The Convergence Challenge: Realizing the Complex Promise of New Technologies

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Instead of adopting new technologies in isolation, consumers integrate them into existing activities. Jerry Wind, Vijay Mahajan, and Robert E. Gunther examine the idea of convergence and show how companies can use it to attract these consumers.

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Consumers rarely use technology in the way they are expected to. Consider Helsinki teenager Lauri Tähtinen. While wireless companies were developing services that would allow travelers to find the nearest sushi bar or Starbucks, 19-year-old Tähtinen primarily uses his cell phone to communicate with his friends. When he heads to downtown Helsinki on a Friday night, he doesn't look for a bar guide. Instead, he begins "pinging" his friends to see who else is downtown and where they are; then they hook up.

The desire to communicate—not just through voice, but through words—is so strong that short messages (SMS) have become the top use of wireless service in Europe, despite the fact that the 10-digit alphanumeric telephone keyboard was not designed for it. These SMS customers have developed facility in rapid finger movements, shorthand codes, and shortcut keys to subvert the telephone keyboard for their purposes.

While information services may meet the needs of some customers, the Helsinki teens want communications. "People don't want to be entertained," Tähtinen bluntly stated on a panel of Helsinki teenagers during a session of the Wharton Fellows program in Finland. "They don't want information. If you go into Internet cafes, you see people are not reading the news; they are all sending e-mail or chatting online. They are willing to pay for social interaction. People want to belong to something."

Wouldn't it just be easier to call a friend on the phone? Part of the advantage of the short messages is that they allow for more private conversations, and they can be used asynchronously. There is no need to respond in real time. Written language also has a completely different character than oral communication. As Tähtinen commented, "When you get a phone call, it is totally the opposite of SMS. SMS represents the joy of communicating, while phone calls are the burden of communicating."

The rapid diffusion of SMS in Europe is an example of how consumers change technology at the same time that technology changes consumers. Wireless users like Tähtinen have changed their behavior in fundamental ways in adapting new technologies, but in other ways they need to fulfill the same enduring human needs for communication and connection. The intersection between the potential of technology and the needs of users is where technologies very often are transformed in ways that the original developers do not anticipate. This hybrid phenomenon is crucial to understand in developing products based on new technologies or adopting new technologies in organizations.

The Convergence of Humans and Technology

From e-commerce to customer relationship management (CRM) to business process reengineering, many new promising technologies and technology applications failed to live up to their potential—and fell far short of their hype. This was not only due to limitations in the technologies themselves, although early technologies are often filled with bugs and rarely work as well as marketing might suggest. The real problem often is not the technology itself, but the unexpected interactions between the technology and the people who use it. Like the Helsinki teenagers and their cell phones, this interaction between people and technology changes both of them.

People do not adopt the technologies 100 percent, but they integrate them into their existing needs and activities. Companies need to focus on what we call *convergence* in their strategies and organizational architecture. Hybrid behavior and the need for convergence approaches was one of the key findings of our new book, *Convergence Marketing,* which explores the opportunities created by e-business technologies and the emergence of a hybrid consumer. These hybrid consumers do not behave like the "cyberconsumer" discussed by early proponents of e-marketing, but they also are different from the traditional consumer. Many pure-play dot-com companies failed to appreciate the complexity of these customers.

Online grocery shopping service Webvan, for example, tried to get customers to take their supermarket shopping onto the Internet. Time-pressed customers complained about grocery shopping, and it seemed like the system that Webvan and others offered would be very attractive. Customers could create standard lists through which they could make repeat purchases in seconds. The groceries would be delivered to their doors, saving customers the trouble of driving to the store and running through the aisles. What the originators of such ideas failed to see, however, is that people sometimes like the experience of shopping or that it may be part of their routines. Webvan shut down its service and filed for bankruptcy in July 2001.

U.K. retailer Tesco was far more successful with a hybrid approach. Tesco, with a large and established retail network in England, raced past pioneers such as Webvan to become the largest online grocer in the world. Tesco used its century-old platform of retail stores in the United Kingdom as the launching pad for its online service, creating a profitable online business that was handling 70,000 orders per week by mid-2001. The company had racked up more than $400 million in sales the year before. Tesco had a cost advantage because it could set up its online grocery business for a fraction of the infrastructure and marketing investment of Webvan. But Tesco also had an advantage of a convergence model. Customers could shop from the same company online or in the store, and the company could gather customer information across the different channels.

Why We Still Have Radios

The advent of a new technology or platform does not eliminate the old one. Tesco doesn't shut down its stores in order to sell groceries online. The store and the online service exist side by side; they interact with one another and are both changed. When television was developed, some thought that it was the end of the radio, but while the role of the radio changed, consumers didn't throw out their radios. They added them to their television viewing. When the VCR came out, observers thought that it was the end of motion picture theaters, but movie theaters continued to grow even as Blockbuster appeared and studios developed a vibrant after-sale market in videos.

When Charles Schwab became a pioneer in online investing, it found that it still needed physical branches. While its customers conducted more than 80 percent of their trades online, the majority still wanted to set up their accounts in a physical branch. They wanted to look someone in the eye before entrusting that person with their money. Once that relationship was established, the online transactions could begin in earnest.

In executive education, we have found a similar effect with distance-learning technologies. A few years ago, some revolutionaries predicted that the university would dissolve into the bits of the "virtual university." And yet, most online educational initiatives that flourished at the end of the 1990s proved to be ideas whose time had not yet come. There was something about personal interaction in the classroom that couldn't be replicated or replaced through technological channels. Similarly, videoconferencing technologies didn't eliminate the need to fly around the world for meetings, as some expected. At Wharton, the new Wharton Fellows Program was designed based on a hybrid model, combining an onsite foundation program with ongoing interaction through an online decision support network. The virtual component cannot take the place of the direct, physical interaction, but the two together strengthen one another.

When new technologies appear, pioneers often claim that they mean the death of the old technology. This is often not the case. The new technologies and old platforms exist side by side. The key is to understand how the new technological platforms transform the old and anticipate how the consumer in the middle of this transformation might react. Very often, however, in the excitement of the potential of new technologies and approaches, the consumer is forgotten. We saw this with many online businesses, where the technology took over and the consumer was forgotten. In assessing the impact of new technologies, we need to carefully examine the creative ways that consumers might integrate these technologies with existing ones.

The Hybrid Organization

We have examined how consumers and new technological platforms interact, changing one another. There is a third part to the convergence phenomenon. It is not just the convergence of consumers and technology, but the convergence of consumers, technology, and the organization. The implementation of new technology, particularly technology that empowers the consumer, changes the organization. And the application of new technologies within the organization offers opportunities to meet the challenges of these changes.

This is why no new technology initiative in the organization can be considered without carefully anticipating the human reaction—by customers and employees. What looks good on paper may be completely transformed by these dynamics. The customer relationship management initiative that looks like it will offer far better service may depend upon collecting information about customers that they will deem an intrusion of their privacy. The technology for increased customization may run afoul of customers who are overwhelmed by choices or by retail partners who are disintermediated or are not prepared to deliver it.

Many organizations have enduring "silos" that form obstacles to implementing new technologies. These silos help executives to control the organization but create barriers for employees and customers. For example, companies are separated by function (marketing, finance, human resources, and so on), by brand and industry, by geography, or by team. Many e-business initiatives in large companies were set up as independent operations, so this created yet another separation in the company. Attempts to bridge these silos through matrix structures have been largely unsuccessful, increasing the complexity of the organization and decreasing the clarity of reporting structures.

While this organizational complexity can be a significant obstacle to the implementation of new technologies in the organization, the technology itself can help to bridge these silos. Just as Web browsers create a coherent, customizable interface for the tremendously complex Internet, which was once accessible only to very technology-savvy users, organizational interfaces can be tailored to the individual employees, customers, or partners. The underlying operating system can be as complex and rigid as it needs to be, but the interface is inviting and flexible.

To build a convergent organization, companies need to look at the entire organizational architecture, not just technology. They need to think through the diverse elements of the organizational design, including culture and values, structure, customer interface, processes, boundaries, performance measures, human resources, and the interactions among these design elements.

When exploring the applications of a new technology in developing new products and services, or when redesigning the organizational architecture, it is important to look beyond the technology itself to the strategy and processes that encompasses the technology and the people who will use it. The technology will rarely be successful if it is simply dropped into the organization without examining these deeper organizational implications both inside the firm and in its interactions with customers, suppliers, and other stakeholders. What remains the same? What can you do that you couldn't do before? What do you need to do differently?

Many e-business initiatives in established firms were initially built as standalone operations. This may have been important in keeping these radical projects, with even more radical staff, from being undermined by the existing culture. But this separation also tended to lead to a lack of integration of the e-business into the established business. The Internet was seen as a separate channel rather than part of an integrated whole. Many companies have since brought their online initiatives back into the fold to capitalize on these synergies and increase convergence. Companies also need to think about how the e-business can be used to transform the existing culture. For example, Kmart used its separate BlueLight site to attract a slightly younger and higher-spending customer. It then integrated the Internet project into its established retail business and used the BlueLight marketing campaign for its physical stores. In this way, the online initiative helped to change the old-line organization.

While some companies have used the collapse of the dot-com bubble as an excuse to dismantle or decelerate their online businesses, this is short-sighted. Instead, now is the ideal opportunity to look at ways to more fully integrate the online businesses into the existing organization, offering a more powerful value proposition to customers.

New technologies continue to be developed. With each new technology, some proponents will claim that it is a revolution that changes everything. This was a constant refrain of the dot-com revolutionaries, who claimed that their businesses could not be evaluated according to standard metrics. These revolutionaries tend to line up against traditionalists who are quick to dismiss the impact of the new technology altogether.

There is a middle way. New technologies do not change everything, but they do change some things. The key in developing strategies to integrate technologies into our products and services and organizational design is to understand what is changed and what remains the same. What are the enduring human or organizational needs that still must be met? How might consumers or employees "subvert" the technology to meet these needs in the way that teenagers used the phone touchpad for messaging? By exploring the interaction between the technology, users, and the organization, we can gain a better understanding of the potential trajectory of technologies and can develop more coherent strategies for implementing them.

Over the next few weeks, we will examine other insights from our book, Convergence Marketing: Strategies for Reaching the New Hybrid Consumer*. The next article will explore the five C's of convergence: customerization, community, channels, competitive value, and choice tools—areas in which technologies create new opportunities but also in which a complex "fusion" of the old and new is required. The final article explores ways that technology can be applied inside the organization to transform it by creating a "digital fabric."*