

From global connection to global orchestration

Future business models for high performance
where technology and the multi-polar world meet

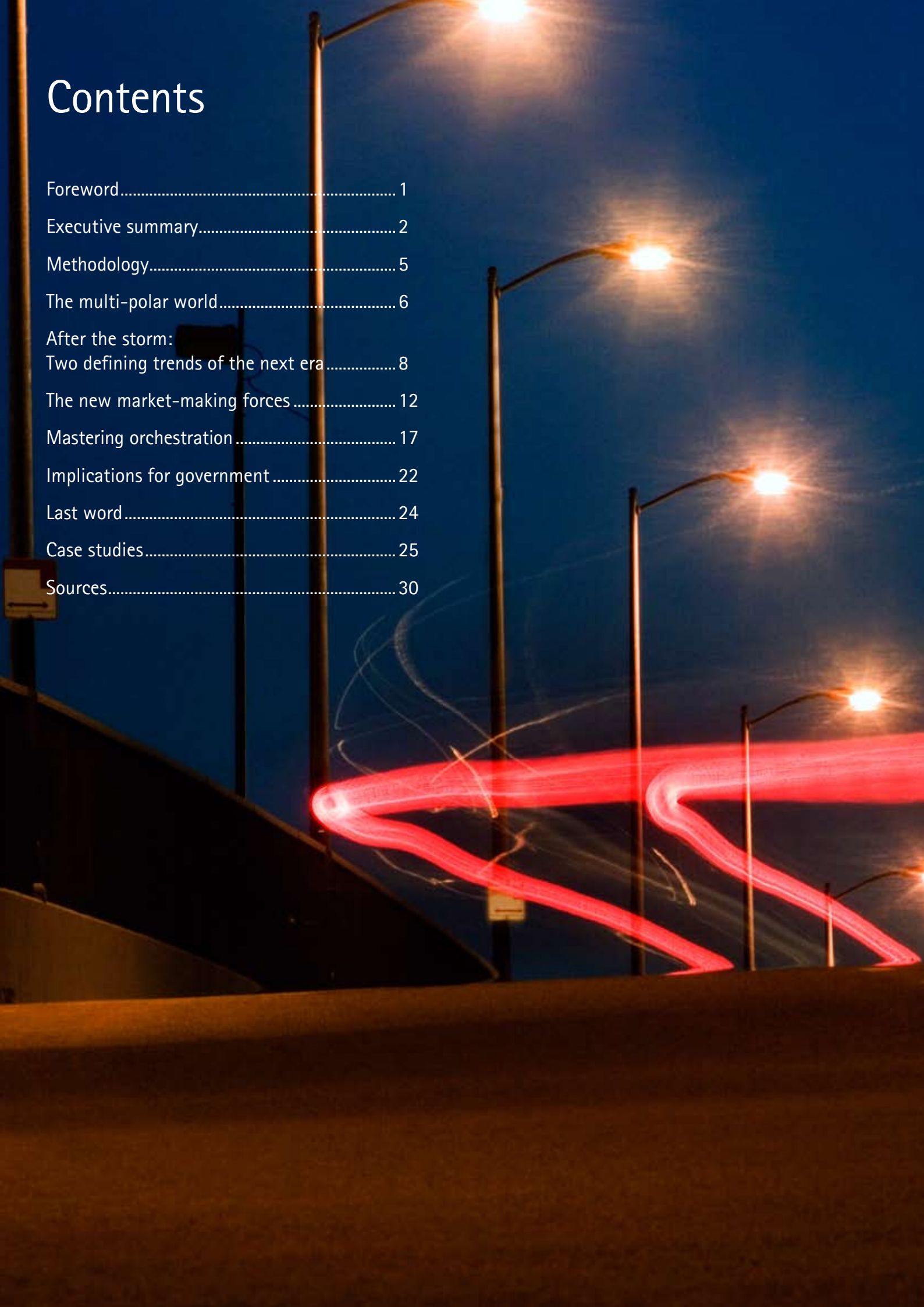
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Foreword



Mark Foster

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Ten years ago, the world entered a period in which globalization would come of age. It was to be an evolution in both substance and form. The rise of emerging markets planted new economic flags, diffusing and rebalancing economic power across ever more countries and regions. At the same time, globalization morphed from being a chiefly one-way phenomenon—with exports and labor flowing from East to West—into an indisputably multidirectional and interdependent contest for consumers, resources, capital, talent and innovation. The economic map became truly multi-polar, the world larger in geographic scope yet smaller in economic distance.

The past two years, though, will be remembered less for trends than for events. The attention of business and political leaders everywhere was rightly absorbed by combating the worst effects of the financial crisis and economic downturn. Now, as the dust thrown up by the global downturn begins to settle, business leaders and policymakers are starting to focus once more on the longer-term influences shaping tomorrow's economy. The advent of a new decade is a natural time to take stock of the interplay of the forces in global economics and their implications for business and government.

Two trends that feature prominently in my conversations with business and government leaders are the acceleration of multi-polar globalization and the transformative potential of newly mature information technologies—including cloud, mobile and collaborative computing. These two trends have not only continued apace during the downturn, but have drawn added strength and speed from it, spurred by the intensifying quest for efficiency, competitiveness and new customers across the world.

Less well known is how IT and the multi-polar world are also enabling individuals and enterprises to connect and communicate in order to create value in new and different ways. Our research has sought to look beyond the daily headlines about social networking, blogging and crowd-sourcing to reveal and understand

the new market-making forces at work. For companies and markets, the implications of these forces, even in embryonic form, are profound.

Organizations have a great opportunity to harness these forces to their advantage to optimize, extend or even transform their business models. Locating and orchestrating the right global connections outside the organization become, perhaps paradoxically, the key to achieving an ever closer focus on the competitive essence of the business. Excellence in networks, relationships and data-driven insight will be required. Some of the necessary responses may seem counterintuitive. Throwing open the doors of the company will not come naturally. Broadening the field of dialogue takes time and effort; customer insight requires work. Yet these investments will help define competitive advantage for the future.

Accenture's multi-polar world research program was launched in 2006 to help companies and public-sector organizations striving to achieve high performance respond to the changes in the world's economies. Our aspiration for this report, the fourth in the series, is that it will spur organizations to move beyond straightforward connectedness toward an effective global orchestration of powerful new economic possibilities that increasingly lie beyond the traditional frontiers of the enterprise and fully harness the potential of pervasive new technology waves.

A handwritten signature in white ink that reads "Mark Foster". The signature is stylized and fluid.

Mark Foster
Group Chief Executive
Global Markets and
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Executive summary



After the storm: two defining trends for the next era

As the world emerges from a period of economic torpor, attention is refocusing on two long-term trends whose continued rise has been obscured by the recent turmoil: the changing shape of globalization and the maturing of information technology (IT).

The rise of a multi-polar world economy—in which economic power and activity are increasingly diffused across geographic borders—continues apace. The recovery now under way is demonstrating the resilience of emerging markets. Developing economies already account for more than half of world output. They have not only weathered the crisis better than developed economies, but they are also helping to power the global recovery, generating the bulk of expected growth in the global economy in 2010. The confident rise of emerging economies is mirrored in the corporate arena. Indeed, the number

of emerging-market companies in the *Fortune* Global 500—a leading ranking of the world's largest companies—has risen from 20 in 1995 to 91 in 2009.

At the same time, a number of information technologies are maturing. The levels of access, cost, standards, openness, reliability and ease of use of both hardware and communication capabilities have developed to the point at which software can be readily used to combine them to newly powerful effect in business and social settings. The coming together of cloud services, collaborative computing, mobile communications and other technologies creates new options for businesses in all regions. In particular, in responding to and reinforcing growth in emerging markets, IT adds weight to the shift toward economic multi-polarity.

By reducing barriers—such as access to markets, upfront investment, and economies of scale—IT and the multi-polar world are intensifying competition. New entrants from emerging markets, free of legacy systems and processes, can access pay-per-use business infrastructure. Niche players anywhere in the world can build competitive cost bases and cut new paths to market. New consumers, better connected and better informed than ever, are entering the global marketplace.



Six new market-making forces

Yet it is not simply a story of competition becoming more intense: competition itself is changing. The intertwining of IT and the multi-polar world has made a number of new economic relationships possible for the first time. This sets the stage for doing business in completely new ways—not by simply connecting across the multi-polar world but by orchestrating the six new market-making forces that Accenture's research identified:

- **Co-production** between companies and their customers or suppliers is blurring traditional boundaries within industry value chains. Innovation and product design are two areas in which enterprises are using new technologies to tap into the collaborative input of a growing number of stakeholders around the world.
- New businesses that use IT to build **new bridges between producers and customers** are emerging. From rural banking to collaborative apps platforms, these intermediary players are harnessing new technology to make markets in places where geographic or economic distance had previously held supply and demand apart.
- Changes in the capability, reach and cost of IT are enabling **new forms of business-to-business commerce**. Thanks to cloud computing and the myriad business models it and other technologies make possible, even for niche providers, companies have greater access—fast, across borders, and often at variable cost—to efficient and industrialized functions to support a more focused core.
- Technology is unleashing **consumer-to-consumer content** as like-minded individuals share information and opinion about products and services—often in an open and global forum where the objective is not profit, but an increase in the knowledge or economic welfare of participants. Shifting market power away from producers toward consumers, this force has implications for reputation, quality, the meaning of brand and, where content can be digitized, for the survival of entire industries.
- IT is allowing consumers to participate in **peer-to-peer markets** for the cooperative production of goods and services in tandem with other consumers. Often driven by a desire to unlock new efficiency or effectiveness in a product or service, peer-to-peer players can quickly open up new market space while also reducing the power of alternative providers. For example, international peer-to-peer microfinance platforms are challenging assumptions about lending to small entrepreneurs in high-growth economies.

- Individuals are collaborating electronically to engage in **cooperative consumption**. Social computing can make it easy for consumers to signal their group buying intentions—and also to increase that collective bargaining power by advertising the offer and enlarging the cluster of committed customers. This “team buying” alters the dynamics of discounting and of product tailoring.

These new market-making forces, and the full range of IT developments they draw on, have big implications. Businesses will have to operate in a much more complex ecosystem, where customers, suppliers, competitors and other producers are increasingly interconnected and interdependent. The new forces heighten a number of business challenges, including the management of networks of third parties, competition from new market entrants, and the protection of proprietary information and data. They also present significant opportunities that were not previously available, including working more efficiently, collaborating in new ways with business partners, and reaching new markets or customer groups.

In the government sphere, too, the market-making forces offer an opportunity to improve public-service value and policy effectiveness, as well as the prospect of innovative solutions to social challenges—ranging from energy usage to security—within and across national borders.

Mastering orchestration

Strikingly, only 11 percent of business leaders we surveyed believe that their companies are significantly advanced in their strategic response to the disruptive business environment brought about by the intersection of the multi-polar world and developments in IT. For businesses looking to harness the changed ecosystem to their advantage, the imperative is to move beyond global connectedness toward a more proactive, continuously managed global orchestration of the new market-making forces that are now available. A number of businesses, both traditional and new, are already doing so to unlock core business improvement in three areas:

Optimization: Achieving operational excellence in current business activities. New information and collaboration tools can enhance the quality of products and services, improve customer service and reduce costs.

Extension: Developing current business in new areas. Companies can harness new technologies to extend existing business models into additional, or completely new, industries.

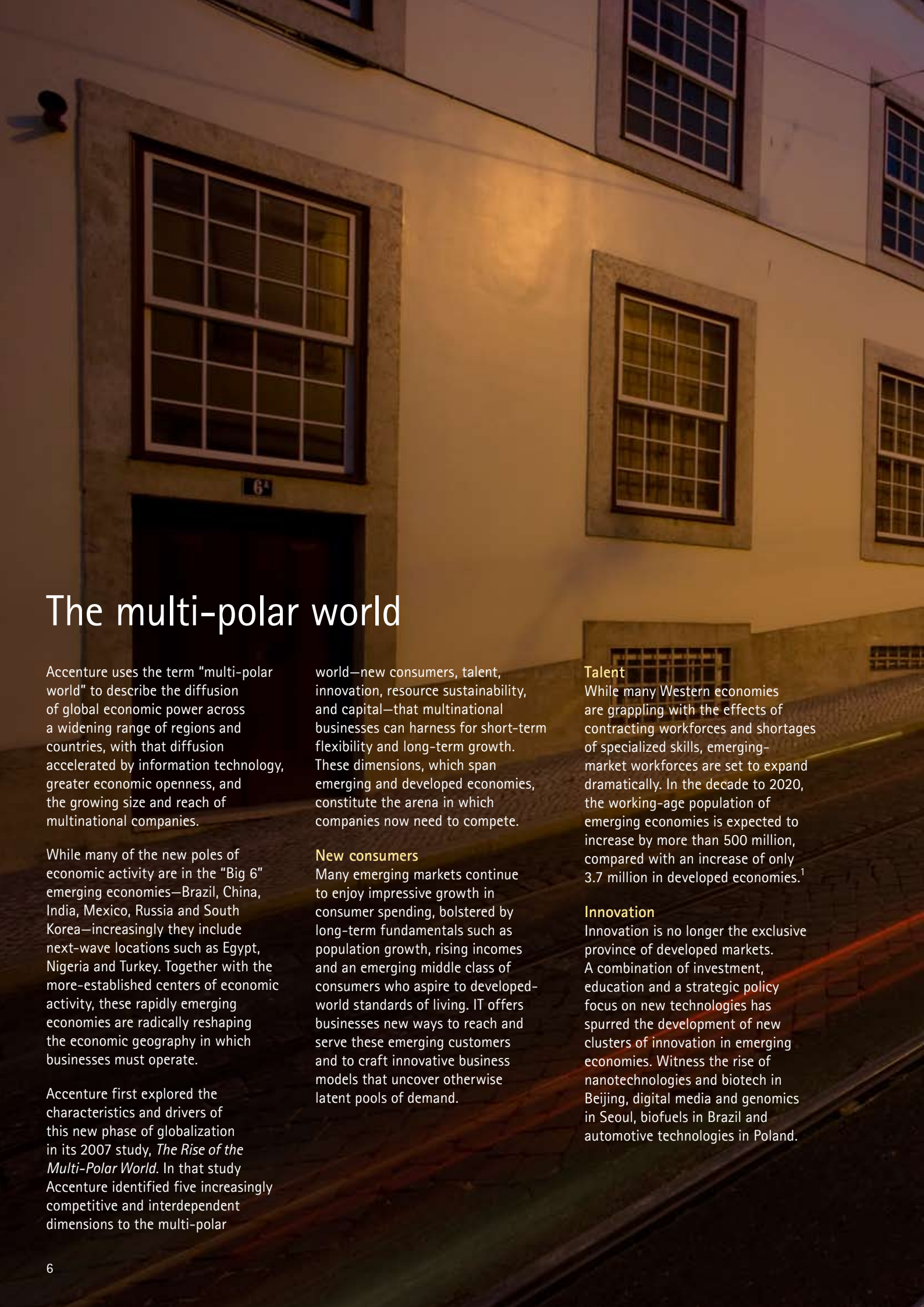
Transformation: Growing new business in new areas. Companies can deploy IT to build new business models for entry into previously unreachable—or even unimagined—markets.

The instruments of orchestration

Orchestrating market-making forces is a complex undertaking. It requires an understanding of how these forces are spawning new business models. For the majority of businesses, the question will be: where to start? Our research has identified two hallmarks of success that will be increasingly important to underpinning a company's competitive performance. Understanding these practices offers a guide to businesses seeking to emulate and excel against the competition.

First, they actively seek greater **insight**. Tomorrow's high-performance businesses will exhibit unusually high levels of business intelligence, putting in place infrastructure with which they can constantly amass and analyze data to glean valuable insight. Their leaders will regularly communicate the importance of round-the-clock alertness, displaying advanced levels of awareness themselves and gearing their organizations' talent-development programs accordingly. In an age when open-source information services have made everyone an “expert,” there is enormous potential for competitive advantage by employing advanced tools for capturing data and analyzing it to produce rich, timely, actionable insights. A passion for data-driven continuous improvement will become a fundamental tenet of a high-performance organization's culture.

Second, they develop deep and wide networks with consumers, entrepreneurs and other businesses. By opening themselves up to the ecosystem, high-performance businesses will draw strength beyond the sum of their parts. By connecting to consumers through social computing and advanced analytics, they will undertake an open dialogue that directs product and service enhancement while building loyalty. By opening up to external entrepreneurs and businesses, they can co-opt the experience and capabilities of others to develop new, innovative solutions at low cost. And by divesting some in-house functions to external service providers, such as cloud owners and horizontal service providers, they can increase efficiency and reduce costs.



The multi-polar world

Accenture uses the term “multi-polar world” to describe the diffusion of global economic power across a widening range of regions and countries, with that diffusion accelerated by information technology, greater economic openness, and the growing size and reach of multinational companies.

While many of the new poles of economic activity are in the “Big 6” emerging economies—Brazil, China, India, Mexico, Russia and South Korea—increasingly they include next-wave locations such as Egypt, Nigeria and Turkey. Together with the more-established centers of economic activity, these rapidly emerging economies are radically reshaping the economic geography in which businesses must operate.

Accenture first explored the characteristics and drivers of this new phase of globalization in its 2007 study, *The Rise of the Multi-Polar World*. In that study Accenture identified five increasingly competitive and interdependent dimensions to the multi-polar

world—new consumers, talent, innovation, resource sustainability, and capital—that multinational businesses can harness for short-term flexibility and long-term growth. These dimensions, which span emerging and developed economies, constitute the arena in which companies now need to compete.

New consumers

Many emerging markets continue to enjoy impressive growth in consumer spending, bolstered by long-term fundamentals such as population growth, rising incomes and an emerging middle class of consumers who aspire to developed-world standards of living. IT offers businesses new ways to reach and serve these emerging customers and to craft innovative business models that uncover otherwise latent pools of demand.

Talent

While many Western economies are grappling with the effects of contracting workforces and shortages of specialized skills, emerging-market workforces are set to expand dramatically. In the decade to 2020, the working-age population of emerging economies is expected to increase by more than 500 million, compared with an increase of only 3.7 million in developed economies.¹

Innovation

Innovation is no longer the exclusive province of developed markets. A combination of investment, education and a strategic policy focus on new technologies has spurred the development of new clusters of innovation in emerging economies. Witness the rise of nanotechnologies and biotech in Beijing, digital media and genomics in Seoul, biofuels in Brazil and automotive technologies in Poland.



Resource sustainability

Because of global commodity markets and optimized supply chains, companies feel the effects of volatility in prices or supply movements more quickly than ever. At the same time, they face the prospect of a world with dwindling fossil-fuel resources—and increasing obligations to preserve natural resources. The challenge is to find the right balance of supply security, price stability, efficiency gains and environmental sustainability.

Capital

Pools of capital are increasingly visible in the emerging world—not only in nascent capital markets but also via new players such as emerging-market multinationals and sovereign wealth funds. With approximately US\$3.9 trillion in assets under management in 2008, sovereign wealth funds—state-backed entities that invest surplus foreign reserves overseas—dwarf private equity and could reach US\$8 trillion by 2015, according to some estimates.²

The canvas of the multi-polar world also features a large and increasingly diverse cast of public and private players operating alongside and competing with traditional, developed-market multinationals. Chief among these are the emerging-market multinationals, which have become increasingly prominent as they expand their international activities. These companies were the subject of Accenture's second multi-polar world study, in 2008, titled *The Rise of the Emerging-Market Multinational*.

In the third multi-polar world study, in 2009, titled *Strategies for achieving high performance in a multi-polar world: Global choices for global challenges*, Accenture studied how high-performance businesses had been evolving their strategies in response to the multi-polar world. The research found that high-performance businesses conceive of and execute their strategies in new

and consistently different ways. In particular, the findings showed that companies need to:

Create geographic options—proactively and continually look outward to sense their environment and make focused choices about where to compete and whom to engage.

Be authentically local—embed themselves with full commitment in their chosen markets, weaving their operations into the fabric of local business and society.

Network the organization—create organizations that are permeable, both internally and externally, enabling flows of ideas, people and industry leading practices to the right places at the right time.

After the storm: Two defining trends of the next era



When the dust created by the recession has settled, it may not be an exaggeration to view multi-polar globalization and new information technology developments as the two defining trends of the era ahead. Powerful individually, each augments and enhances the other. Their interplay is setting the stage for substantial changes in how businesses see and interact with the world around them—in how they orchestrate their interactions with other entities rather than simply connecting with them.

Among business leaders worldwide, there is a palpable sense that significant change is afoot. Forty-one percent of executives believe new players from emerging markets to be one of the two developments that will have the most impact on business over the next five years, according to Accenture's survey; 35 percent pointed to new technology capabilities (see Figure 1).

The shift to a multi-polar world is accelerating

For some time now, businesses have found themselves operating in a world where economic power and possibility are increasingly diffused across geographic borders, especially to emerging markets—a process that Accenture terms the rise of the multi-polar world (see "The multi-polar world"). In the depths of the downturn, it was easy to wonder whether this shift to emerging markets had stalled. Levels of risk aversion rose sharply and investors and businesses withdrew capital, often to shore up core businesses at home. But the nascent recovery is now demonstrating the resilience of emerging markets. Developing economies have not only weathered the crisis better than developed economies, but they are also helping to power the global recovery:

- In 2009, for the first time, emerging markets accounted for half of the global economy;³

- Emerging markets are expected to generate the bulk of the growth in the world economy in 2010;⁴

- Emerging markets attract a larger share of foreign direct investment than developed markets, and drive an increasing share of outward investment flows;⁵ and

- The six largest emerging economies (the "B6")—Brazil, China, India, Mexico, Russia and South Korea—are on a path to grow by 5.1 percent in 2010.⁶

This rebalancing of economic activity features not only the B6; it is evident also in the next wave of emerging economies, among them Indonesia, Malaysia, Nigeria, Thailand and Turkey. Much of this growth results from emerging-market businesses that have continued their onward march amid global recession. Indeed, the number of emerging-market companies in the *Fortune* Global 500—a leading ranking of the world's largest companies—has more than quadrupled in less than 15 years, from 20 in 1995 to 91 in 2009.⁷

Figure 1: Trends in emerging markets and new information technologies are the most-cited developments impacting businesses over the next five years

In your view, which two of the following developments will have the most significant impact on your business over the next five years? (Select two)



Emerging-market companies have tended to fare well during the recession, partly owing to strong local growth but also to highly competitive cost structures and a long history of serving customers at low (or multiple) price points. For example, Indian conglomerate Godrej has created a new type of refrigerator priced between US\$65 and US\$75; using solid-state technology instead of a compressor, the unit is lightweight and can cool 30 liters of food.⁸ Similarly, China's Zhongxing Medical has transformed the domestic radiography market in the past decade by creating a technology that renders X-ray images in digital form, bypassing the traditional lengthy and expensive chemical process. By 2009, the company had a 50 percent share of the Chinese market—despite 40 percent price cuts by developed-market competitors.⁹

While the multi-polar world increases the scale of the business landscape and introduces new competitors, developments in IT are creating new connections and new possibilities for businesses to achieve high performance around the globe.

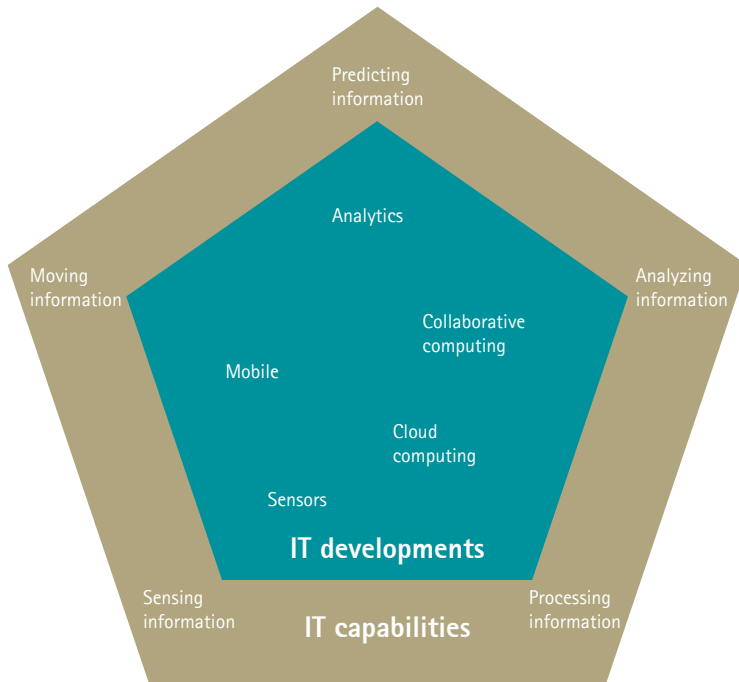
The continuing IT revolution

While the attention of policymakers and business leaders has been focused on the biggest economic upheaval of the past 50 years, the rapid march of information technologies has gone largely unnoticed. During this time, information technologies have reached new levels of maturation in terms of access, cost, openness, standards, reliability and usability. This is true both of IT hardware—including servers, PCs, smartphones and sensors—and of communication technologies, with mobile and broadband connectivity nearly ubiquitous in the developed world and increasingly common across much of the developing world.

Software has been the essential catalyst in this revolution. It has brought together hardware and connective infrastructure to apply technologies to real-world problems, needs and wants—both in business and social spheres. Businesses are now increasingly using a wide variety of newer technologies to meet their objectives. These range from pure hardware such as cloud-based servers or remote sensors, and communications technologies such as mobile and broadband, to complex software-driven technologies such as social computing and advanced analytics.

Yet IT can be only as relevant as the content it holds, transmits or serves up. This period of IT maturation coincides with increasing levels of digitization—the availability of content in electronic form. Not only are books, music and news all online, but increasingly so are taxes, medical records and bank deposits. And in the future, remote sensors will allow a raft of physical objects to interact with people—and each other.

Figure 2: New developments and capabilities in IT



The business impact of a selection of current technologies

So what will the transformation in the power of information technologies mean for business? Earlier phases of the IT revolution enabled us to move and process information, powered by computer processing cycles, dependable and sophisticated software, and networking capabilities. Recent developments are enabling IT to sense, analyze and even predict information, creating new capabilities in the generation and application of business insight (see Figure 2).

Cloud computing—This provides businesses with access to computing power, software and process management functions from a remote third-party provider, enabling them to pay “per use” and avoid the need to own significant infrastructure themselves. Types of cloud services include IT infrastructure (access to hardware and servers), platforms (development environments for applications), applications (accessed through Web browsers) and multi-

client process clouds. The emergence of cloud providers serving many different companies will promote greater standardization and industrialization of business processes, yielding significant scale efficiencies and allowing the optimization of IT functions across the entire cloud.

Collaborative (social) computing—This encompasses a wide variety of technology tools that allow real-time networking and collaboration among users, both at home and increasingly in the workplace. It facilitates the creation of online communities of interest that companies can tap into to source ideas, test products and services, and market new offerings.

Advances in mobile technologies—These technologies are now coming into their own, not just for personal communication, but also for remote telemetry. Mobile technologies allow businesses to reach customers at any time wherever they are, tailor services to the customer’s exact location and sell to previously unreachable markets.

Remote sensors—These create new ways to track goods across the supply chain and to obtain information about product usage. They are an important element in the development of “smart grids” that integrate households and power grids in ways that increase energy efficiency and reduce energy use.

Advanced analytics—This is the extensive use of data, statistical analysis, explanatory and predictive models, and fact-based management tools to drive decisions and actions.¹⁰ Businesses can harvest greater insight and competitive advantage from the mass of data accumulated in the course of producing and selling to customers or operating plants and equipment.

These developments in IT are not only changing the options available to businesses, but are also accelerating the move toward a multi-polar world.

IT-powered multi-polarity

IT continues to make the world feel smaller to organizations. As the availability, affordability and power of IT continue to increase, geographic distance becomes less relevant for today’s multinationals. Bangalore can be as convenient as Boston, Seoul as accessible as Seattle. Cost-effective and powerful IT makes it possible to closely monitor a manufacturing plant in Vietnam or to track components across a global supply chain. The Internet instantly links suppliers directly to billions of potential customers across the world. The growing global middle class, more and more reachable through the Internet and mobile phones, offers businesses the prospect of reaching millions of new consumers with greater discretionary spending power (see Figures 3, 4 and 5). Mobile technology, in particular, has been crucial in increasing access to markets, particularly among the world’s poorest. Mobile phones, for example, allow farmers to access live market prices for their produce, and they bring banking services to remote areas for the first time. A recent Accenture survey of consumers revealed that those in emerging markets are more than twice as

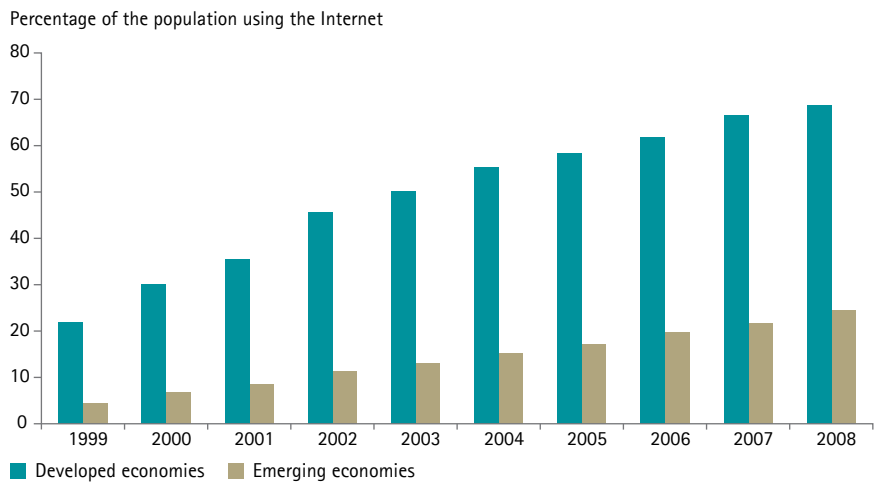
likely as those in developed markets to buy and use consumer IT—such as Web-enabled mobile phones, smartphones and netbooks—in 2010.¹¹ Advances in IT also allow companies to access the increasingly sophisticated workforces of the emerging world, meaning that ever-more-complex tasks can be carried out across virtual global networks.

The new capabilities of IT have the potential to benefit the competitiveness of emerging-market multinationals. Using IT, they can leapfrog to create cheaper, more flexible business processes without the concerns of legacy IT that confront their developed-market counterparts. It is no wonder that, between 2010 and 2013, IT spending is forecast to grow 5.8 percent per year in emerging markets compared with 3.6 percent in developed markets.¹²

IT and the multi-polar world have enlarged the business ecosystem

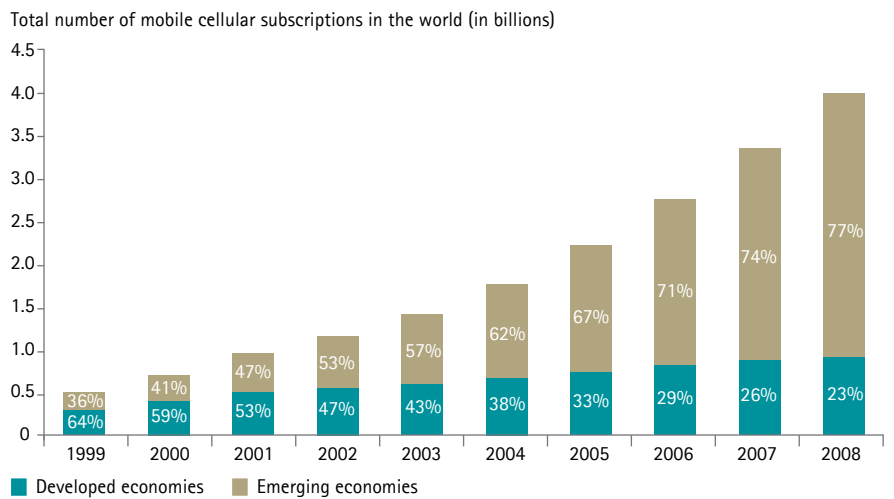
Taken together, the rise of the multi-polar world and the maturation of IT are changing the nature of competition and the nature of stakeholder interactions. The ecosystem in which businesses have traditionally operated has enlarged and become more complex: more competition, more stakeholders, more customers, spread across more geographic boundaries. As the following chapter explains, the two trends are also combining to generate new ways of creating value among stakeholders—with important consequences for businesses.

Figure 3: Growth in Internet connectivity



Source: International Telecommunications Union, 2009; Accenture analysis

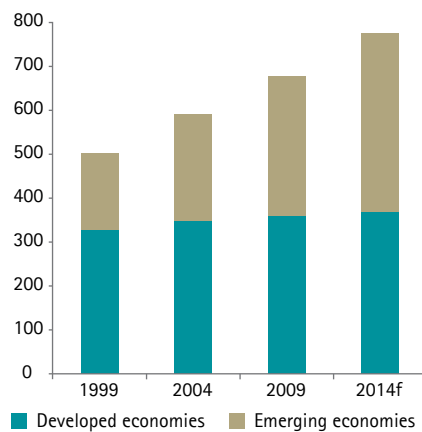
Figure 4: Growth in use of mobile telephones



Source: International Telecommunications Union, 2009

Figure 5: Growth of the middle class

Number of households (in millions) with annual incomes greater than US\$5,000 (at constant prices and at purchasing power parity)



Source: EIU

The new market-making forces



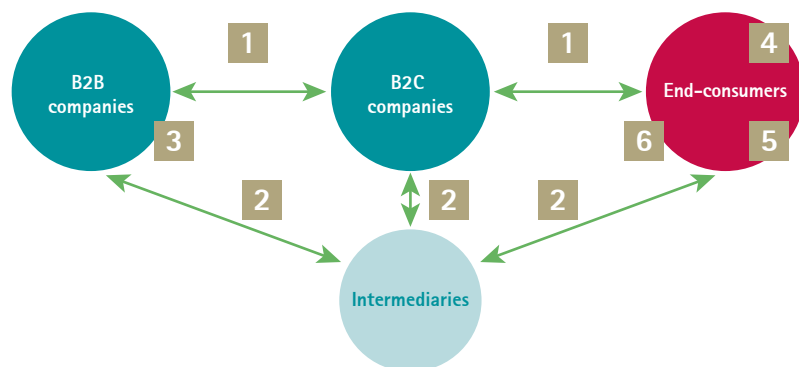
The business ecosystem is now populated by more stakeholders and competitors, complicating the terrain for companies around the world. However, a further reality is dawning: the nature of competition itself is changing. Accenture has identified how the intertwining of IT maturation and the rise of the multi-polar world are generating six forces that are creating new market potential (see Figure 6). These forces are leading to novel configurations of capital, talent and resources that open up more efficient forms of production; unlock new products and services; introduce new business models; and open more components of the value chain to collaborative execution.

Figure 6: A perspective of ecosystem disruption

6a. Traditional view of the business ecosystem



6b. New market-making forces are creating a more complex business ecosystem



- | | |
|--|--|
| <p>1 Co-production between firms and their customers and suppliers</p> <p>2 Using IT to create new bridges between producers and customers</p> <p>3 New forms of B2B commerce, including the emergence of specialist "horizontal" players</p> | <p>4 Consumer-to-consumer content sharing</p> <p>5 Peer-to-peer markets operating outside the traditional value chain</p> <p>6 Cooperative consumption by groups of end-consumers</p> |
|--|--|

Here is a review of the six new market-making forces:

Co-production

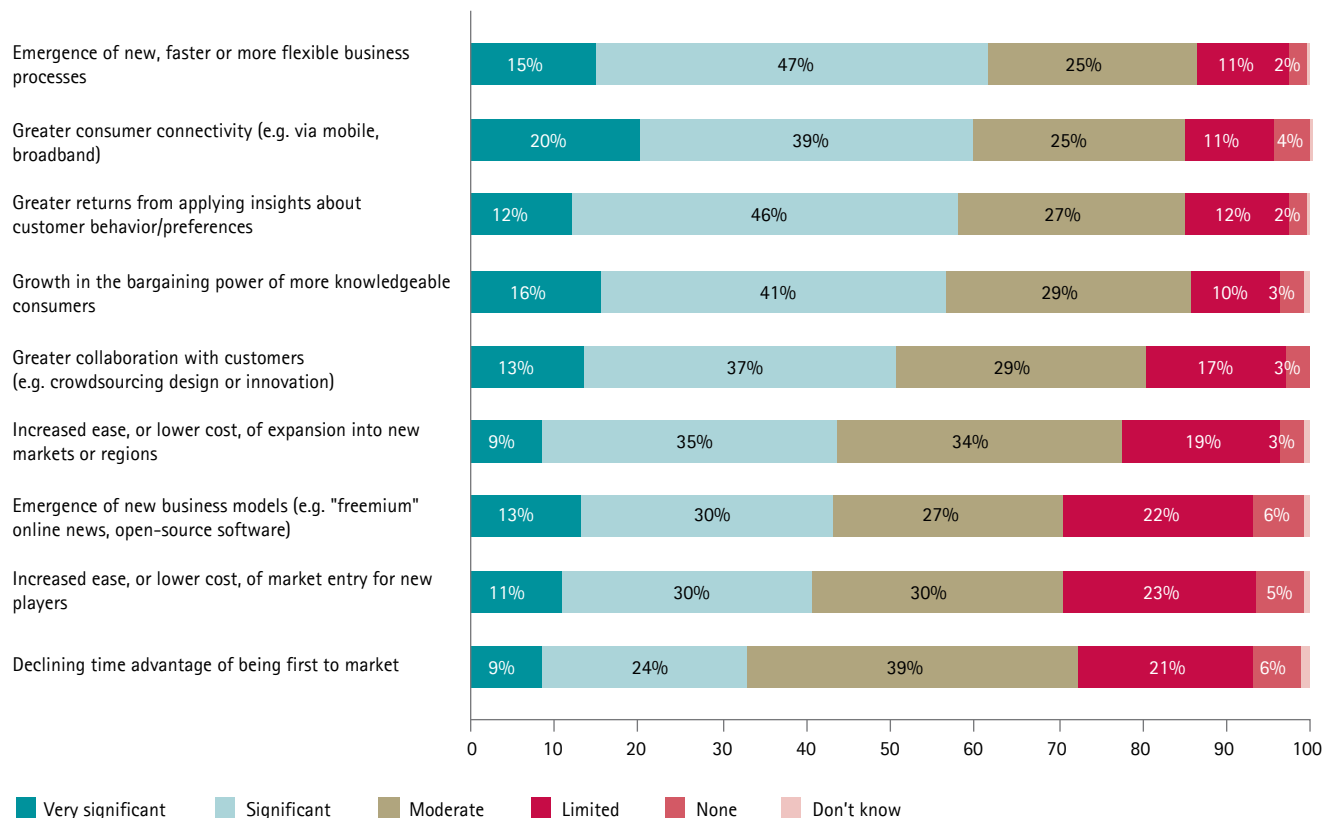
More and more companies are harnessing their customers' ideas, tastes and productive powers. Danish toy maker Lego has launched an online customization platform—its Design byME site—where enthusiasts assemble components for their own designs, which Lego then makes available to other customers.¹³ Dell launched its IdeaStorm site to tap into the ideas of the global community of Dell users; to date, the company has implemented hundreds of the 12,000-plus ideas suggested at the site.¹⁴ Companies can also use such communities as tools to reach out into the marketplace. Lancashire Tea generated publicity, as well as useful input, when it asked its fans on Facebook to help choose its new packaging designs.¹⁵ Estée Lauder invites bloggers to its perfume launches to help generate online buzz around new fragrances.¹⁶

Some new companies take this idea to its logical extreme and have built their business models entirely on harnessing the experience of external individuals. Marketocracy, an investment-management and research firm, manages mutual funds based on the top performers from more than 100,000 model portfolios run by amateur investors.¹⁷

There are strong indications that business leaders are starting to take customer co-production seriously. Half of the business leaders responding to Accenture's survey think that greater collaboration with customers (for example, crowdsourcing of design or innovation) will have a significant or very significant impact on competition in their industries over the next five years (see Figure 7).

Figure 7: Impact on competition of long-term IT-related trends

What impact will each of the following long-term IT-related trends have on competition in your industry over the next five years?



New bridges between producers and customers

Information technologies are being used to enlarge markets. Two examples: selling mobile phone banking services in rural areas of emerging markets, as Kuwait-based mobile telecommunications company Zain does in partnership with Citibank in East Africa, and providing higher education online to students across the world, a model that the University of Massachusetts uses to reach students in China.

Most senior executives grasp the potential for disruption—and sense the opportunity. Nearly sixty percent of respondents overall said that greater consumer connectivity would have a significant or very significant impact on competition in their industries over the next five years (see Figure 7). Interestingly, the response was more emphatic among executives at companies based primarily in emerging markets, with 68 percent of respondents in those markets, compared with 56 percent in developed markets, saying that greater consumer connectivity would significantly affect competition in their industries over the next five years.

Companies can also harness value by acting as intermediaries and offering services that facilitate the productive activities of others. InnoCentive was the first global Internet-based hub designed to help connect "seekers"—those with challenging research problems—with "solvers"—individuals who devise creative solutions to these problems. InnoCentive itself does not generate solutions; rather, it brings together individuals, companies, academic institutions and public-sector and non-profit organizations that collectively represent more than 200,000 of the world's brightest minds.¹⁸

Other examples include Apple's iPhone apps, which provide a new revenue stream for Apple and a creative and entrepreneurial outlet for others, and Amazon's "Marketplace," which offers small businesses the chance to reach large audiences while increasing the variety of products for sale on Amazon's site.

Information technologies also allow companies to serve a much wider variety of tastes and needs. The most well-known example is how e-commerce is helping businesses reach the "long tail" of niche markets.¹⁹ At Apple's iTunes Store, for instance, consumers can purchase more than 10 million songs across every genre of music. Similarly, retailers and individuals can find large international audiences for their often niche wares using eBay's marketplace.

New forms of business-to-business commerce

Historically, business-to-business (B2B) companies supplied raw materials, semi-finished and wholesale goods and services and, more recently, B2B grew to include outsourcing as companies realized the cost advantage of using specialists to undertake more of their non-core activities. Now, outsourcing is moving deeper into activities once considered core as technology changes the cost basis of those activities—and the ease and exactness with which companies can interact with their outsourcing providers.

New specialized services are becoming possible as cloud computing and related technologies enable the aggregation of small, individually uneconomic pockets of demand for business services in areas such as procurement, human resources and data analysis. Amazon, known for its online retail presence, now offers e-commerce and warehousing services. Li & Fung, previously a trading company, now provides sophisticated procurement solutions (for more detail, see "Case studies: Li & Fung").

These developments present particular opportunities for small companies, which can now take advantage of the benefits of scale previously enjoyed only by large businesses. Larger businesses are under further pressure as smaller rivals are increasingly able to source standardized business services from third-party cloud providers (such as Salesforce.com) with little upfront investment and without having to manage an IT legacy.

Consumer-to-consumer content

Information technology has helped overcome the asymmetry in knowledge that has traditionally given sellers the upper hand. In this new phase of consumer-to-consumer (C2C) activity, participants are sharing information in open, global online forums. Initially taking the form of reviews of products and services, this activity now increasingly encompasses the mobilization of communities to support, discuss or take action about a product, service or project.

For example, on TripAdvisor's website, individuals rate and talk about their experiences in hotels and restaurants around the world, shifting the balance of market power from the hospitality sector toward the traveler.²⁰ The *Now Smell This* blog brings together perfume enthusiasts to review scents and is an opinion former in the industry.²¹ This is creating a fundamental change in the way consumers choose what to buy as they rely increasingly on information written by peers online rather than on brand history, marketing or published specialists, for example in consumer reports.

At the same time, new IT efficiencies and price points are enabling consumers to share more ideas and information. Some of this is just for recreation or entertainment: tweets of news articles or YouTube videos are typical. Often, sharing takes the form of blogs, many of which provide insight into a particular topic. They range from the mainstream to the niche, such as *The London Review of Breakfasts*. These tools help individuals

keep their networks up to date with the latest trends in their areas of interest, and can provide companies with opportunities to tap into groups of interested customers. However, the speed of dissemination of information has a downside: bad news can spread very quickly, and there are real risks of companies facing serious brand issues from one bad review—which might even be written by a competitor.

PatientsLikeMe shows how the model of C2C dialogue has the potential to transform the health care and pharmaceutical industries. Patients with complicated medical problems share information with others with similar conditions at PatientsLikeMe's site, arming each other with the information needed to engage in informed dialogue with their doctors and creating samples to test new therapies in large self-organized standardized trials.²²

Individuals' ability and appetite to generate and distribute their outputs, often seemingly without a profit motive, is in turn rendering that output free at the point of consumption. Music, news, opinion, food recipes: in all these areas, content sharing threatens established business models, as demonstrated by the growth of unsigned bands sharing music on MySpace, the pressures faced by the newspaper industry, and the closure of *Gourmet* and other magazines.

Overall, C2C communities can heighten consumers' expectations of companies, potentially reducing their ability to create or control their market and investor messages and changing pricing models in a number of industries. Many business leaders are aware of the challenge: Accenture's survey reveals that 57 percent of executives think the growing bargaining power of knowledgeable consumers will significantly affect competition in their industries over the next five years (see Figure 7). Leaders of businesses based in emerging markets are especially concerned, with 67 percent expressing this view, compared with 52 percent from developed markets.

Peer-to-peer markets

IT has enabled the creation of models of international production based on cooperative interactions among individuals rather than traditional sources of experience and trust. Witness the ascendancy of Wikipedia, or the success of peer-to-peer lending, especially in providing credit to areas of the developing world where conventional banking services are scarce.

The new capabilities of IT and the rise of the multi-polar world give more power to groups of individual producers; in some cases, they remove the need for traditional intermediaries or guardians of trust. Groups of like-minded individuals can now easily "cluster" to reduce their reliance on established companies and have more choice over how goods and services are produced. These communities are not necessarily driven by pure profit motives; one example is the Linux operating system, which was created and is sustained by developers working for free using open-source software.²³

Increasingly, peer-to-peer networks provide services outside the boundaries of the established corporation. For example, in online groups such as TechArena Community, individuals seek and offer each other experience on how to operate and upgrade their computers.²⁴ Zopa.com, a marketplace where individuals lend money to other individuals, creates an alternative to banks for borrowers and a new form of investment for individual lenders.²⁵ Peer-to-peer production is likely to extend beyond the intangible world of ideas, money and information to communities that produce products. Access to low-cost production in emerging markets continues to broaden; producing physical goods at home will be increasingly possible with the arrival of affordable 3-D "printers".²⁶

Cooperative consumption

Social networking tools and other technology developments allow customers to increase their bargaining power further through "team buying," where a group comes together online to negotiate a discount on a product or service.

Historically, consumer cooperatives were organized to keep prices fair and reduce monopolistic behavior. As markets became broader-based and better regulated, there was less need for such models of consumption. Recently, thanks to IT, the trend has taken off again. Shanghai-based Liba.com, founded in 2003 and selling everything from paint to ceiling lamps, had 1.6 million members within five years, with 300,000 unique visitors a day on its site and some 30,000 transactions a month during group-buying events in Beijing, Shanghai, Guangzhou and elsewhere.²⁷

In North America, Groupon is a young US company performing the same function.²⁸ It brings together offers of discounts from local businesses and invites members to register their interest; if enough people register on a given day, the offer comes into effect. The advantages of this model are that it focuses customers' minds, lets them know exactly what they are getting, and then encourages interested individuals to advertise the deal to their networks. Earlier team-buying models were less effective because they relied on waiting for a critical mass of customers to express an interest in a product before negotiation on discounts could begin.

Opportunities and challenges in the changed ecosystem

While some of the new market-making forces may still be embryonic, each has substantive implications for businesses. Most dramatically, competitors or new entrants—sometimes not driven by a profit motive—can harness the new forces in ways that risk subverting existing business models, and potentially transforming whole industries. For example, insurance risk assessment could be upended by the combination

of location-based technologies, freely available neighborhood data and analytics software. In health care, social computing may create new options for drug trials—as well as a growing reliance by patients on the Internet for medical advice. Nor will government and regulation be immune from these forces (see “Implications for government”).

Executives expect new IT-driven business capabilities to have a major impact on competition in their industries over the next five years. For example, 62 percent of respondents to Accenture's survey thought the emergence of new, faster or more flexible business processes would have a significant impact on competition (see Figure 7). Nearly sixty percent of business leaders thought the same of greater consumer connectivity, and 58 percent pointed to the greater returns resulting from applying insights about customer preferences.

The changed ecosystem will create challenges, but also opportunities for achieving high performance. Among the challenges, companies will need to manage more complex networks of suppliers, business partners and customers; protect proprietary information and data; compete for technologically and analytically skilled employees; and respond to competition from new market entrants (the four challenges most cited by executives in our survey; see Figure 8).

On opportunities, the business leaders we surveyed saw potential to drive performance across many parts of the enterprise, from creating more efficient ways of global working, and collaborating internally and externally, to reaching new customer groups and entering new markets (the four opportunities most cited by executives in our survey; see Figure 9).

In short, companies have the opportunity to do things differently, harnessing the new market-making forces to drive high performance.

Figure 8: Businesses see management of complex networks as the most significant challenge raised by future developments in IT

For your company, which of these business challenges will be most heightened by the impact of IT developments over the next five years? (Select two)

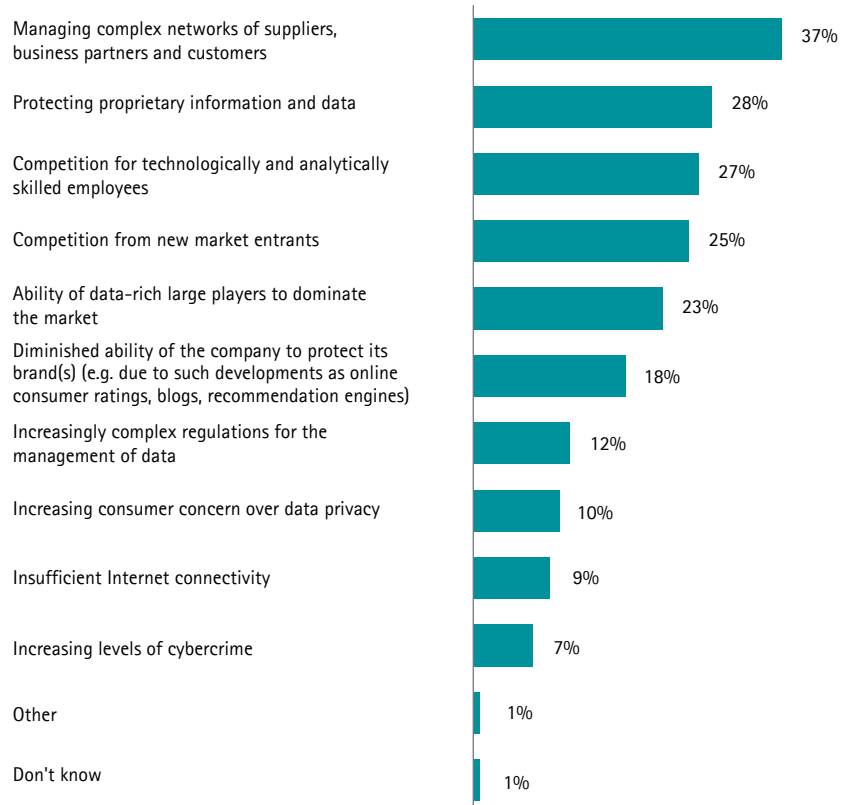
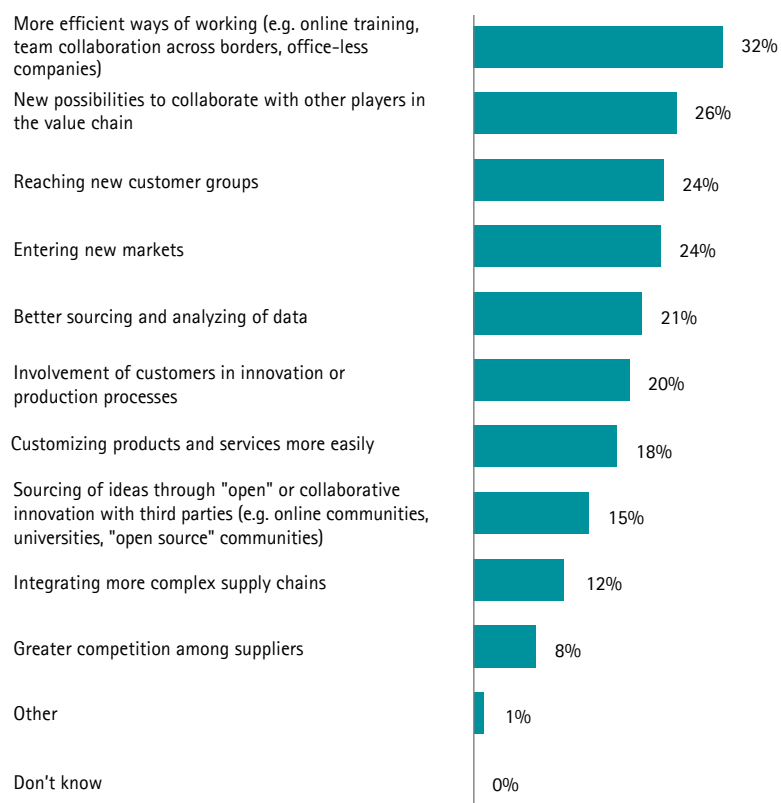


Figure 9: Business leaders see IT-related opportunities to improve company performance in multiple areas

Which of the following IT-related opportunities do you see as most relevant to improving your company's performance over the next five years? (Select two)



Mastering orchestration



New information technologies and the multi-polar world have combined to create turbulence in industry structures. Although business leaders see many opportunities and challenges ahead, few are well prepared: Accenture's research has found that only 11 percent of business executives believe that their companies are significantly advanced in their strategic response (see Figure 10).

The challenge for businesses seeking to achieve high performance is to move from a period of building global connections to one in which those connections are actively managed in new and different ways. In the changed ecosystem, a broader suite of technological and geographic options is available. Orchestrating those connections and relationships requires harnessing the six market-making forces in order to realize the potential for growth and value creation. Public-sector organizations have similar opportunities to deliver policy and services more efficiently and effectively (see "Implications for government").

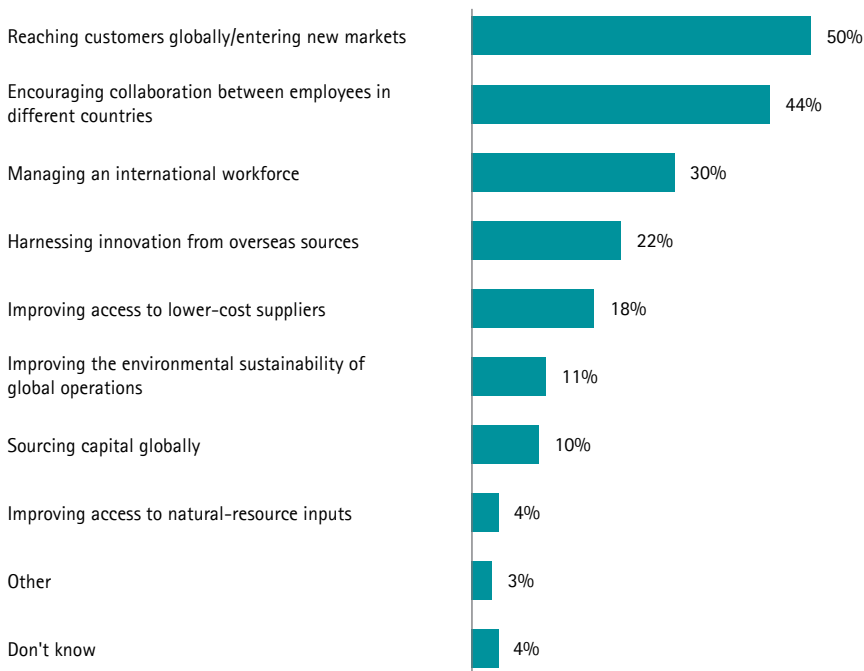
Figure 10: Few businesses are advanced in their responses to new, technology-enabled opportunities and challenges

To what extent do you feel your company is prepared to deal with the opportunities and challenges you identified?



Figure 11: IT is seen as critical in helping business orchestrate global operations

When it comes to managing a global business, to which of the following challenges will IT most help you to respond over the next five years? (Select two)



What are the opportunities for high performance?

Accenture's research has identified three principal ways in which organizations are realizing opportunities for achieving high performance in the changed ecosystem: optimization, extension and transformation.

Optimization: Achieving operational excellence in current business activities

For most businesses, achieving excellence in execution is a perennial priority. In times of recession, it is a key differentiator.²⁹ Optimization affords businesses the potential to continue doing what they do, just better—with lower costs and increased revenues. IT's role in enabling this is not in question, but cloud computing, mobile computing and other technologies, separately and in combination, can push that contribution to another level. They afford new players a range of opportunities, including enhancing

the quality of products and services (for example, by acting upon customer feedback on blogs), deepening existing revenue streams (using social networks), improving collaboration between employees (through more efficient communication tools) and reducing overhead costs (using cloud computing). Moreover, the maturation and near-ubiquity of information technologies means that most businesses can very easily harness them.

Eli Lilly and Company, for example, is using cloud computing to optimize its business. With pressure growing to cut fixed IT costs without compromising IT service levels during the recession, the pharmaceuticals company began working with an application cloud provider to grant computing capabilities to its global network of scientists. As a result, its scientists can conduct more effective and efficient molecular modeling or risk-analysis calculations across countries and regions.³⁰ Lilly can now have new computer servers up and running in three minutes;

previously, it would have taken seven and a half weeks to deploy them internally.³¹ (For more detail on Lilly's strategy, see "Case studies: Eli Lilly and Company.") In realizing these benefits, Lilly's experience reflects the results of our business leader survey: 44 percent of respondents saw IT as helping them most with encouraging collaboration between employees; 30 percent, managing an international workforce (see Figure 11).

In order to reach customers globally—the most common challenge identified by business leaders (see Figure 11)—computer giant Dell began using Twitter. Users can sign up to follow Dell, receiving messages about discounted products as well as links to purchase products or to forward the information on to others. Because of its choice to open up to consumers on Twitter, Dell saw US\$3 million in additional sales in 2007 and 2008. In 2009, the cumulative sales figure rose to US\$6.5 million, as the number of users following Dell on Twitter climbed to 1.5 million. Dell has seen some of the strongest growth in Twitter-related sales come from emerging markets, where broadband penetration is rising and adoption of social media is strong among consumers. Dell's Brazil operation, for example, has generated US\$800,000 in just eight months of activity through its local Twitter account.³²

Extension: Developing current business in new areas

Companies can also harness IT to extend their business models into adjacent industries or markets. Google offers a good example. The company earns the bulk of its revenues from Internet advertising, which made up 97 percent of its 2008 revenues of US\$22 billion.³³ But now, to tap into a new market of Web users, the company has developed Google Wave, a social computing platform that will allow users to collaborate and communicate using richly formatted text, photos, videos, maps and more.³⁴ Although free at the point of consumption, this product extends the company's business model by getting more people to navigate its Web pages. Similarly, Google's free mobile-phone navigation service,

which streams live traffic updates to handsets running on its Android operating system, is also envisaged as a future ad-supported service.³⁵

ICICI Bank in India has used technology to extend its business into adjacent geographic and IT-enabled markets—markets that were previously unreachable. In 2001, the company launched its Non Resident Indian (NRI) banking service, which uses Web-based and wireless platforms to provide the Indian diaspora community with e-banking services. Money transfers are its core offering to NRIs, but the product range has evolved to include savings and deposit products, structured investment options, mortgages, insurance and equity-linked products. ICICI has also introduced a number of product variations which appeal to different market segments. For example, its "NRI Edge" is targeted at affluent NRIs seeking a range of priority services and exclusive privileges, while a card-based remittance account allows its customers to draw down NRI money transfers at ATMs in India.³⁶ With the NRI service serving its clients as far apart as Canada and the Middle East, ICICI has extended its business model into entirely new geographic—and virtual—territory (for more on ICICI's strategy, see "Case studies: ICICI Bank").

Transformation: Growing new business in new areas

IT can help develop entirely new business models that serve markets that had previously been unreachable—or even unimagined. It can also help reshape industry dynamics by setting new standards that others have to follow.

Safaricom, a mobile network operator in Kenya, is using IT to develop a new business model and tap into a new market. The company's M-PESA service, launched in 2007, offers customers a way to transfer money anywhere in the country or to make payments—for instance, school fees and taxi fares.³⁷ Essentially, Safaricom has transformed its business model by serving an entirely new market in Kenya: mobile banking. In 2008, the increase in demand for M-PESA contributed to a 94 percent rise in

revenues from Safaricom's data-services business segment (which includes M-PESA, text messaging and Internet services). Data services accounted for 18 percent of Safaricom's total revenues in 2008—an increase of more than 50 percent from 2007—and are likely to contribute an even higher proportion in the future.³⁸

Smaller companies are also using IT to disrupt industry dynamics, developing business models that could become the industry standards. For example, prior to Zipcar's arrival, the choices for those who needed a vehicle were to buy, lease or rent. But Zipcar has established a new model: an IT-enabled car-sharing service. Zipcar provides on-demand access to vehicles using high-speed Internet, mobile broadband and GPS technology. Users register online to reserve vehicles, and with the use of a "Zipcard," they can access, unlock and lock, and return their vehicles.³⁹ Alternatively, customers can use a mobile app to find, reserve, access—or even sound the horn of—a Zipcar vehicle. Customers can purchase services in increments of as little as an hour.⁴⁰ Since the US-based company was founded in 2000, it has opened offices in Canada and the United Kingdom. While it is still relatively small, Zipcar has 80 percent of the car-sharing market, has grown its user base to 270,000 and expects to have 2 million users by 2014.⁴¹ By using technology to work globally, this company is transforming industries: in 2009, car-rental company Hertz launched its own car-sharing service in Europe and North America.⁴²

The instruments of orchestration

How can businesses set about realizing the opportunities presented by the changed ecosystem? What are the capabilities they can develop to position themselves for effective global orchestration and high performance? Accenture's research has identified two broad hallmarks of success that will be increasingly important to underpinning a company's competitive performance: first, relentlessly gathering, analyzing and using data; and second, developing a broader network of relationships with stakeholders.

They continuously seek greater insight

To better understand their global communities of consumers and stay ahead of the competition, companies can use analytics technologies to drive decisions and actions. Good data analysis can help businesses understand and manage their performance.

Collect the right data—with the right infrastructure

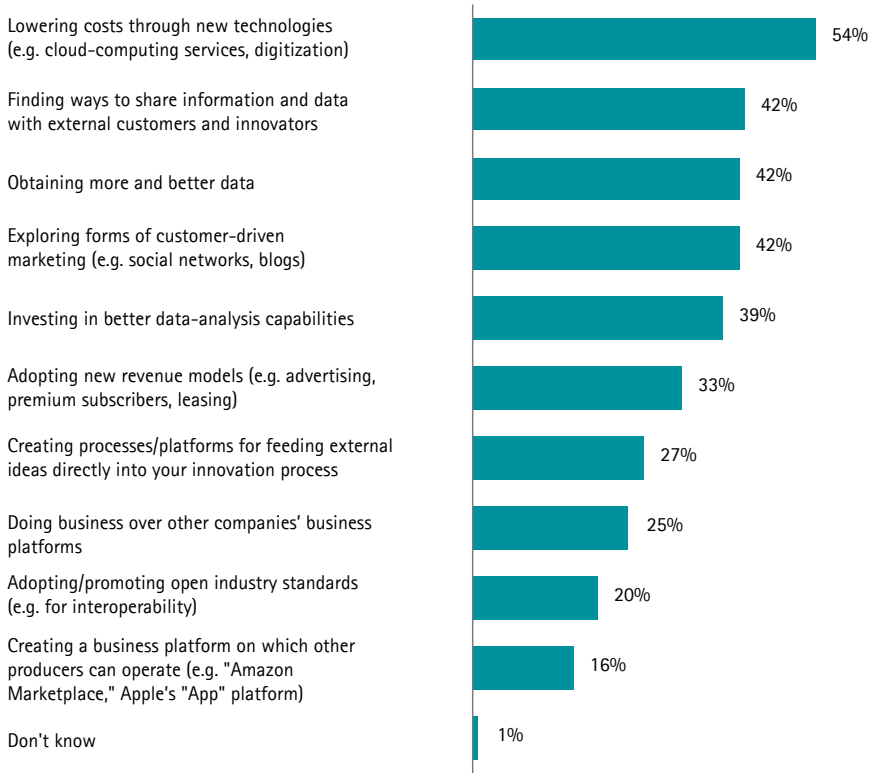
Forty-two percent of company executives told Accenture that obtaining more and better data will be a strategic priority for their organizations over the next five years (see Figure 12). A key to achieving this is to establish the right analytical infrastructure. Many companies, such as online DVD rental service Netflix, have incorporated business intelligence technologies from the outset.⁴³ Netflix uses recommendation algorithms to predict the movies its customers will be interested in seeing. Consumers' movie recommendations are a key to understanding their preferences—and ultimately a pointer to the number of films they will purchase. Netflix regularly upgrades its technology infrastructure through open-source channels.⁴⁴ A recent improvement to its algorithm came from a dispersed team of global researchers based in Austria, Canada, Israel and the United States.⁴⁵

Create insight from the data

Simply collecting data is not enough. Deriving actionable insight from the data is the critical next step. Indeed, Accenture's research shows that it is becoming more important to develop better data-analysis capabilities. Thirty-nine percent of the business leaders we surveyed expect that investing in better data-analysis capabilities will form a part of their strategies for responding to the emerging challenges—such as greater competition from data-rich companies—over the next five years (see Figure 12).

Figure 12: Businesses are showing a broad range of responses to IT opportunities and challenges

Which of the following are likely to form part of your strategic response to the identified opportunities and challenges over the next five years? (Select all that apply)



An example: India-based YES Bank is using analytics to better understand its customers. The company previously managed customer relations with static, manually updated databases. As a result, tracking sales leads was challenging; cross-selling opportunities were being overlooked; and turnaround time on customer complaints was substandard. The bank then implemented a collaborative customer relationship management tool, which captures customer queries and grievances, storing them in a centralized system. In order to generate insight from this data, employees can now make blog-like entries on customers—including ideas and suggestions for potential sales. The sales and product teams then analyze all of this information and propose new offerings, such as customizing existing products or offering entirely new ones. YES Bank has reported significant benefits as a result. Turnaround time for processes is down by 70 percent, and the overall customer service experience—the processing of sales leads and service requests—has improved by 60 percent.⁴⁶

Overall, Accenture's research shows that customer service is becoming a target area for generating data-driven insight: Asked which business practice areas would be most affected by IT over the next five years, 42 percent of business leaders cited customer services first or second.

Put the insights to work

Having collected data and created insight, the essential next step is to convert that knowledge into tangible business impact. Doing so, however, requires a strong commitment to act on feedback and a culture that rewards this passion. Business leaders will need to regularly communicate the importance of alertness as well as gear talent-development programs accordingly.

Companies with a wealth of data can use it to make their products and services much more attractive to consumers. Businesses with rich seams of accumulated data on customer preferences, such as large retailers, can drive greater returns by applying (or reselling) insights about customer behavior and preferences,

bringing new levels of customization to marketing, sales and manufacturing efforts. Tommy Hilfiger shares its data with Art Technology Group, which uses algorithms to mimic the in-person feedback loop in a physical store. The result is an online retail experience that changes with the time of the week: customers get quickly to the online checkout on Monday mornings, just as they would at the store, but they experience a more relaxed approach on Saturday afternoons, with more detours and extra sales pitches.⁴⁷

Another company putting insights to work is Wal-Mart, the global retailer, which operates one of the world's most sophisticated supply chain analytics systems. The company aggregates sales and inventory data into a single technology platform, which store managers use to optimize product ranges, tailoring assortments to local community preferences.⁴⁸ By mining US customer data, the company has learned that certain food products (for example, Spam and Pop-Tarts) are more popular during hurricane season because consumers stock up on non-perishable goods in preparation for bad weather.⁴⁹ In addition, Wal-Mart has issued a mandate to its top 100 suppliers to tag merchandise with RFID technology. All of this has led to significant efficiency gains for the company: its leaders estimate that the data collected have cut the incidence of out-of-stock products by 30 percent and improved the efficiency of moving products in-store by 60 percent.⁵⁰ By building the ability to generate insight into its business practices, Wal-Mart is better able to orchestrate its operations globally—knowing precisely when, where and why certain products must be supplied in its stores.

They develop wide and deep networks

While creating and using insight can help companies drive performance, a willingness to open the doors to new participants will also determine a business's ability to identify and attract value. More and more companies are drawing strength from beyond their walls through new interactions with others in their networks, allowing them, paradoxically, to focus on their

competitive essence. In our survey, 42 percent of business executives said that finding ways to share information and data with external customers and innovators will form part of their strategies for responding to emerging IT-enabled opportunities and challenges (see Figure 12). Doing so will not be straightforward for some organizations, because it requires a culture of openness that may be at odds with traditional notions of competitiveness. However, businesses that are ready and willing to take steps such as these will be well-placed to marshal a global network of players to their advantage.

Connect to consumers

Companies are already engaging in dialogue with consumers across the world using technologies such as social computing and advanced analytics. For example, MyStarbucksIdea.com, a social network and comment box launched in 2008 by Starbucks, allows consumers from as far apart as Ghana, Mexico and South Korea to share ideas about how the company can improve its performance—for example, what new products and services the company should launch, or what music its customers prefer to listen to in its coffee shops.⁵¹ Starbucks allows users to examine others' ideas, discuss them openly and cast votes on the ones they like most.⁵² The company then analyzes customer feedback to identify the most popular ideas. It considers a range of factors, such as the number and timing of votes cast or the volume of comments that a single idea has generated. Starbucks has assigned a team of specialists to monitor the network and bring the best ideas into the product or service development pipeline.⁵³ By March 2009—MyStarbucksIdea.com's first anniversary—the social computing platform had generated roughly 70,000 ideas.⁵⁴

Open up to entrepreneurs and other businesses

Some companies are exchanging ideas and knowledge capital with individual entrepreneurs and other businesses—and, in some cases, engaging with competitors. Apple is already very active in this way. The company invites third-party developers—individuals or

other businesses—to design and sell apps and software for its iPhone and iPod Touch devices. In fact, according to Apple, its future performance "depends on support from third-party software developers."⁵⁵ While the likes of Apple and Facebook may be best-known for opening up to other businesses in the app development space, others are catching on fast. For example, China Mobile recently opened its own online software and app store, Mobile Market, before launching its "Ophone" platform—the world's first mobile operating system developed by a telecommunications provider.⁵⁶ With the scale that China Mobile has—it is the world's largest mobile phone operator by number of subscribers—app services are likely to feature prominently in the company's future competitiveness.

The multi-polar world and information technologies are widening the boundaries of innovation—allowing firms to source ideas from anywhere in the world. For example, Procter & Gamble (P&G) operates an online portal to facilitate an exchange of technology, trademarks, packaging, marketing models, engineering and business services with external parties. It has also helped launch three separate entities that have digitized—and globalized—the innovation process. One of these, NineSigma, connects businesses that have science and technology problems to companies, universities, governments and private labs to develop innovative solutions. With offices in North America, Europe and Asia, NineSigma has access to solution providers in more than 135 countries and gives solution providers the chance to work with its Global 1000 network of clients "to help enhance their innovation capacity."⁵⁷ Not only does this create opportunities for P&G to source ideas globally, but it gives others the chance to drive business performance in a world where talent is dispersed geographically. (For more on P&G's strategy, see "Case studies: Procter & Gamble.")

Farm out more functions

Today, we are witnessing the next stage of the outsourcing movement. Information technology is enabling businesses to divest even more of the activities that have traditionally been performed in-house. Businesses are now providing standardized B2B services across multiple industry sectors, effectively becoming "horizontal players" (for an example, see "Case studies: Li & Fung").

Cloud computing is becoming a major catalyst for this trend. Fifty-four percent of those responding to Accenture's survey indicated that they would adopt new technologies, such as cloud computing, to lower costs over the next five years (see Figure 12). The cloud can provide IT resources on tap, enabling companies to shed many more facets of their data management and other activities. Companies such as China Mobile—which became China's first company to engage in cloud computing with the launch of its BigCloud in 2009—will provide other businesses with various cloud services, including infrastructure and platform clouds.⁵⁸

Nasdaq, the securities trading market that lists nearly 4,000 companies, uses cloud infrastructure (access to hardware and servers) for data warehousing, providing instant data access, with the added benefit that Nasdaq pays for no more than it consumes. The costs to Nasdaq of building the data warehousing capacity in-house would have been prohibitive. By farming out these IT capabilities, Nasdaq has converted its data storage activities from fixed to variable costs.⁵⁹

New technologies are also allowing companies to outsource more business functions to horizontal B2B service providers. Convergys Corporation works across industry sectors to help companies and governments improve the value they derive from relationships with their customers and employees. T-Mobile USA used Convergys's advanced speech self-service solutions, and Honeywell hired Convergys to implement strategies to improve employee retention.⁶⁰

Implications for government



Citizen demands on governments are intensifying. Greater personalization of services is becoming the norm, creating the need for significant investment to tailor transactional channels to the needs of the citizen. Furthermore, global challenges such as climate change and international terrorism continue to preoccupy policymakers, requiring coordinated responses on a scale that demands high levels of collaboration and investment. The fallout of the economic downturn has presented governments with additional challenges. With public borrowing reaching record levels, an age of fiscal austerity faces many economies as they attempt to rebalance the books. While the demands being placed on them are increasing, governments are now less equipped to meet those demands using traditional, publicly funded mechanisms.

Potential opportunities

The rise of the multi-polar world, the maturation of IT and the new market-making forces that they unleash may help governments find new solutions to these persistent problems. We may be only on the cusp of understanding fully the promise the changed ecosystem holds—but we can envisage a future in which new technologies change the way governments operate, both in terms of delivery of public services and achieving broader policy objectives.

Delivering public value

At a time when governments have to meet increased demand with reduced resources, the intersection of new technologies and the multi-polar world provides new ways of delivering services to improve the social and economic conditions of citizens. There are two principal ways in which these opportunities could be manifested.

Co-production

It has long been understood that families and communities constitute a second economy that parallels the formal economy. The scale of the resources that individuals contribute in this way is enormous, but this informal economic value is generally untapped, unmeasured and unrecognized by public authorities. However, by using new technologies such as social computing, governments can enroll, educate and engage citizens as co-producers of public value in ways that were previously unimaginable. This can take many forms: citizens providing real-time feedback on services, with government agencies using the feedback to improve delivery; citizens using networking technologies to get together to improve social and economic conditions through local community action; or governments using new information channels to educate citizens and empower them to take individual actions to improve their circumstances.

For example, the District of Columbia has developed a digital public square that enables citizens to access government and public policy information and engage with government and each other through social networking and other technologies to develop and influence responses to policy issues.⁶¹ Very often, locally led activities are already taking place—such as continuous or occasional home-care for an elderly person. But by harnessing and coordinating activity through the use of IT, not only can the impact of such services be improved, but governments can also recognize more clearly these services' contribution to the formal economy. The key for governments is to regard citizens not just as recipients of services but as cooperators in the production of public value. By doing so, government agencies and the community at large can draw from a much larger reservoir of motivated talent.

Cross-sector working

As public spending is reduced, greater responsibility will fall to the third sector (such as charities and voluntary groups) and to businesses to provide services that traditionally have been provided by governments. In Australia, the "Communities for Children" initiative is delivered by community groups and voluntary organizations to improve education outcomes for children younger than 5. Appropriate governance structures have been put in place that balance the need for accountability to central government with the flexibility to respond to local conditions and circumstances.⁶² In the future, cross-sector working will become even more important, as collaborative technologies increasingly offer a low-cost, efficient means of coordinating action.

Delivering policy solutions

IT could also provide governments with alternative tools and approaches to deliver orchestrated solutions to local, regional, national and international policy challenges. For example, new technologies are likely to become one of the key elements in combating climate change. The potential afforded by smart-grid technologies in developing the smart cities of the future is already being witnessed in places such as Boulder, Colorado,

which aims to become the world's first smart-grid city.⁶³ More of the progress in moving to a low-carbon society is occurring at the urban level. By using virtual platforms to create networks and share best practices at the city level, new technologies offer governments the potential to capitalize on this trend. Similarly, they offer the potential for intergovernmental cooperation on issues such as border management and security, where proactive collaboration between the agencies of different countries is essential to the effective management of a complex global issue.⁶⁴

Potential challenges

Many of the policy challenges with which governments will have to grapple stem from the inherent tension between new technologies that transcend national borders and governments that are accustomed to operating within those borders. Three of the most pressing policy areas are privacy and data protection, consumer regulation and market structure.

Privacy and data protection policy

With new technologies so easily able to move and store data virtually, there are myriad questions about the control that citizens have over their personal information. Societal concerns about the safety and security of data could be heightened as governments seek to exploit operational efficiencies. Furthermore, differences between national standards governing the use and sharing of information are likely to mean that governments will have to find new ways to accommodate both privacy and national security concerns.

Consumer regulation

Consumers' ability to collaborate and exert greater pressure on businesses will present challenges to traditional thinking on consumer policy. Consumers and consumer groups can now form and act in highly effective ways—often transcending national boundaries. This raises questions about whether legislators need to reassess elements of existing consumer regulation, designed originally to correct perceived imbalances in bargaining power between purchasers and producers.

Market structures

New technologies offer the potential to reduce barriers to entry by lowering sunk costs for businesses. At the same time, there is a possibility that market influence will be perceived to have tilted toward the enterprises that own or control the most information. The challenge for policymakers will be finding a balance between the more permissive environment facilitated by globalization and IT and the need to ensure a level playing field for incumbents and new entrants alike.

We are only just beginning to understand the potential afforded by the two trends of IT maturation and the rise of the multi-polar world. But already it appears that they could present governments with tools and mechanisms to help overcome a number of challenges in today's global economy. While they may also present some far-reaching questions about future policy and the role of government itself, understanding their potential is the first step toward harnessing them.

This section was prepared in conjunction with the Accenture Institute for Health & Public Service Value.

Last word

The economic landscape that lies ahead will seem foreign and forbidding to many business leaders. Those who cling to old notions of competition, who think in terms of linear value chains and who live by yesterday's definitions of customers will find the landscape alien indeed. Accenture's newest multi-polar world study confirms that only a minority of executives are confident that their companies are crafting effective strategic responses to the new environment.

But that is not the whole story. There are many positive signs that the majority see tremendous upside amid the changes wrought by technology's accelerating impact and by the surge of emerging markets. Accenture's research shows that even though some corporate chiefs may still lack the strategic responses to the upheaval, more of them are alert to the threats, eager to act to counter those threats and keen to launch their own forays into the new environment.

There is no doubt that the next five years will be turbulent, characterized by high levels of uncertainty and plenty of experimentation. Businesses, individuals and governments will rush to harness the opportunities of this new era while attempting to mitigate the risks. Many companies will make false starts; some will fail to keep pace with the speed of evolution in their surroundings. But others will thrive, seeking and finding new market spaces of their own. Just as primary colors swirl together to make new hues, so those organizations will blend their proven operating models and competencies with the new market-making forces to create new, robust economic entities. They will have moved beyond their old identities as well-connected global players. They will have continued to journey toward high performance and become masters of global orchestration.

Case studies



ICICI Bank: A leader in the adoption of technology

ICICI Bank is a fast-growing financial services firm that provides a range of banking products and services to corporate and retail customers through a variety of delivery channels. It has quickly grown to become India's second-largest bank measured by total assets. ICICI is active in segments including retail banking, wholesale banking, insurance, investment banking and fund management. It has operations in 18 countries, including China, Russia, South Africa and Qatar.⁶⁵

During the 1990s, ICICI's leadership identified one main opportunity and one main challenge facing the company. First, there was a burgeoning opportunity to tap into the growth of the middle-class Indian consumer base—a market then underserved by foreign and domestic banks. Second, there was a need to compete with the cost structures of subsidized state-controlled Indian banks.⁶⁶

ICICI's response was to construct an IT infrastructure that would deliver both scale and cost reduction. In fact, the company has emerged as a leader in the adoption of technology in the banking sector.⁶⁷ Evidence of this is the company's IT "culture": rather than have its technology strategy conducted by an IT department, ICICI's different business groups now underwrite and monitor all IT implementations—an approach that was forcefully championed under former CEO K.V. Kamath.⁶⁸

ICICI is now using IT to optimize operations and extend into new markets. For example, the company has deployed a variety of innovative ATM services, and its expanding ATM network is one of the largest and most widespread in India.⁶⁹ Efforts such as these have enabled the bank to quickly grow its consumer base—from fewer than 1 million customers in 2000 to 25 million in 2009.⁷⁰ ICICI has also moved into a different market—that of international remittances—by exploiting the worldwide growth

of broadband access. At the heart of ICICI's ability to orchestrate its global operations is the creation of new bridges to customers—together with its willingness to open up to other businesses.

Using mobile technology to expand service offerings

ICICI was the first Indian business to use the Wireless Application Protocol, just months after the technology's 2000 debut.⁷¹ In 2004, it partnered with Indian telecommunications company Reliance Infocomm (now Reliance Communications) to start an interactive mobile banking service in India.⁷² In 2008, ICICI launched iMobile—an Internet application that customers can download to their mobile phones to enable them to access bank or credit-card accounts. Customers can also use their phones to pay bills or transfer funds to ICICI and non-ICICI bank accounts—all free of charge by ICICI.⁷³ More than a million subscribers signed up to iMobile within six months of its launch.⁷⁴

Using broadband to reach more customers

In 2000, ICICI was the first Indian bank to offer online banking services.⁷⁵ By digitizing the banking experience, the company has been able to develop successful new revenue streams, such as its Non Resident Indian (NRI) banking service. Using a Web-based and wireless platform, ICICI provides the Indian diaspora community with a suite of services: savings and deposit products, structured investment options, online remittances, mortgages, insurance, and equity-linked products.⁷⁶ The service has become a "one-stop shop" for NRIs as far afield as Canada and the Middle East. In 2004, ICICI partnered with US bank Wells Fargo to launch a remittance service that allows customers in the United States to send up to US\$3,000 a day from US to Indian bank accounts for US\$8 per transaction.⁷⁷

Deploying Web-based platforms and analytics to lower costs for consumers

ICICI-Prudential, an insurance arm partly owned by ICICI Bank, is using the Web to help reduce insurance premiums for its customers who suffer from diabetes. The insurer collects data on those customers' behaviors and lifestyles using an online monitoring system, working with pharmaceuticals companies, fitness clubs, and diagnostic and testing companies. Patients have full access to their data and can easily track their health online. ICICI-Prudential is better able to gauge each customer's risks and tailor pricing to specific circumstances. Diabetes patients who practice healthy lifestyles and use medications in the prescribed way are offered lower premiums—if the data from the patients' health reviews confirm their behavior.⁷⁸

Partnering with business process management vendors to improve data management

ICICI allocates an unusually large proportion of its IT budget to new applications. In a typical large US bank, discretionary IT spending is considered high if it accounts for 25 percent of total IT spending. At ICICI, the figure is nearly 80 percent.⁷⁹ One example: in 2005, in order to make its IT infrastructure more efficient and cost-effective, ICICI replaced its array of disparate technology systems with a single, enterprise-wide online platform. Among many benefits, the new platform enables ICICI to provide information access to all employees; it can scale upward and outward to address multiple queries simultaneously and can address security concerns through a single point of control.⁸⁰

Procter & Gamble: Opening its innovation model

Procter & Gamble (P&G) is famous for such consumer brands as Crest, Pampers and Tide.⁸¹ Its products are used in homes 3 billion times a day, and every house in the world is said to have at least one of its products.⁸² After acquiring The Gillette Company in 2005, P&G became the world's largest consumer goods company. In 2008—despite the global recession—it had profits of US\$12 billion, making it the world's 22nd most profitable company and ninth most profitable in the United States.⁸³

In 2000, after decades of solid performance, P&G missed its financial forecasts for two quarters in a row and its stock price fell by more than half.⁸⁴ What's more, research and development (R&D) productivity had started to stagnate: research costs were climbing, sales were flat and the percentage of new products meeting financial targets had stalled at 35 percent.⁸⁵

P&G realized it could not sustain its new-product pipeline with the development processes it had in place. Its response was to collaborate with external innovators across the world to change the way it came up with new products. By doing so, P&G was able to slash R&D costs, increase sales and enhance its innovation success rate—the percentage of new products that meet financial objectives.⁸⁶ In this way, P&G has successfully orchestrated the co-production capabilities of other companies and individuals.

In less than a decade, P&G has significantly improved its performance, with nearly all organic sales growth coming from new brands and new or improved product innovation.⁸⁷ Over the past 14 years, the company has had 114 top-25 best-selling new products in the US consumer goods industry—more than its six largest competitors combined. In the last year alone, P&G had five of the top 10 new product launches in the United States

and 10 of the top 25. The company hopes to maintain its lead by investing, on average, twice as much in its innovation capability and pipeline as its big rivals do.⁸⁸

Using online hubs to source ideas from around the world

To open up the innovation process globally, P&G launched the "Connect & Develop" program—an online portal set up to exchange intellectual property with third parties. Before Connect & Develop, P&G housed 7,500 researchers in its global R&D facilities. It can still tap into the inventiveness of this internal researcher pool, but it can now also reach an additional 1.5 million externally, in any part of the world.⁸⁹ Collaboration efforts such as Connect & Develop have had positive results. Today, more than half of all of P&G's new products include at least one major component from an external partner.⁹⁰ The company now works with a diverse group of collaborators worldwide:

Entrepreneurs

P&G welcomes the experience of independent entrepreneurs and small businesses, previously considered too small to form alliances with large companies.⁹¹ One of the ways the company taps this talent is through online crowdsourcing R&D networks. P&G was one of the first companies to work with InnoCentive and has helped found other global crowdsourcing networks such as NineSigma, YourEncore and Yet2.⁹² P&G also launched its Open Innovation Challenge to identify innovative ideas in health care beyond its own labs. The initiative attracted 170 expressions of interest, with 72 ideas submitted by 25 small companies. Eight of those ideas were selected for R&D funding and business support.⁹³

Suppliers

Collectively, P&G's top 15 suppliers have 50,000 people in their R&D groups—a significant source of innovation. P&G has created an online supplier network to facilitate a private exchange of technology briefings, knowledge and ideas across the world. Today, the company works jointly on product development in suppliers' labs, and vice versa.⁹⁴

General public

Individual consumers can submit their ideas via the Connect & Develop site. In 2008, P&G received more than 4,000 submissions, and some are now being funded for development and collaboration within P&G businesses.⁹⁵ To widen the site's reach to consumers, it is now available in Chinese and Japanese and it will soon be offered in Spanish and Portuguese.⁹⁶

Bringing big ideas into the organization

P&G's external collaboration has translated outside ideas into successful product launches. For example, while pursuing the development of an anti-wrinkle cream for the next generation of its Olay products, P&G came across a new peptide technology developed by a small French cosmetics company.⁹⁷ This technology went on to become a key component of Olay Regenerist—which quickly ascended to No. 1 in market share for skin-care products, helping make Olay a US\$1 billion P&G brand.⁹⁸

Refining existing products and technologies

P&G refines and develops technologies from products that are already being marketed—what it calls "cooked" products. For example, a Japanese company developed the technology behind the product that became P&G's Swiffer Duster. P&G's engineers had been working on a similar technology, but when the company caught sight of the Japanese product—a hand-held dusting tool sold only in Japan—P&G sought a partnership. The Swiffer Duster is now sold in 15 global markets, and the product and its manufacturing process were developed within 18 months—a very fast product development cycle.⁹⁹

Li & Fung: Metamorphosing from exporter to supply chain specialist

The Li & Fung Group is a multinational group of companies that operates in export sourcing, distribution and retail. Based in Hong Kong, Li & Fung works chiefly in textiles, garments and apparel, but it has branched out into hard goods such as fashion accessories and home products.¹⁰⁰ The company is established globally, with 80 purchasing offices in 40 countries. In 2007, it exceeded its self-prescribed three-year growth plan by growing annual revenues to US\$12 billion.¹⁰¹

Established in 1906, Li & Fung exported mostly silk and porcelain goods before shifting to garment trading in the 1950s. By the 1980s and 1990s, the company was expanding its operations globally; since then, its presence in overseas commercial centers has only increased.¹⁰² In fact, Li & Fung has transformed into a global, horizontal provider of services traditionally performed internally by retailers and wholesalers—services such as supply chain management, production and operations. A key reason for this transformation—often overlooked—was its ability to use technology effectively. This IT pedigree continues to propel Li & Fung's business performance, allowing the company to continually expand its B2B service offerings—and more effectively orchestrate across the multi-polar world.

Handling horizontal activities for other businesses

The rise of the Internet brought the threat of highly efficient business models that could bypass traders such as Li & Fung. In response, Li & Fung rethought its role in the value chain and began to harness a host of technologies to optimize performance. Its Web-linked intranet portal allowed for real-time connectivity between its

own offices and operations. Similarly, its extranet sites—also launched in the 1990s—permitted seamless interaction between Li & Fung and its manufacturers and suppliers.¹⁰³

Achieving efficient internal and external communication has been, and continues to be, a cornerstone of Li & Fung's success. It is early evidence of how and why the company transformed into a full-service manager of global supply chains: it uses its highly efficient IT-enabled global network to take its customers' orders and distribute them to its thousands of contracted vendors around the globe.¹⁰⁴ The company now even merges its operations with many once-core business functions of its customers—or acquires those functions outright—thanks to its IT-enabled efficiency. Here are two recent highlights:

Liz Claiborne

In February 2009, Li & Fung paid US\$83 million to acquire the sourcing operations of Liz Claiborne. The New York-based fashion company had been struggling to deliver its high-value lines of clothing on an ever-faster schedule—partly because it was finding it increasingly difficult to deal with independent local suppliers overseas. Li & Fung will now act as the primary global sourcing agent for all Liz Claiborne labels, including Lucky Brand, Juicy Couture and Kate Spade. According to Liz Claiborne's CEO, the decision was made because “now is the time to reinvent your business model to be more competitive.”¹⁰⁵

Wear Me Apparel

In October 2009, Li & Fung acquired several divisions of Wear Me Apparel LLC for US\$402 million. The US apparel company holds licenses to brands such as Disney, Calvin Klein, Timberland and Nickelodeon; it designs and manufactures clothing sold at Wal-Mart, Macy's and other big retailers. In the future, Li & Fung will take control of Wear Me's design, sourcing, licensing, marketing and sales divisions.¹⁰⁶

Using IT to manage global operations

Li & Fung's global expansion over the last decade is typical of the global rebalancing of economic power in the multi-polar world. The company launched its “onshoring” operations in the United States between 2005 and 2008; more recently, it has announced plans to open its first such facility in the United Kingdom.¹⁰⁷

Information technologies continue to feature in Li & Fung's strategy. In particular, it is using IT to make its global operations faster, nimbler and more efficient—which has helped push the company into the reenergized B2B arena. Here are two recent examples:

Centralizing global data management systems

Prior to 2008, Li & Fung ran different online portals for its vendors. To improve communications between its clients and vendors, the company recently deployed a single automated supply chain management platform. Developed and provided by a software vendor, the platform integrates product lifecycle management with supply chain execution systems, combining data and functionality into a single solution. It supports Li & Fung's internal sourcing teams as well as its suppliers, facilitating collaboration across the company's global supply chain and logistics network.¹⁰⁸

Increasing the efficiency of global communications

Many of Li & Fung's thousands of suppliers are located in remote areas, so the company is equipping them with mobile personal digital assistants linked to the Internet. The technology has enabled Li & Fung's project managers to instantly feed information from supplier factories into a centralized database, improving the quality control of information and increasing the number of daily inspections—saving the company money. Li & Fung has also been able to improve the visibility of the production process: it can now track, in real time, when an order has been accepted by a vendor, when the vendor has begun cutting or stitching, and when the goods have been shipped.¹⁰⁹

Eli Lilly and Company: Using IT to transform industry behavior

Eli Lilly and Company is a US-based pharmaceutical company whose products are marketed in 143 countries worldwide. Founded in 1876, Lilly is known for breakthrough products in a number of clinical categories, including chemotherapy (Gemzar), sexual health (Cialis) and anti-psychotics (Zyprexa).¹¹⁰ In 2008, for the first time, the company surpassed US\$20 billion in revenues, with eight products exceeding US\$1 billion in annual sales.¹¹¹

Today, the pharmaceuticals industry faces significant disruption. R&D costs are rising. Competition from low-cost generic drug manufacturers from emerging markets is intensifying. Consumers are increasingly well-informed, through the Internet, about the drugs they should be using. There is also the growing risk of intellectual property piracy by unlicensed drugmakers.

Lilly is harnessing IT capabilities to address these growing challenges. While the company's R&D expenditures were rising during the 1990s, its large research staff was struggling to solve difficult research problems.¹¹² In 2000, recognizing the opportunities, Lilly created "eLilly," a division designed to improve R&D practices.¹¹³ Out of this came a number of collaborative ventures, including InnoCentive, Chorus and Collaborative Drug discovery. This approach to R&D is part of what Lilly's leadership calls its "FIPNet" (Fully Integrated Pharmaceutical Network) strategy.¹¹⁴ Today, the company is demonstrating how pharmaceutical companies can use IT to help improve their operations and pave the way for breakthrough discoveries. By harnessing the advantages of co-production, Lilly is pointing to how pharmaceutical companies can undertake global orchestration.

Drug discovery

Lilly is now using technologies such as social computing to cut the costs and shorten the time it takes to discover new chemical solutions.

Using online hubs to source ideas from around the world

Around 2000, Lilly created InnoCentive, the first global Web-based platform to streamline the drug discovery process. Formed out of the eLilly division, Lilly spun off InnoCentive as an independent start-up in 2001. Today, it allows companies such as Lilly to source ideas from around the world. For example, more than 50 percent of InnoCentive's solutions come from China, India and Russia.¹¹⁵

Using a Web-based initiative to find new compound developments

Lilly recently launched the Phenotypic Drug Discovery Initiative (PD2) to improve the discovery of products that treat Alzheimer's disease, cancer, diabetes and osteoporosis. Researchers across the world can use the portal to safely submit compound structures that Lilly will evaluate free of charge using a set of algorithms. All intellectual property rights remain initially with the submitting researcher or institution. However, if the submitter chooses to take it to the next stage of evaluation, Lilly reserves the right to negotiate an exclusive collaboration or licensing agreement if the submission has real promise.¹¹⁶

Clinical trials

Clinical trials allow safety and efficacy data to be collected for new drugs in development. Lilly is using technologies such as advanced analytics to help minimize costs and the time needed for trials.

Using social computing to connect with virtual teams

In 2004, Lilly assembled "Chorus," a virtual development team designed to speed the process of getting new ideas through to "proof of concept" (POC—where there is clear evidence that a drug works in humans). Chorus cuts the cost of reaching POC by connecting Lilly with an external network of content specialists.¹¹⁷ Eighty percent of the work is performed externally, and Chorus is able to reach POC 12 months earlier

than the industry standard—and at half the cost.¹¹⁸ This is all facilitated by VOICE—a Web-based enterprise management technology that enables real-time collaboration.¹¹⁹

Harnessing analytics technologies to aid information distribution and access

Lilly has recently created an "Advanced Analytics Hub" to implement new clinical trial design and analysis practices. Clinical trials are the most costly and time-consuming stage of pharmaceutical R&D: a large-scale Phase III trial, to prove effectiveness, can involve tens of thousands of patients, take years to complete and cost hundreds of millions of dollars. Lilly's new analytics platform will allow its researchers to learn and adapt as ideas move through the pipeline—increasing the pace and cutting the costs of clinical research.¹²⁰

In addition, Lilly has recently begun using a technology platform to manage clinical research data. The solution is helping Lilly accelerate clinical processes and enhance data-analysis capabilities—for example, by allowing it to run "what-if" scenarios on medical information extracted from clinical trials.¹²¹

Approvals and patents

When a pharmaceutical company wants to bring a drug to market, the product must be submitted to government regulators for approval. However, the costs and time associated with seeking drug approvals are significant. To streamline the approval process, Lilly is using a software solution that helps with regulatory compliance and helps the company obtain patents more quickly. As more of the company's data becomes digitized, the platform provides drug regulators with online access to information about products slated for approval. In the United States, for example, the platform will allow Lilly to submit data on drugs to the US Food and Drug Administration.¹²²

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Acknowledgements

Core research team

Tim Cooper, Christopher Hilson, Katharine Hirst, Mark Purdy, Matthew Robinson.

Senior Executive sponsors

Mark Foster, Mark Spelman.

We would also like to thank the following individuals for their contributions to the study

Claire Allen, Chris Allieri, Allan Alter, Joanna Brown, Nicholas Bruneau, Rob Coffey, Ryan Coffey, Paul Chadha, Ladan Davarzani, Alice Demaret, Helen Doyle, Henry Egan, Dan Elron, Ben Geschwind, Stéphane Girod, Nancy Hamill, Jeanne Harris, Phyllis Kennedy, John Kerr, Denis McCauley, Laine Monaldo, Raghav Narsalay, Andrew Newby, Paul Nunes, Armen Ovanessoff, Alex Pachetti, Greg Parston, Athena Peppes, Jeffrey Playford, Rajiv Roychaudhuri, Erik Schumb, Sandra Silva, Fei Sun, Kishore Swaminathan, Robert Thomas, Amy Van der Kleij, Oscar Vasco, Dadong Wan, Christian Winslow.

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