the macroeconomic trends, current industry issues, and pain points for the chemical manufacturing industry. This update also includes recent major IT announcements and/or investments across hardware, software, and services.

Arming for the Next Big Thing: Large Vendors Accumulate the Tools to Create Collaborative Decision Environments

Bob Parker
Document # MI209356 – November 2007

This Manufacturing Insights Perspective looks at recent acquisition and partnership activity in the enterprise application market, particularly in the area of business intelligence. The document looks at how manufacturers can view these vendors as key suppliers of collaborative decision environments (CDEs).

The Robot Revolution Revisited

Bob Parker
Document # MI209349 – November 2007

This Manufacturing Insights Perspective looks at robotics and factory automation, specifically at how companies are evaluating cost efficiencies from capital investments versus moving operations to low-cost regions.

The New Sterling Commerce — Your Supply Chain Delivered

Bob Parker
Document # MI209352 – November 2007

This Manufacturing Insights Perspective provides an update on the product offerings of Sterling Commerce and guidance to IT organizations considering investment in software to support multichannel sales activity.

Consumer Products Manufacturing Industry Update, 3Q07

Kimberly Knickle, Jay Holman, Jony Moe, Simon Ellis

Document # MI209369 – Published November 2007

This Manufacturing Insights update reviews the status of the consumer products manufacturing industry for 3Q07. This update presents an overview and analysis of the macroeconomic trends, current industry issues, and pain points for the consumer products manufacturing industry. This update also includes recent major IT announcements and/or investments across software and services.

The Aging/Emerging Dynamic

Bob Parker, Joe Barkai

Document # MI209354 – Published November 2007

This Manufacturing Insights Perspective looks at the challenges presented by an aging workforce in established geographies and the emerging workforces in developing geographies. The document looks at how technology such as social networking can be used to provide the requisite knowledge management.

The Emergence of Engineering Services Outsourcing

Mukesh Dialani, David Tapper, Joe Barkai

Document # MI209243 – Published November 2007

This Manufacturing Insights report provides an overview of the current situation for the research and development (R&D)/product engineering services market that is emerging from the shadows.

Will the Current Financial Market Situation Impact Manufacturing IT Spending?

Bob Parker

Document # MI209350 – November 2007

This Manufacturing Insights Perspective looks at how the subprime credit crisis will impact IT spending in the manufacturing industry.

Upcoming Webcasts

Automotive Service in the Global Economy - November 20, 2007

Join **Joe Barkai, Practice Director, Product Lifecycle Strategies at Manufacturing Insights**, for an informative session about the challenges diagnosing and servicing modern vehicles. During this one-hour session, Mr. Barkai will provide our latest market research data to describe the current state of the automotive industry. Joining Mr. Barkai during this seminar will be **Arnold A. Taube, PE from Deere & Company, a global manufacturer**, who will discuss Deere & Company's aspects of the globalization on service including commentary around product development, teaming (KSS vs practicality), intellectual property protection and more. This program is a joint activity of the Service Technology Program Office (STPO) of **SAE Internationa**l and Manufacturing Insights specifically developed for the members of to the vehicle service development community.

Global Supply Chain Top 10 Strategic IT Priorities for 2008 - December 13, 2007

Join **Simon Ellis,** Practice Director, Supply Chain Strategies at Manufacturing Insights along with **Kimberly Knickle,** Practice Director, Emerging Agenda, for an informative session about the challenges and uncertainty in supporting rapidly changing geographic markets, imbalances among supply and demand, and inevitable physical supply chain disruption.

Worldwide Manufacturing 2008 Top 10 Predictions - January 8, 2008

Join **Robert Parker,** VP Research, for an informative session about the challenges and uncertainty in supporting rapidly changing geographic markets and discuss ways in which the experienced buyer from manufacturing IT organizations will look for ways to engage the business leadership and help put information to work in delivering higher decision-making competency.

Meet Our Analysts at an Upcoming Event

San Diego Convergence Forum

November 13-14, 2007 - San Diego, CA
Join **Bob Parker**, Research VP, at this SCOR/Six Sigma/Lean Convergence Forum in San Diego.

NASSCOM 2008 India Leadership Forum

February 13-15, 2008
Join **Bob Parker,** Research VP, at one of the most respected events across the world, which is now in its 16th year.

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