Cisco Internet Business Solutions Group, Manufacturing Practice

The Manufacturing Community

For years, manufacturers have used technology to increase productivity and improve customer service. Today, they face unprecedented challenges. User demands for a wider range of products are forcing manufacturers to innovate faster and develop greater intimacy with end customers. Tectonic shifts in the global economy have created formidable new competitors and huge new markets in emerging countries. Now that the worst of the economic crisis is behind us, the question that remains is, "How has this crisis changed the way manufacturers operate, and what are their opportunities for growth?" Four key trends are evident:

1. **Overcapacity—**The automotive industry faced overcapacity for nearly 15 years, following old but trusted paradigms. Repercussions were more models, higher complexity yet "more of the same," discount wars, and investments in plants that were not fit to deliver the right products at the right time. These scenarios were not just limited to the auto industry. Steel, industrial systems such as photovoltaic cells, and semiconductor companies also saw overcapacity.

   European and U.S. companies that have been focused on their home markets are reconsidering their growth strategies, given slower projected growth rates and scarcity of skilled labor at home. CxOs are thinking about how to get the most productivity from the assets in their own backyard, while sustainably participating in the amazing growth in emerging economies. Foreign direct investments must give way to new models to collaborate and compete with these challengers, and they require careful thinking about how to configure value chains for agility and productivity.

2. **No more "back to normal"—**A number of best practices emerged for companies operating in the last months of the economic downturn. For example, companies adopted information and communications technology (ICT) such as telepresence and other collaboration tools to curb costs. Market research, indeed, shows that productivity has been growing quite substantially, even throughout the recession.[1] It would be fair to say that the near-death experiences of some manufacturing companies have permanently changed the way they think about process innovation and how to make it happen. This will come with a resurgence of application-based IT spending, borderless networks, and collaboration.

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3. **New ways of working—**Many companies now realize that their old business models are not fit for the future, and that they have to rethink their operations models. Take, for example, the utility industry. Some utilities lost 25 percent of their revenues due to the economic downturn, so their profits from electricity generation are down.[2] At the same time, regulators are mandating "smart meters" and are committing to much higher percentages of renewable energy sources. Their existing grid infrastructures cannot accommodate these requests, so they have to reinvent the way electricity is transported and distributed. Converging the communication and physical infrastructure with smart-grid solutions, for example, can lay the foundation for new sectors of economic growth, and government financial stimulus packages have pushed smart grid beyond the tipping point. Smart grid is just one example of an innovative solution that will be at the core of a new way of doing things, especially in the utilities infrastructure space.
4. **Grow, collaborate, or go—**Companies must redefine resource allocation across the board to create the "new machine." For example, until recently, it would have been unthinkable for competing automotive OEMs to speak about collaborating. Nevertheless, the economic crisis—as well as recognition that some new technologies such as hybrid and electric cars might be too much for OEMs to take on by themselves—has brought them closer together.

   Volkswagen is a great example of a carmaker that has joint platforms across its brands. For instance, the Porsche Cayenne and Volkswagen Touareg SUVs share the same platform; only some of the engines and outer bodies differ. This evolution from X-model to X-brand platforms will evolve toward and X-industry platform. A world where Renault supplies the diesel engine and Toyota manufactures cars designed by BMW and Mercedes might not be inconceivable. Imagine what this means for standardizing and collaborating? Much can be learned from the IT industry; its products/solutions will be key to making this happen.

What do these trends mean for the manufacturing industry? Further consolidation, collaboration inside and outside companies, new tools that increase efficiency and streamline processes, new standards for borderless networks, and new infrastructure projects are imminent. Now is the time for the industry to embrace the core principles of next-generation manufacturing and use them to achieve a sustainable, competitive advantage.

Improving Business Models for Greater Rewards

The Cisco® Internet Business Solutions Group (IBSG) Global Manufacturing Practice engages with CxOs from global Fortune 500 manufacturing companies across various industry segments. We provide customers with tremendous insight into the potential business benefits of effective ICT strategies. Our success revolves heavily around helping clients understand how to fund, choose, structure, measure, and operate ICT projects that will reap the greatest rewards. Our Practice consists of five seasoned teams with specific industry expertise and demonstrable customer results in these markets:

Aerospace and Defense

CEOs in aerospace and defense are focused on turning existing operations into value-added solutions, driving innovation and finding new sources of revenue. To fulfill these objectives, many CEOs are building networked businesses that accelerate internal and external collaboration, enable real-time decision making, and enhance core process areas, such as customer care and product life-cycle management. The Cisco IBSG Aerospace and Defense Practice advises industry executives on how to use IT to transform business processes, particularly in the areas of IT excellence, customer care, and supply-chain management. We have helped many companies save US$300 million over the years and generate millions of dollars in new products and services, attaining up to a 20 percent higher return on their IT investments.

Automotive

Globalization, the credit meltdown, emphasis on "green" vehicles, the global recession, and now the rapid resurgence of demand have put tremendous pressure on the auto industry. Industry players face many challenges, including competing with new OEMs, reinventing business models and corporate cultures, sharing ownership for joint initiatives, and investing in new technologies such as electric, hybrid, and fuel cells.

Our Practice experts have a deep history of working with auto executives to implement IT strategies, Internet-based solutions, and networked business processes across the automotive enterprise. Today, we are applying our expertise to help companies create the next-generation auto industry—one that is collaborative and distributed, empowered and trusted, entrepreneurial, globally diverse, and more innovative. The auto industry of the future will fundamentally change the way cars are built, used and serviced, and integrated with the environment. The Smart and Connected Passenger Vehicle is one example. Cisco IBSG envisions four key capabilities in the connected vehicle: 1) connect within the car, 2) connect to personal devices, 3) connect "around" the car, and 4) connect to the cloud. We are working extensively with the auto industry, government agencies, and industry associations to put a "price tag" on the associated benefits, which we believe will exceed $1,000 per vehicle annually—enough to finance the necessary roadside and service infrastructure.

Energy

Our Energy Practice helps Fortune 500 companies understand the business benefits of using the network and associated technologies to tackle specific challenges and to transform their organizations, workflows, and business processes. Based on engagements with customers, our expert advisers help industry executives address significant areas of interest, including improving innovation, identifying emerging technologies, strategizing to improve business resiliency, and using communications and collaboration tools on the trading floor to enhance insight and control.

High Technology

The high-tech industry is a complex ecosystem that comprises equipment and components suppliers, OEMs, distributors, systems integrators, software companies, consumers, and more. High-tech executives face a number of key issues—from how to make timely, high-

quality business decisions by tapping the industry's collective intelligence at a time of uncertainty, to creating effective innovations capabilities, improving supply-chain processes and collaboration, and enhancing customer experience.

Our Practice experts work with some of the world's largest companies in the areas of collaboration and business architecture; Enterprise 2.0 (Web 2.0, social media, and context-aware computing); knowledge worker productivity; using the network to harness and apply globally distributed knowledge for business advantage; and improving resource productivity in product development and innovation. A global semiconductor manufacturer provides one example of how we recently assisted a company in achieving its Enterprise 2.0 and social computing goals. Through our advice on how to use social computing and collaboration technologies to improve internal training and knowledge transfer, one of company's engineering groups realized annual savings of more than $20,000 on travel costs for in-person meetings, a $25,000 savings in related hardware shipping costs, and an increase of 300 man-hours in employee productivity per year.

Industrial

The combination of large government stimulus packages and continued growth in emerging countries has led to a large-scale increase in new infrastructure projects for industrial companies. CxOs are focused on optimizing processes for innovation, value chain, customer experience, and asset management, using new, virtualized capabilities to provide visibility into global operations and launching into new markets.

Our Practice experts assist global corporations by providing new collaborative capabilities to rapidly optimize core processes. We accelerate success for our customers by strategically applying analytic frameworks for capturing new markets, increasing returns through new business architectures, and developing new business models for revenue generation, service support, operations excellence, supply-chain optimization, employee productivity acceleration, and channel partner collaboration. We do this through direct engagements, using new analytics and next-generation collaboration tools such as social media and video-based interactions. We have completed initiatives with leading industrial companies in the areas of innovation, collaboration, and operations improvement. Key new areas of emphasis include optimizing value chains, increasing revenue through new market adjacencies, and increasing productivity, product innovation, and lean manufacturing through team-based active collaboration environments.

For more information about the capabilities of the Cisco IBSG Global Manufacturing Practice, please visit our website at http://www.cisco.com/web/about/ac79/mfg/index.html, or contact:

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Endnotes

1. http://mjperry.blogspot.com/2010/07/increased-worker-productivity-has.html
2. Cisco IBSG analysis, 2010.

More Information

Cisco Internet Business Solutions Group (IBSG), the company's global consultancy, helps CXOs from the world's largest public and private organizations solve critical business challenges. By connecting strategy, process, and technology, Cisco IBSG industry experts enable customers to turn visionary ideas into value.

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