The Future Enterprise: Innovating for High Tech Industry Success

WHITE PAPER

Sponsored by: SAP

Christopher Holmes   Robert Parker

July 2012

EXECUTIVE OVERVIEW

With ever shortening technology and product lifecycles, intense competition, and an increasingly well-informed consumer, the high tech industry is at the forefront of managing a fast-evolving business. High tech companies have traditionally focused on supply chain optimization to stay competitive and lower costs across the entire value chain; however, this is no longer enough to future-proof their business.

The high tech manufacturing enterprise of the future will be very different from the one we see today. If we look at the likes of Apple, Sony, Samsung and Dell, these companies no longer only sell hardware like computers, mobile phones, and tablets. Today, their stable of hardware products are complemented by a range of value-added services extending from online stores for applications, music, books and videos as well as cloud services for storage and content management.

Future high tech manufacturing enterprises will generate revenues from a mix of products and services which will be seamlessly integrated to provide customers with their choice of device and access to content and services that enrich their overall user experience. Devices will come in a variety of styles and offered based on different pricing or business models such as usage or tiered subscription. They will also be available across Internet channels and from any type of retailer, and sold to both consumer and corporate customers. The difference between hardware and software providers will blur, as products are developed to run the software, and software is developed to run on specific products. Products will be continuously refreshed, thanks to rapid product lifecycles and via a continuous update process, supported by a return and upgrade service.

On the marketing front, product promotions will continue to be influenced by the latest consumer trends, using music, sports, celebrities and social media to sell tech products and services as consumers see their devices not just as tools but also as lifestyle products. This shift is also seen in the consumerization of IT within the

enterprise, where more organizations are taking a bring-your-own-device (BYOD) approach to cater for this new group of Gen Y employees who use their lifestyle devices for both work and leisure.

These trends have a bearing on the supply chain across different channels from manufacturers to distributors/wholesalers to retail centers, all of which will need to be tightly integrated. With an extremely nimble supply chain, the focus will on the "perfect" product launch in which promotional activities are in sync with online and physical retail store distribution to meet the predicted demand. The ability to ensure the entire supply chain is in sync to meet the fast-changing customer demands is the hallmark of success in the high tech industry. As the industry evolves, the revenue make-up of the key players in the supply chain will also change, with revenue generated from both hardware and software services, increasing the value-add to the device sold. This will also drive the need for greater process integration across the supply chain to capture these value-added activities.

This IDC Manufacturing Insights White Paper will highlight the key challenges facing the Asia/Pacific region's high tech industry over the next three years and what companies will need to do to maintain their competitive edge. The paper will discuss the solutions needed to support the new vision as high tech companies rethink the way they operate, obtain better product and customer intelligence, and manage IT innovation for business impact.

FUTURE-PROOFING THROUGH INNOVATION

The Asia/Pacific region has been at the center of high tech manufacturing for the last few years. Many global companies have well-established operations within the region, splitting their manufacturing as well as research and development activities across different countries. However, the cost of doing business in the region has risen, driving companies to focus on improving productivity and efficiencies across business processes, as well as growing their top line through new products and services.

In order to achieve this "future state," organizations need to rethink the way they operate. Technology should not simply be used to automate processes and drive out cost. Today, high tech companies have technologies and tools at their disposal, which enable them to increase the value and support the innovation of both products and services to generate revenue. This shift can be seen in the move by the traditional Taiwan contract manufactures, such as Inventec, to enter the software and services space. As high tech companies evolve to offer both products and services, the need for technology to support this integrated business model will be a key enabler.

The Multidimensional Supply Chain

The supply chain will continue to undergo significant change from its current form. With the ever increasing number of new product introductions, high tech companies must strive for the perfect product launch that is well integrated with retail and online promotional activities. In order to support this fast moving, responsive supply chain, greater integration of product, transactional and financial processes are required to automate the information flow both up and down the supply chain.

Indeed, this has changed the way high tech products are being brought into the market and sold through the channels. High tech brands like Lenovo, Samsung and Sony have begun to follow Apple's retail strategy of marketing and selling technology products for both their functionality and fashion status. Consumer tech marketing has taken the cue from fashion marketing and embraced non-traditional consumer electronics channels, targeting fashion or lifestyle boutiques and upscale shopping malls.

Aligning with Sales and Marketing

However, this shift in sales and marketing does put a strain on high tech organizations as they transcend from selling a mass consumer product with stable demand to a niche fashionable good with variable demand. Whether it is for the launch of a new game (software) or a new device, this is true for any company that has to continually push products into the marketplace using promotions, and adopt new brand strategies to catch the hype around the latest trends and events.

Microsoft is a good example of a tech giant that has to continuously push its marketing muscle when launching new products, such as the special edition Xbox game consoles branded with newly launched games. From a coordination standpoint, the need to ensure the supply chain is in place to support retail demand across both brick-and-mortar and online retailers is critical to ensure that stocks are available at the product launch to capitalize the short sale window typical of fashion goods. This is only possible through the use of technology to effectively coordinate a massive worldwide product launch. Companies need to emphasize the operational integrity of the supply chain, ensuring that they are able to respond to customer demand, whether the product is a success or failure, through a response management approach. In order to achieve this level of flexibility, companies must fully understand their supply chain, including manufacturing cycle times, suppliers' lead time, shipment times and overall capacities across the chain to effectively manage any "what-if" scenarios across the high-tech business Web.

Aligning to the Retail Channel

The need for the manufacturer to support the retail channel will continue to intensify. Although physical product fulfillment is key, these changes in the retail environment require manufacturers to ensure that they communicate their key product information to shoppers across all sales channels, from e-commerce Web sites to retail shop fronts through their channel partners. Unlike typical fashion products which require little technical product knowledge to close the sale, manufacturers need to ensure that their retail partners are technically competent about their products to better serve their customers. Trained retail associates are also required to help educate, trouble shoot and support these new products. Technology publications and social media platforms where these products are reviewed should also be monitored for customer feedback and comments. Social media, if used correctly, can be a potentially useful channel for closing the loop and building more loyal and engaged customers.

Product and Supply Chain Integration

Manufacturing and Supply Chain Efficiencies

For the OEM, the coordination across the supply chain requires an extremely effective and efficient material requirements planning (MRP) process. Through the use of the latest technologies such as "in memory" processing, the ability to run MRP on demand will enable the organization to respond quickly to changes in the marketplace. This enables material requirement and production plans to be generated in "real time" to ensure that actual physical productions of parts, systems and final products are in sync with the actual demand in the marketplace.

Mobile technology will play an ever more important role in driving responsiveness across the shop floor, where physical production needs to become ever more responsive. With an emphasis on productivity and efficiency, mobile technology will facilitate shop floor productivity: from maintenance engineers being able to access repair manuals for machines and request for spare parts to be issued from stores, to supervisors having instant access to the latest production schedule and being able to view the current performance of the operations.

Through the use of mobile technologies, instant updates can be communicated and shared between the shop floor and supply chain, making real-time coordination possible. This will enable perpetual inventory across the supply chain with end-to-end asset tracking to provide high-fidelity, real-time information visibility for fast decision making and improved collaboration and efficiencies across the chain.

Worldwide Manufacturing

The need to supply in smaller batch sizes with localized promotions to ensure a perfect product launch requires local support and proximity to demand. This, coupled with an increasing need to reduce risk across the supply chain, will drive a change in the supply network configuration: shifting from the traditional mass production mode of gaining economies of scale through a large manufacturing plant, to the flexibility and responsiveness of managing a network of smaller manufacturing plants located close to the demand. Although this approach will improve fulfillment performance from a delivery stand point, the need to manage a more complex supply chain, with multiple plants being supported by multiple different suppliers, will increase complexity across the physical, information and financial supply chain.

Technology-Driven Innovation

High tech manufacturing is changing, from how the products are sold to where the revenue streams are coming from. Thus, product technology needs to continually evolve, as does the technology used to support the organization providing the product. From the manufacturing standpoint, the focus on the use of technology in driving productivity and efficiency has, and will, need to continue. However, we also need to look at the type of value that these technologies can create for the organization. This can be anything from the ability to rapidly deploy new manufacturing and retail sites, to having the resources and support to quickly develop and implement new pricing or business models as well as implement marketing promotions that keep pace with the competition.

For organizations to move forward in this approach, the technology needs to be flexible and innovative. By flexible, companies need to be able to "pick and choose" the applications that suit them the best. These applications need to be able to change over time, as the business changes; hence those organizations with a large amount of customization will find themselves being left behind, as they cannot keep up to date with the latest technology. Innovative requires that organizations continually look to newer technologies and think about how they can change the way they operate. Through a "tech watch" approach where technology and business functions come together, proofs of concept and the latest technology approaches can be reviewed, assessed and funded.

For companies that are some way behind their competitors, the use of a cloud-based approach can be one way of get access to the technology resources quickly, using vendors packaged applications that are available in a software-as-a-service model. Moving to a cloud-based solution can have its benefits across the enterprise as it will help drive "standard" business processes across the entire enterprise. With the move to revenue coming from services, and "app stores" in the future,

companies will need to put in place the processes and support required to manage this new revenue stream. Looking to cloud-based delivery of these services would speed up the deployment and support of processes, as well as allow for scalability as the service is expanded to meet new requirements.

FUTURE OUTLOOK

High tech companies need to put in place the building blocks today to take advantage of new future opportunities afforded by new technologies – if they are not already thinking in this way, they are already behind. Through the adoption of new technologies such as cloud, mobility, analytics and social business, companies can "future proof" their organizations from both an operational perspective, but also from a value perspective as high tech companies have to have the technology and service capabilities to provide ongoing support for products.

With a combination of better analysis, speed to market, and a responsive physical manufacturing environment, high tech organizations can look forward to evolving into manufacturers of lifestyle or fashion products, especially knowing that they have the creativity, technology and capabilities that are the hallmarks of the fast-evolving high tech industry.

Essential Guidance

The future success of high tech companies lies in their ability to adapt their strategies and adopt new technology as the backbone to changing the way they operate. IDC Manufacturing Insights recommends the following checklist:

● Further integrate IT and business. Technology and the business will have to be further integrated to ensure the entire supply chain is in sync to meet the fast-changing customer demands. This also means making collaboration the centerpiece of all strategies. This is critical so that they have the right building blocks in place to identify, adapt and adopt the business processes and technologies. If the organization continues to operate in silos, many of the advantages of the new technology will not be realized.

● Set aside a portion of the IT budget for testing new technologies individually or across intersections (e.g., mobile and analytics), this needs to be a key area of the new business and technology integration. A group of "digital innovators" need to be focused on "Tech Watch" activities, keeping up-to-date on the latest technologies while staying tuned to business requirements. This team needs to manage the business pull on technology and the technology push to the business.

#AP727005V

- Evaluate the pros and the cons of being an early adopter and a fast follower for each of the new technology areas. Being the first has its benefits, as does being a fast follower. Identify which process areas the organization needs to excel in; these can be the early adoption target areas. Utilize the power of business process simulation to understand what impact the newer technologies will have, be it a "continuous improvement" or "process step change."

It is important to understand that the newer areas of technology adoption will allow for fundamentally different business models to be developed. They will need to be evaluated on the value that the technology will bring to the business, and not just focus on cost savings.

CONCLUSION

In the fast moving and fast changing world of the high tech industry, the ability to change and adapt is key. Those organizations that are not able to change the way they operate, will not be able take advantage of newer technologies; they will also be most at risk of struggling to enhance their product offerings and falling behind. It is imperative that companies put in place an IT strategy that will enable them to move quickly, adapt to new business requirements, and ultimately prosper as the high tech industry evolves. Technology will be at the core of how the future high tech company innovates across products and services, and going beyond basic cost-cutting to identify where technology can truly add real business value to the organization.