CHAPTER 1.6

Meeting the Decade's Challenges: Technology (Alone) Is Not the Answer

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As we look ahead to the next 10 years, it is clear that both business and society at large face some pretty daunting challenges. For example, many businesses will be banking on revenue growth fueled primarily by emerging markets, where products sell at a fraction of their developed-economy prices. Companies in countries with aging workforces will struggle to leverage the entrepreneurial energy of younger labor pools in places such as China and India. If successful, that leverage will complicate efforts to get beyond the mixed blessing of today's nascent but jobless economic recovery in Europe and the United States.

Challenges such as these will play out against a backdrop of problems that bedevil not just business but society as a whole: environmentally unsustainable growth, inadequate education and healthcare, and political instability. Just as we begin to get a handle on some of these problems, they will be overtaken by new ones, as yet unimagined.

Information and communication technologies (ICT) can help us meet these cascading challenges.

For starters, the spread of ICT throughout the developing world—continuing the trend documented in this and previous editions of *The Global Information Technology Report*—will distribute more broadly fundamental services such as education and healthcare. Transformational technologies such as mobile and cloud computing—along with other technologies that are, again, as yet unimagined—will spawn solutions to specific business problems. But ICT in isolation will offer little value. In order to spark the innovation and enable the implementation of new technologies to solve big problems, we need to transform all of today's organizations: business, nonprofit, and governmental.

We need to realize that most of the value that an organization creates for itself and its stakeholders originates not at headquarters but on the front lines, in the "value zone" where individual employees interact with individual stakeholders. In order to energize those value-creating employees, we need to create a culture of transparency that engenders their trust. We need to rethink the traditional organizational hierarchy, making managers as accountable to employees as those employees are to their bosses. In short, we need to activate and enable the *catalysts* for creating and delivering innovative technology-based solutions—our people.

This chapter will briefly review the potential of transformational ICT and then explore how organizations can unlock that potential by empowering and encouraging their employees.

The potential of transformational ICT

The past decade offers abundant evidence of the beneficial impact that technology can have, in ways both big and small. As described in last year's *Report,* for example, the Spanish government has used ICT as a tool for creating

greater cohesion in a society of significant social and cultural diversity and with highly autonomous local governments. Among the successes are accessible, citizen-centric healthcare and public administration services.[1]

Other benefits of technology are on a much smaller scale. In India, nearly 20 million new mobile phone subscribers sign up every month, nearly one-third of them in rural areas, including remote villages with no electric services.[2] The spread of this technology changes people's lives for the better in a variety of ways.

Fishermen in the southwestern state of Kerala, for example, once had to rely on local brokers and hope their catch would sell at a decent price. If all the local fishermen had a good day, they were likely to find low prices in their home market—or even end up dumping their catch into the sea if demand for the perishable product had been met before they arrived. With the advent of mobile phones, they could compare bids from local brokers while still at sea—or check the situation at nearby ports, where the day's catch may not have been so bountiful and brokers might be offering higher prices.[3]

Mobile phones are also enabling social networks, including some quite different from the vast system of, say, a Facebook. Along the tense border between India and Pakistan, someone will climb a tower and call out the name of a favorite Bollywood song. Then someone on the other side who hears the request will use his mobile phone to call in the request to the local radio station, which broadcasts the song for listeners on both sides of the border.

ICT has also been a source of major value creation in the business world over the years, completely transforming many industries by revolutionizing their business models and removing obstacles to growth. FedEx used mainframe technology and centralized processing to create a next-day delivery service in the United States and globally.[4] Ebay's auction system changed the way individuals buy and sell from one another and created thousands of independent online businesses.[5] Apple used technology to turn an industry liability—music piracy and unauthorized file sharing—into the iTunes music store, radically changing the face of the company and the industry.[6]

In the coming years, transformative technology developments will continue to remove barriers to progress and generate tremendous and often non-monetary value for businesses, nongovernmental organizations, governmental agencies, and society as a whole. For example, the continuing integration of networking, processing, and sensor technologies will enable wireless systems that link the physical world to digital data networks in fields ranging from medicine to security. Other technology breakthroughs will further the automated delivery of healthcare, the efficient management of electric grids, and the global development of complex products such

as aircraft. Across the board, technology—and ICT in particular—will continue to enhance productivity, benefitting both shareholders and customers of countless businesses.

The catalyst for transformational ICT

Transformational technologies on their own will not be sufficient to meet the challenges of the coming years. We cannot rely only on the "what" of ICT to solve problems. We need also to focus on the "how" of inventing and implementing those technologies. We need to activate the human catalysts that will unlock technology's potential.

The innovation that creates transformational ICT, and the innovative ways of applying it, typically take place in the context of an organization. So if we want to realize the full business and societal benefits of new technologies, we need to transform our organizations so that the people in them become engaged in the difficult and creative work required to tackle a major challenge.

HCL Technologies has experimented over the past five years with just this kind of organizational reinvention, learning that success is not based so much on what technology services a company provides but on how it delivers them. This experiment has yielded some lessons about creating a structure and environment for fostering innovation and using its output to solve problems and create value.[7] The key takeaways from HCL's experiment include:

Recognize your "value zone"

In the industrial economy of the past, the locus of value creation in most companies was manufacturing or distribution or, in some cases, research and development. But in a knowledge economy characterized by services, or by commodity products differentiated by the service package and customer experience that surrounds them, the value zone has shifted.

In most cases, significant value is now created at the interface between a company's employees and its customers, whether these are individual consumers or the employees of the customer companies. This is also true for most social and governmental agencies: the value zone is where the organization's people directly interact with their individual beneficiaries or constituents.

Why is it important to identify the location of the value zone? Because this is where mutually beneficial innovations emerge, through the give-and-take of conversation and interactions between an organization's employees and the people that organization serves. This is where problems are solved—problems that might be specific to the situation but that typically are representative of larger issues. Those problems are typically not solved unilaterally by the company or the social or governmental agency. Increasingly, they are solved collaboratively.

Recall the well-known case of Lego and the launch of its Mindstorms programmable toy robot. Within weeks of the product hitting the market, customers basically hijacked it, reverse-engineering the firmware and developing additional software to program the robot. Instead of resisting hackers' alterations to its product, Lego encouraged customer extensions of the Mindstorms line and ultimately worked with users to create the second-generation product.[8]

Such collaborative innovation takes place, on a smaller scale, thousands of times a day among individuals working in the value zone. It is here that potentially transformational technology can be put to innovative use in countless ways, activated by individuals working across organizational boundaries. But that will happen only if organizations recognize the tremendous importance of the individuals working in the value zone and are structured to not only permit but to encourage innovation there.

Create trust through transparency

Individuals in the value zone will not seek and then seize value-creating opportunities if they do not care about the organization they work for. They will not care about the organization they work for if they do not trust it or its leaders. And they are unlikely to feel much trust if the organization is a place of secrets.

If organizations want their employees to commit themselves to constant innovation and value creation, they need to look for ways to increase transparency—whether it involves throwing open the financial books or posting executives' 360-degree reviews on the company intranet.

An open and transparent organization is particularly important as younger employees—those of the so-called Gen Y or Millennial Generation—enter the workforce. Used to the open book of their friends' lives on social networking sites, people in this generation find the lack of transparency in most organizations unnatural if not completely demotivating.

The trust fostered by transparency is crucial during the adoption of a transformational ICT. No matter how many business or societal problems a technology solves, it is likely to face resistance within an organization because of the wrenching changes it will impose on the way people do their jobs. Getting buy-in for implementation of the technology will be particularly difficult if people mistrust their own leaders and organization.

The acute need for transparency is a sign of the times. The breakdown of trust between employees and their organization's management is one of the most distressing consequences of the economic downturn. It prevents organizations from tapping an immediately available resource—their own people—that could re-vitalize business and society.

In the case of HCL, it was found that candor fostered employee trust, which in turn helped the company improve its performance even during the economic downturn. HCL was one of the few information technology (IT) service providers to grow during this period, with revenues increasing more than 20 percent year over year during the depths of the recession.[9]

As the economy started to decline, many global corporations assumed that management had all the answers—and those corporations certainly were not going to share them until absolutely necessary. By contrast, HCL Technologies turned to its employees and asked, "What can we do to get through this? How can we reduce costs, increase revenues, retain customers?"

The thousands of responses the company received led to initiatives that were shared with employees and then carried out. Though some underperforming employees were laid off, HCL Technologies increased its overall headcount, including in the United States and Europe. And as economic conditions improved, the company found itself not with a dispirited and fearful workforce but instead with one that was engaged and ready to pursue new growth opportunities.

Invert the organizational pyramid

The traditional organization, with its hierarchical pyramid and well-oiled but inflexible systems, is simply not equipped to creatively tackle tomorrow's formidable array of challenges. It is not set up, for example, to spot an opportunistic, even serendipitous, use of a new technology that fully capitalizes on that technology's transformational potential.

One way to increase the chance of identifying unusual value opportunities is to turn the standard organizational hierarchy, or at least aspects of it, upside down. The aim is to formally acknowledge and then provide support for those individuals working in the value zone, the people who grapple with problems in collaboration with customers or other stakeholders.

In this approach, managers who in the traditional hierarchy were "superior" to the frontline employees now are charged with ensuring that their subordinates have the support needed to generate value, both for the organization and for the customers or other stakeholders it serves. Functional managers in areas such as human resources and IT, who often answered only to senior managers, now also are accountable to the value-creating frontline employees. Although this "value pyramid" is turned upside down, the traditional "control pyramid" remains in place for formal governance purposes; the two pyramids together create a star-shaped organizational structure.

Besides formalizing the importance to the organization of employees in the value zone, this topsy-turvy system accomplishes several goals, as detailed below.

For one thing, it aims to ensure that maximum value is created for the customers. HCL Technologies' approach is dubbed "employees first, customers second" only because, by giving top priority to frontline

employees and ensuring they have the resources needed to solve customers' problems, customers fare better than they would otherwise.

The structure also is designed to increase employees' engagement by giving them both the opportunity and the responsibility to take action on behalf of a customer without requiring layers of bureaucratic approval and second-guessing by those higher ups in a chain of command. Employees have to seize this opportunity, though; it will not be handed to them by their managers.

Sometimes their enthusiasm puts them in direct conflict with company practices—to the ultimate benefit of all. Not long after the US consumer electronics retailer Best Buy acquired Geek Squad, a small firm that offered technical support to home computer users, the company built an elaborate wiki to make it easy for the rapidly growing ranks of technicians to swap service tips. It was an innovative tool seemingly well suited to the temperament of the geeky technicians—except that no one used it. Why? The technicians were ignoring the company-endorsed wiki in favor of another collaborative technology: massively multiplayer online games such as Battlefield 2. As they roamed through virtual worlds trying to destroy their enemies, team members would exchange bits of advice or discuss new ways to tackle customer problems. Some of these resulted in new Best Buy service or product offerings.[10]

Responsibility for initiating organizational change, as well as for innovation, is also pushed down the ranks (or, in the hierarchy of the inverted "value pyramid," up the ranks). As in a democracy, those at the grassroots level are as much the harbingers of change as the leaders at the top. Everyone is not always in complete agreement about the need for change or how to carry it out. But, again as in a democracy, they are charged with being active participants in the process.

Nurture new leaders

The upending of the traditional hierarchy also frees up possibilities for collaborative thinking and action, the kind needed to find solutions to problems made increasingly complex by the accelerating explosion of information. Instead of a few individuals with all the answers holding leadership positions, different people—which ones depends on the situation and individual talents—step forward to lead efforts to solve problems. Though not always in a leadership role, everyone is always prepared to lead. And that includes younger employees or those who might not fit the traditional leadership profile.

Consider an initiative at IBM, in which young employees volunteered to work—in addition to their regular jobs—on developing services for people at the bottom of the economic pyramid in developing countries. The program started out as a business development initiative, but it became a *de facto* leadership development initiative—one with the potential to

identify and develop leaders who were globally aware, passionate about a value-driven project, and able to work collaboratively. Such people might not have been identified by the typical "high-potentials" training program, but as volunteers, they effectively self-selected themselves as potential leaders.[11]

Such an initiative leaves the traditional leader at the top of the organization with the crucial job of enabling and encouraging these new leaders at every level.

Conclusion

The reinvention of traditional organizational structures described here is likely to become increasingly important over the next decade. These new configurations will allow people in these organizations to serve as the catalysts that allow future technologies to transform business and the world. More broadly, these new organizational structures will unleash individuals' innovative drive and leadership talents to meet the challenges—technology related or not—of the next and subsequent decades.

Notes

1 See Lanvin et al. 2010.

2 Telecom Regulatory Authority of India 2010.

3 Jensen 2007.

4 FedEx, "FedEx Timeline."

5 Walker 2005.

6 Apple Inc. 2008.

7 This story is recounted in Nayar 2010.

8 Seybold 2006.

9 HCL Technologies 2010. Revenues in the quarter ending June 2010 were up 21.5 percent compared with the quarter ending June 2009, as measured in US dollars. They were up 17.8 percent as measured in Indian rupees. The difference in percentage results from the different dollar-rupee exchange rates at the beginning and the end of the period.

10 Tapscott and Williams 2008.

11 Hill 2008.

References

Apple Inc. 2008. "iTunes Store Top Music Retailer in the US," April 3. Available at http://www.apple.com/pr/library/2008/04/03itunes.html (accessed 27 January 2011).

FedEx. "FedEx Timeline." Available at http://fedex.com/us/about/today/history/timeline.html (accessed January 27, 2011).

HCL Technologies. 2010. "Fourth Quarter and Annual Results FY 2009-10." Available at http://www.hcltech.com/investors/Downloads/FR/IR_july'10_s.pdf (accessed January 27, 2011).

Hill, L. 2008. "Where Will We Find Tomorrow's Leaders? A Conversation with Linda Hill." *Harvard Business Review* January: 123–291.

Jensen, R. 2007. "The Digital Provide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector." *Quarterly Journal of Economics,* August 2007, as reported in *The Economist*, May 10, 2007. Available at http://www.economist.com/node/9149142?story_id=9149142 (accessed January 27, 2011).

Lanvin, B., D. T. Mancera, and J. Busquets. 2010. "Promoting Information Societies in Complex Environments: An In-Depth Look at Spain's Plan Avanza." *The Global Information Technology Report 2009–2010.* Geneva: World Economic Forum. 127–40.

Nayar, V. 2010. *Employees First, Customers Second.* Boston: Harvard Business Press.

Seybold, P. B. 2006. *Outside Innovation: How Your Customers Will Co-Design Your Company's Future.* New York: Collins. Chapter 2. Available at http://www.psgroup.com/detail.aspx?id=695.

Tapscott, D. and A. D. Williams. 2008. *Wikinomics: How Mass Collaboration Changes Everything.* New York: Portfolio. Chapter 9.

Telecom Regulatory Authority of India. 2010. *The Indian Telecom Services Performance Indicator Report,* issues for the four quarters ending June 2010. Available at http://www.trai.gov.in/Reports_list_year.asp (accessed January 27, 2011).

Walker, L. 2005. "EBay Sellers Fell Into Careers That Fill Their Lives." *The Washington Post* June 30, 2005. Available at http://www.washingtonpost.com/wp-dyn/content/article/2005/06/29/AR2005062902935_pf.html (accessed January 27, 2011).