



The evolving electronics industry

Courting the customer through insight and innovation

Transistor by transistor, the electronics industry is literally changing the world. Consider this: today's fastest computer can now achieve 17 quadrillion calculations per second¹, and by 2015 there will be more than seven billion mobile devices in the world consuming and generating massive amounts of data.² Right now there are more than one billion transistors for each person on the planet.³

With innovations like these, it is no surprise that the electronics industry continues to be a leader in research and development investment across the world.⁴ However, despite an impressive track record of pioneering technology, today's electronics industry is in a state of disruption. Product life-cycles are compressing, emphasizing the need to create innovative products and services faster and more cheaply than ever before. Competitive pressures are at an all-time high, with aggressive new entrants vying with a continuing need to contain operational costs. And though profit margins for some electronics segments remain relatively high, most are under heavy margin pressure.

Together, these trends are driving electronics companies to find new growth opportunities. Many believe that the best way to do this—perhaps the only way to do it—is to transform their business models by getting closer to their customers. In fact, the 2012 IBM CEO study revealed that 86 percent of global electronics CEOs are implementing extensive changes in their organizations to deepen their understanding of individual customer needs, while enabling faster, more relevant responses to markets and individuals.⁵ CEOs realize that innovative products and services are only successful when they deliver on customer needs.



Smarter electronics

Point of view

At IBM, we believe the best route to this customer intimacy is through the data that electronics devices and equipment create. With billions of people connected by nearly a trillion devices, this data represents a wealth of untapped resources that electronics companies are just starting to understand. It is not just the volume of data that is exploding, but also the variety, velocity and veracity—the percentage of the data that needs to be reviewed and addressed—that is growing exponentially. However, as revealed in the IBM 2011 CMO study, a vast majority of electronics companies are unprepared to manage the impact of all this data and make use of social media as a strategic business tool.⁶ Now is the time for electronics companies to convert data into insights, and create the new products and services that will continue to change the world.

Courting the customer

In the 21st century, innovation for its own sake is not enough. The key to success is not just bringing new products to the market, but enhancing business-to-business interactions and people's lives. Greater customer intimacy means a shift in the traditional relationships between buyers and sellers. It becomes one of partnership—a mutually beneficial feedback loop in which customers are active participants in the business, and companies use customer insight to innovate.

Insight resulting from analysis of data can be used to redefine product development and customer experiences. Investing in an array of capabilities that create deeper insights and promote smarter products and services can pay off in terms of faster and higher returns. Most electronics companies have already invested in some form of customer information and product lifecycle management, and while investing in these individual capabilities can produce good returns, an end-to-end approach offers systemic benefits that can yield exponential returns. For example, the value of customer data can be greatly enhanced through investments in analytics that drive deeper insights.

Tying these insights to product development can shorten time to market and produce offerings that are more aligned with customer needs. To this end, a four-phase roadmap, with each phase building on the one before, can help improve an electronics company's cumulative cash flow and innovation capabilities. At IBM we call this the C.O.R.E model:⁷

- **Capture the data:** Collect, integrate and standardize data to make it more useful.
- **Optimize insights:** Apply analytics to the data to yield deep customer and operational insights.
- **Revamp development:** Increase credibility in the marketplace through the introduction of more intuitive and relevant products and services.
- **Enhance the experience:** Extend the value of products through value-added services.

Capture the data

The first step is focused on gathering as much useful and relevant information as possible, whether from product usage, mining social media or tracking customer interactions with service personnel. All relevant sources of data should be tapped. As consumers connect more and more of their devices, from the living room to the kitchen, data can be collected, with permission, at a level of detail never before possible.

Optimize insights

In the second step, companies analyze the data they captured to spot hidden trends, predict outcomes and lend certainty to decision-making. It is a critical capability, because it creates a basis for action—something that raw data alone cannot provide. Analytics can help reveal the most intelligent and profitable course of action, based on answers hidden within the data. As an example, a leading telecommunications company monitored social media, call records and other subscriber data in real time. They then analyzed the data to predict churn and move proactively to increase customer retention, resulting in a quick 10 percent return on investment.⁸

Revamp development

Insights from analyzing data must be used to transform how products and services are created and managed. The ability to achieve rapid time to market with intuitive and—more importantly—relevant offerings is a major factor in market credibility. The integration of social networking, open source hardware and software, 3-D printing and crowd-sourced development funding are transforming every element of the product development process. The result is the emergence of a whole new collaborative, global and transparent development process for electronics companies.

Enhance the experience

Today's consumers respond to direct, continuous and high-touch connections to trusted brands. Offering real-time, pervasive service execution, as well as device and subscriber management, is critical for creating brand preference and customer loyalty. Adding new services does more than boost product sales, it also provides opportunities to interact, partner and gather information to enhance experiences. Electronics companies such as Ericsson, in network management, and Ricoh, in document management, are shifting their business models from products to services. Ericsson now offers managed services that help companies design, build and manage entire network infrastructures. Once mainly known as a copier and printer manufacturer, Ricoh now offers professional services to help companies manage document-intensive business processes.

Conclusion

The idea of creating experiences that matter to the customer lies at the heart of competitiveness in today's electronics industry. It is actually not a new concept. Decades ago, companies like Kodak and Polaroid understood they were really in the business of creating memories, not just selling cameras and film. However, with the technology available to them at the time, they were unable to truly deliver on the promise of differentiated experiences. Today, the focus on customer experience has grown to the point where it practically overshadows the products themselves. That context is essential when considering new ways to innovate and generate revenue. In today's age of data explosion and information overload, the key technology needed is to process and understand all types of data. It is applying analytics to data that allows companies to gain new insights that drive innovation. As stated by IBM Chairman, President and Chief Executive Officer Ginni Rometty in her March 7, 2013 speech to the Council on Foreign Relations, "Data is indeed the basis of competition in the 'smarter' era. And big data is indeed the next natural resource—promising to do for our era what steam, electricity and oil did for the Industrial Age."

Ultimately the electronics industry will need leaders that accept the challenge to transform their companies and the industry at large. As an electronics company, IBM has not only helped support such a transformation for other companies, but has undergone the same transformation itself. Years ago, IBM remixed its portfolio toward services and software, investing in solutions that foster communications with clients. These shifts not only saved IBM from the grip of commoditization, they also positioned the company for the services economy of the 21st century. That same transformation is what is required for other electronics companies today.

For more information

For more on how to build a smarter electronics industry, please visit: ibm.com/electronics

Additionally, IBM Global Financing can help you acquire the IT solutions that your business needs in the most cost-effective and strategic way possible. We'll partner with credit-qualified clients to customize an IT financing solution to suit your business goals, enable effective cash management, and improve your total cost of ownership. IBM Global Financing is your smartest choice to fund critical IT investments and propel your business forward. For more information, visit: ibm.com/financing



© Copyright IBM Corporation 2013

IBM Corporation
Sales and Distribution
Route 100
Somers, NY 10589

Produced in the United States of America
March 2013

IBM, the IBM logo, and ibm.com are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at "Copyright and trademark information" at ibm.com/legal/copytrade.shtml

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED "AS IS" WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.

¹ *Top500 List - November 2012, TOP500*, <http://www.top500.org/list/2012/11>, (November 2012).

² *ManuFACTS: Wireless Broadband and Spectrum Management: Efficient Use of Spectrum Resources Contributes to Industry Growth and Job Creation*, National Association of Manufacturers (June 2011).

³ *Your most valuable asset is your data*, IBM, ibm.com/software/ebusinessjstart/solutions (2011).

⁴ *Science and Engineering Indicators 2012*, National Science Foundation, National Center for Science and Engineering Statistics (NCSES), <http://www.nsf.gov/statistics/seind12/c0/c0i.html> (January 2012).

⁵ *Leading Through Connections: Insights from the Global Chief Executive Officer Study*, Electronics industry perspective, IBM Institute for Business Value, <http://public.dhe.ibm.com/common/ssi/ecm/en/gbe03504usen/GBE03504USEN.PDF> (June 2012).

⁶ *From Stretched to Strengthened: Insights from the Global Chief Marketing Officer Study, Electronics Point of View*, IBM Institute for Business Value, <http://public.dhe.ibm.com/common/ssi/ecm/en/gbe03438usen/GBE03438USEN.PDF> (October 2011).

⁷ *The road to customer intimacy: Leveraging investments in customer insight to maximize returns*, IBM Center for Applied Insights, http://www.ibm.com/smarterplanet/global/files/us_en_us_products_cai_electronics_b.pdf (June 2011).

⁸ James G. Kobielus, *Zero In On CRM HEROes. The Role of Social Network Analysis*, Forrester Research, (October 2010).



Please Recycle