



# Redefining Boundaries

*Insights from the Global C-suite Study*

This report is IBM's second study of the entire C-suite and the eighteenth in the ongoing series of CxO studies developed by the IBM Institute for Business Value. We now have data from more than 28,000 interviews stretching back to 2003.

Our latest study draws on input from:

Chief Executive Officers (CEOs)	<b>818</b>
Chief Financial Officers (CFOs)	<b>643</b>
Chief Human Resources Officers (CHROs)	<b>601</b>
Chief Information Officers (CIOs)	<b>1,805</b>
Chief Marketing Officers (CMOs)	<b>723</b>
Chief Operating Officers (COOs)	<b>657</b>

---

## Can you see the competition coming?

What makes the world's top executives cringe? "The 'Uber syndrome' – where a competitor with a completely different business model enters your industry and flattens you," said one executive. As the CIO of a U.S. transportation firm, this is someone who knows just how much momentum an eighteen-wheeler builds up when it's barreling along the freeway. But many other business leaders also fear a new rival could turn their companies into roadkill.

"It's very difficult to predict how the competitive landscape will play out," the CEO of a Dutch IT company said. "Will adjacent players try to get into our space? Will the folks who built the pipe try to compete with us?" the CEO of a U.S. digital marketing firm asked.

Management guru Clayton Christensen coined the term "disruptive innovation" to describe how new entrants target the bottom of a market and then relentlessly move up market, eventually ousting established providers.<sup>1</sup> But what was once a relatively rare phenomenon has now become a regular occurrence. Innovations that harness new technologies or business models, or exploit old technologies in new ways, are emerging on an almost daily basis. And the most disruptive enterprises don't gradually displace the incumbents; they reshape entire industries, swiftly obliterating whatever stands in their way.

So how are C-suite executives (CxOs) tackling the threat of competition from companies in other sectors or with very different business models? Our latest study explores what they think the future holds, how they're identifying new trends and how they're positioning their organizations to prosper in the "age of disruption."

---

*“Disruptive technologies could change the fundamentals of our business and cause totally unpredictable effects, if they become widespread.”*

**Kazuo Hirai**, CEO, Sony Corporation, Japan

*“The boundaries of competition are becoming ambiguous.”*

**Yong Eum Ban**, CFO, JoongAng Media Network,  
South Korea

For this study, we surveyed 5,247 business leaders from 21 industries in more than 70 countries (see Figure 1). Our respondents – most of whom we spoke with face-to-face – represent a wide range of public and private enterprises. We’ve analyzed their input extensively, drawing on our global team of business strategists, consultants and statisticians. We’ve also used IBM Watson™, our pioneering cognitive system, to extract additional inferences from the open-ended responses we received.

**Figure 1**

*Regional spread: More than 5,000 CxOs around the world participated in our study*



---

This report reflects the opinions of all the CxOs who participated in our study and contains our overall findings. We've identified three key initiatives to ready your enterprise for the next level of competition:

- Prepare for digital invaders
- Create a panoramic perspective
- Be first, be best, or be nowhere

In subsequent reports, we'll discuss the roles different CxOs can play in equipping their enterprises to repel assaults from attackers in adjacent industries, digital upstarts and rapidly diversifying tech giants. We'll also look at how they can create new value for their customers, clients and citizens and the emergence of learning or "cognitive" systems in their competitive agendas.

**Beware: Blurring boundaries and digital disintermediation ahead**

A few years ago, CxOs could see the competition coming. The biggest risk was the advent of a new rival with a better or cheaper product or service. And you could fend off the threat by improving or expanding the range of products and services you offered, or getting to market more efficiently and imaginatively.

Today, the competition's often invisible until it's too late.

---

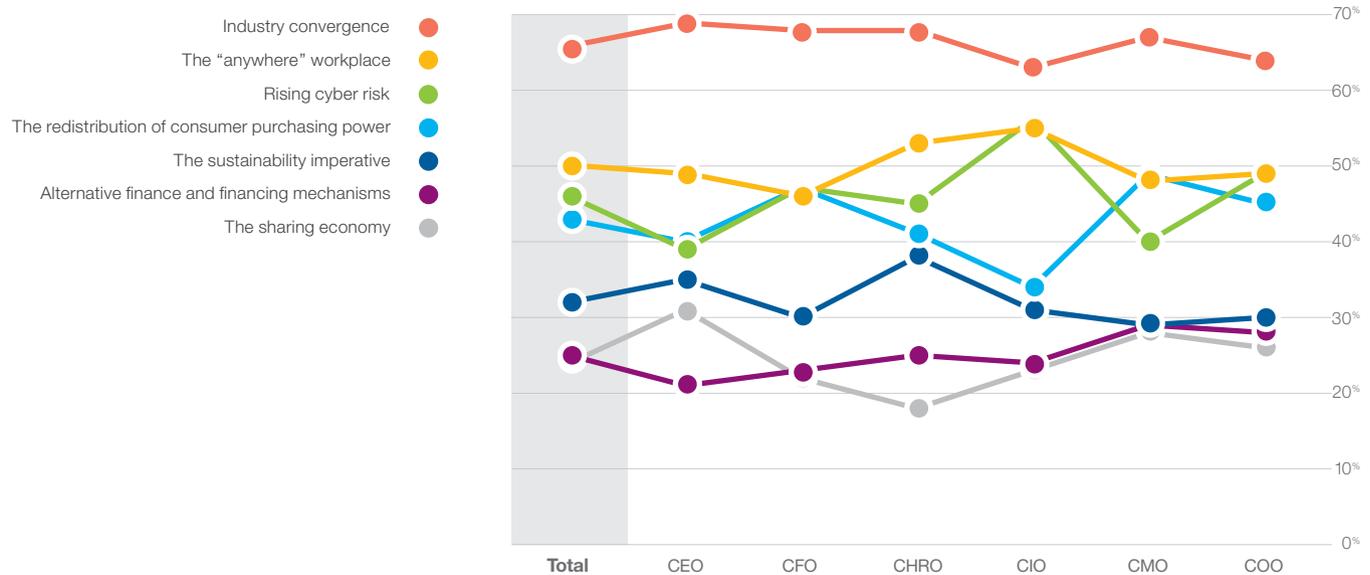
*"The biggest threat is new competitors that aren't yet classified as competitors."*

**Piotr Ruszowski**, CMO, Mondial Assistance,  
Poland

The boundaries between industries are continuing to erode, as companies in one sector apply their expertise to others – bringing previously separate industries together and sometimes redefining the very way in which they’re classified. CxOs are acutely aware of this change. We asked them to identify which developments they expect the next “wave” to consist of. Industry convergence clearly eclipses any of the other trends they anticipate in the coming three to five years (see Figure 2).

**Figure 2**

*Breached walls: CxOs expect far more industry convergence in the next few years*



---

Some forms of convergence – such as the marriage of consumer electronics and healthcare in digital exercise-tracker Fitbit – are fairly obvious. Others stem from more unlikely liaisons. Agrochemical giant Monsanto is moving into “data-driven farming,” for example, with the creation of real-time tools to help farmers maximize crop yields.<sup>2</sup> And U.S. defense contractor Lockheed Martin recently partnered with DNA-sequencing firm Illumina to develop personalized health and wellness solutions.<sup>3</sup>

The competition isn’t just coming from new permutations of old industries, though; it’s also coming from digital invaders with totally different business models. These companies typically target a key part of the value chain, bypass the incumbents and seize control of the customer relationship, making other suppliers irrelevant.

There are two kinds of invader: digital giants and ankle-biters. “Titans like Alibaba and Tencent have begun to muscle in on territory traditionally occupied by state banks such as ours,” the CIO of a financial services firm based in Hong Kong explained. The CMO of a U.S. food retailer can sympathize. “Google is getting into the grocery business to protect the profitability of its ad display business, and Amazon is getting into the business because it wants to sell the world to the world,” she ruefully remarked.

The digital giants can damage you with a few well-placed punches. But the ankle-biters are equally dangerous *en masse*. They’re small, smart and agile. They’re also unencumbered by legacy infrastructure. In fact, they often don’t have any infrastructure at all because they use others’ assets. And they’re hard to spot until they’ve taken a chunk of your flesh.

*“It’s really hard to predict the rapidly evolving technology environment; you don’t know what you don’t know but you’re still trying to stay ahead of it.”*

**Ian Cunningham**, COO, Tangerine Bank, Canada

The banking industry is a case in point. At one time, anybody who wanted to save or borrow money, trade shares or buy foreign currency had to visit a bank. Now, there’s Nutmeg for savings, Kabbage for loans, Robinhood for stock trading and Currency Cloud for cross-border payments, among a wide array of similar providers. Then there’s Yodlee for those who want an account aggregation service, plus numerous sites for comparing interest rates.

Hence the fact that CxOs are so nervous. Two years ago, they thought new rivals were as likely to come from their own industry as from others.<sup>4</sup> Today, they’re more worried about outsiders invading their patch (see Figure 3). “We used to look at The Four Seasons as a competitor,” the CMO of a hotel business in the United Arab Emirates, noted. “Now we look at disruptors like Airbnb.”

**Figure 3**

**Digital disturbance:** CxOs are terrified of outsiders making a land grab



## Prepare for digital invaders

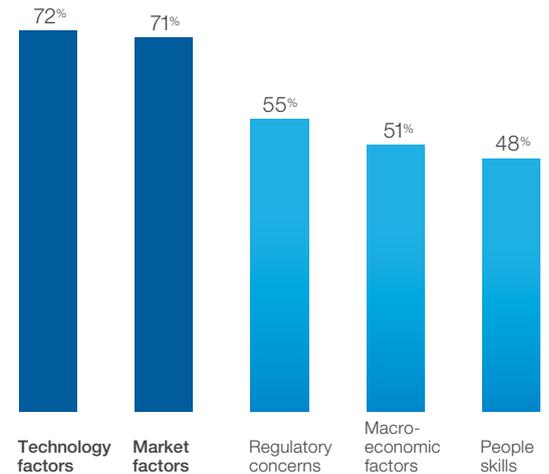
What underpins this shift in the competitive arena? CxOs believe technology and market factors are by far the biggest of the various external forces buffeting their organizations (see Figure 4). CEOs put technology at the top of the list, as they have for the past four years. But now, for the first time ever, the other members of the C-suite also see technology as the main game-changer. The CIO of a Danish engineering consultancy summed it up succinctly when he said, “I think we’re on the verge of a revolution.”

While CxOs overwhelmingly agree on the *importance* of technology, they’re more uncertain about its impact. We used Watson Analytics to analyze more than 7,600 open-ended comments on how respondents expect specific technologies to affect their businesses and discovered that the number of executives expressing positive sentiments was more than double the number expressing negative sentiments.

On the one hand, CxOs welcome the chance to develop better goods and services, utilizing more efficient manufacturing techniques and more sustainable energy sources. “We’re counting on technology to fuel our next wave of growth,” declared the CFO of an Indian insurance company. On the other hand, CxOs are desperately trying to cope with a “technological onslaught,” as the CIO of a Malaysian healthcare provider put it. And the stakes are extremely high. “If we gamble on the wrong thing, it could have a really negative impact on our business,” the COO of a Belgian electronics firm commented.

**Figure 4**

*Twin forces: Technology and market factors are transforming the competitive landscape*



*“The app concept – that there are millions of developers who can convert mobile and wearable devices into completely new and innovative tools – will transform big business.”*

**Asher Yaqub Khan**, Chief Commercial Officer, Ufone, Pakistan

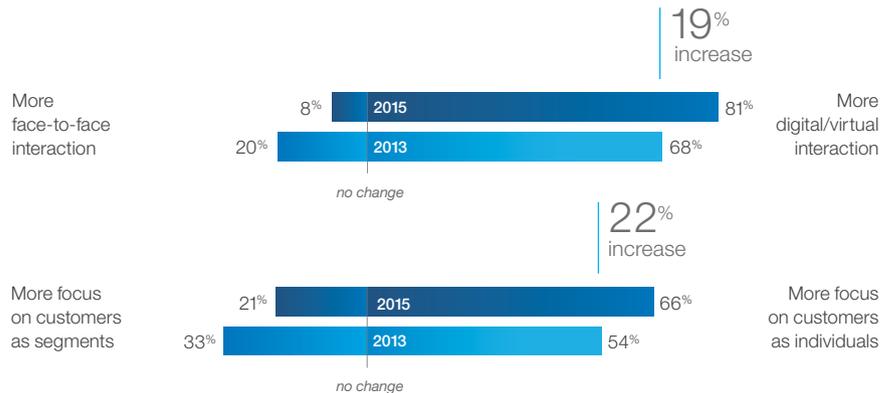
### Redraw the rules of engagement

Still, these reservations haven't blunted recognition that different tactics are required to thrive in the new competitive environment. The members of the C-suite know greater efficiency, alone, isn't enough to deal with amorphous opponents capable of altering direction almost overnight. Fending off such assailants requires a much bolder approach.

Most CxOs anticipate changing the way their organizations engage with customers. They're especially interested in creating more digital, individualized experiences (see Figure 5). As the CEO of a British utility noted, “We now have the tools to understand 90 percent of our customers, but we need to get to segment-of-one understanding.”

**Figure 5**

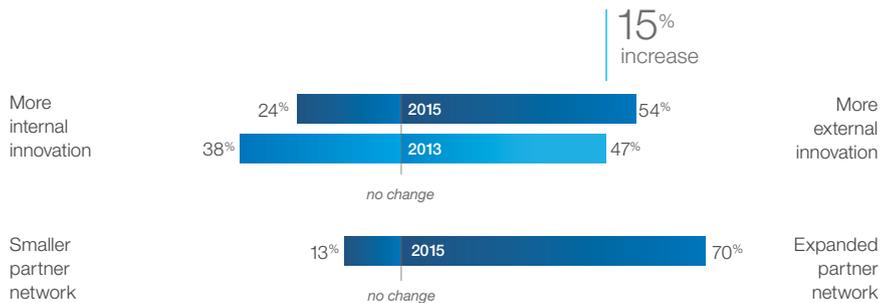
**Personal touch:** CxOs anticipate more digital and individual engagement with customers by 2020



More than half of all CxOs are also looking for additional innovation from outside sources to help them mount an effective counter-attack. And they plan to partner more extensively to access that innovation (see Figure 6). “If we work alone, our future growth will be constrained. We need to collaborate with other organizations,” the CIO of a Chinese consumer products company remarked.

**Figure 6**

*Joint venture: CxOs plan to partner more actively, primarily to access external innovation*



CxOs acknowledge the need for more decentralized decision-making, too (see Figure 7). They realize conventional hierarchical management isn't appropriate when much of an enterprise's value lies in the networks it's formed, rather than the resources it owns. Nor will it work with enemies that are small, nimble and well hidden. Organizations have to get closer to the action and trust their partners to play their roles within the ecosystem.

*“We anticipate relying more heavily on partnerships and adjacencies, and on innovating by listening to clients and developing solutions together.”*

**David Mills**, CEO, Ricoh Europe, United Kingdom

---

*“We need to change the way we make decisions. If we empower our employees more and more, we’ll be able to accelerate the speed at which we do business.”*

**Shogo Ikeuchi**, CHRO, Recruit Holdings, Japan

**Figure 7**

**Distributed power:** CxOs recognize the importance of delegating in a networked environment



Nevertheless, many CxOs are uncomfortable straying too far off the beaten path. Nearly two-thirds of them plan to enter new markets. But their comments show they’re largely sticking to existing areas of experience. In other words, they’re focusing on new demographic segments or geographic markets, not on opportunities in other sectors.

### **Torchbearers light the way**

Some organizations are bolder than others, though. Analyzing the responses we received enabled us to identify a small group of enterprises that excel on two counts. They enjoy a strong reputation as leading innovators. They also surpass their industry peers in terms of revenue growth and profitability. We’ve called these organizations Torchbearers, and they account for 5 percent of the survey population.

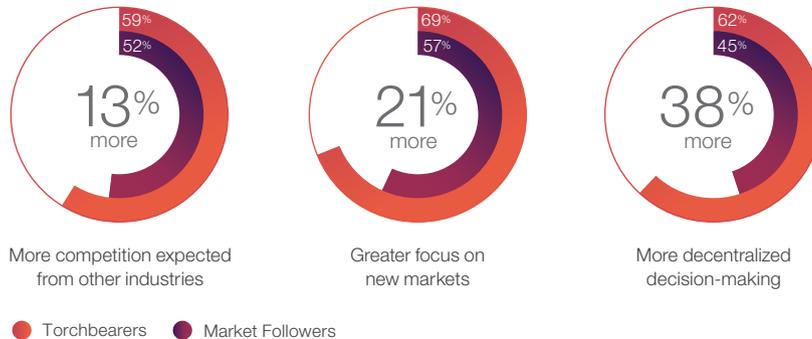
We likewise identified a group of enterprises that lag behind the rest. Market Followers have a much lower market profile in the opinion of the CxOs who head them, and almost all are much less successful financially. They represent 34 percent of our total sample.

Comparing the two groups shows that Torchbearers are more aware of the risk of being disrupted by new entrants from other industries and of the potential of cognitive computing systems. They're also more likely to be entering new markets and adopting a more decentralized management style (see Figure 8).

In short, Torchbearers are better prepared to recognize and deal with attacks from digital invaders, and they're deploying some of the same tactics their rivals use. They're exploring the opportunities in adjacent spaces and stripping out bureaucracy so they can move swiftly. That's not to say they're trying to emulate everything the digital invaders do. Nor should they. Long-established enterprises can't simply jettison valuable brands, legacy systems or their duty to shareholders. But Torchbearers *do* have a far keener sense of how the battleground has shifted and are poised to strike back.

**Figure 8**

*Gearing up: Torchbearers are better placed to take on the disruptors*



**Our recommendations***Put more scouts on the front line*

In fast-moving markets, historical data has limited value. Delegate all but the most important decisions to the people who are closest to your customers. With decentralized decision-making, you'll have more scouts – with greater freedom of action – on the front line. Pooling the local intelligence they provide with input from your partners will give you a much clearer idea of how your markets are changing. It will also enable you to warn your allies, if you see new threats emerging, and forge stronger relationships with them.

*Share to shine*

Ratchet up your plans to form new partnerships, and be ready to “reciprocate” by sharing key resources with your allies so you can grow together.<sup>5</sup> Start by defining what you can share and what sort of partner you want. Look for enterprises with a strong record of innovation and skills that could be combined with your own to create new opportunities. Once you've found a suitable ally, conduct small experiments to learn together.

*Seize the middle space*

What do disruptors like Alibaba, eBay, Spotify and WhatsApp have in common? They've each become the linchpin in a virtual network other companies use to reach their customers. Building an online forum where buyers and sellers can trade, share information and swap insights, and stimulating the development of a healthy ecosystem, can be a highly profitable strategy. It also prevents you from being cut out of the picture by somebody else.

---

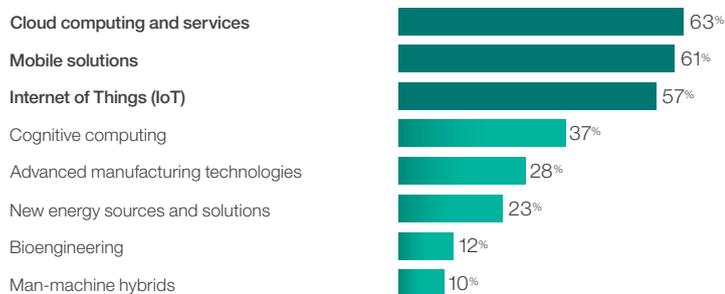
## Create a panoramic perspective

The more nebulous your enemies and the faster the pace of change, the wider – and further – you need to look. Yet it's extremely difficult to glimpse beyond the immediate future. As the famous philosopher of science Thomas Kuhn pointed out, scientific progress is typically irregular – a series of “peaceful interludes” punctuated by intellectual revolutions.<sup>6</sup> It's also, arguably, becoming even more unpredictable, as knowledge becomes increasingly specialized and fragmented, and crowdsourcing and crowdfunding play a bigger role in innovation.

So what do the members of the C-suite think the future will bring? There's widespread consensus on the technological elements of today's “wave.” Most CxOs, regardless of role, believe cloud computing, mobile solutions and the Internet of Things (IoT) will predominate in the coming three to five years. Cognitive technologies (systems that understand natural language and are not programmed, but learn) lie next on the horizon, as the bridge to new levels of personalization and insight from exploding volumes of data (see Figure 9).

**Figure 9**

*Star tech: CxOs think three technologies will be particularly important in the near term*



---

*“The hardest thing is working out whether what’s happening is hype, trend or tsunami.”*

**Faik Açıklan**, CEO, Yapı Kredi Bankası, Turkey

*“Cloud enables us to ‘dematerialize’ services and deliver them remotely. We don’t have to own the infrastructure to do this.”*

**Kyra Arcia Marciano**, CMO, Banco Bolivariano, Ecuador

C-suite executives expect these technologies to deliver significant benefits in the near term (see Figure 10). Take cloud computing. “Cloud can help you shorten lead times and share resources more effectively,” the CIO of a Vietnamese container terminal company said. It also lets you “create digital ecosystems to serve customers’ interests more effectively,” the CIO of a Swiss travel company commented. And with the “pay-as-you-go” model, you don’t need to make a heavy upfront investment, the CFO of a Mauritian financial services provider pointed out.

**Figure 10**

*Great expectations: CxOs believe technology can transform the way their enterprises operate*

Technology	Benefits
Cloud computing and services	More speed and agility; lower capital expenditure and operating costs; more productive use of IT resources; easier collaboration
Mobile solutions	Access to real-time data; opportunities to improve customer experience
Internet of Things (IoT)	Better utilization of assets; scope to convert products into services, add wrap-around services and personalize offerings
Cognitive computing	Better understanding and engagement of customers; improved asset utilization; most advanced analytical and predictive skills
Advanced manufacturing technologies	Greater efficiency; cost savings; potential for mass customization; easier experimentation
New energy sources and solutions	Greater efficiency; new sources of business; environmental advantages
Bioengineering	Opportunities to develop better crops, processed foods, medicines and medical devices
Man-machine hybrids	Potential for medical and complex mechanical advances; cost savings

---

Meanwhile, mobile solutions “facilitate a deeper understanding of the individual customer,” the CEO of a South African bank told us. They also, of course, enable what the CIO of a Qatari educational institute calls “anytime, anyplace, any device access.” And that’s as valuable for employees as it is for customers. “The ability to equip our salespeople with real-time information is critical in closing deals,” the COO of a Hong Kong-based transportation company noted.

The Internet of Things offers other advantages. The CMO of a U.S. machinery manufacturer mentioned the ability to “increase utilization of our equipment and optimize capital costs. We’ll be able to predict failures and do preventive maintenance.” Other CxOs talked of converting products into subscriptions. “First, we’ll digitize our analog products. Then we’ll replace products with services,” the COO of a Spanish office supplier explained.

A number of executives also cited the benefits of cognitive computing in generating new discoveries, making better, more informed decisions and driving contextual customer interactions. “Cognitive computing will allow us to analyze customer data, create predictive models and track the changing needs of customers. This will provide new upselling and cross-promotion opportunities,” the CMO of a Polish oil company remarked.

CxOs think it’s the *confluence* of different technologies that holds the greatest promise, though. “Mobility and data sharing via cloud will open up new business models,” the CEO of a Taiwanese bank told us. Other executives referred to the opportunities for combining smart products with advances in bioengineering to improve healthcare.

---

*“Products will come with a ‘virtual layer’ such as information or services.”*

**Dr. Ralph Körfgen**, Head of Corporate Development,  
Deutsche Bahn, Germany

---

*“With cognitive computing we’ll be able to do scenario planning ‘on steroids.’”*

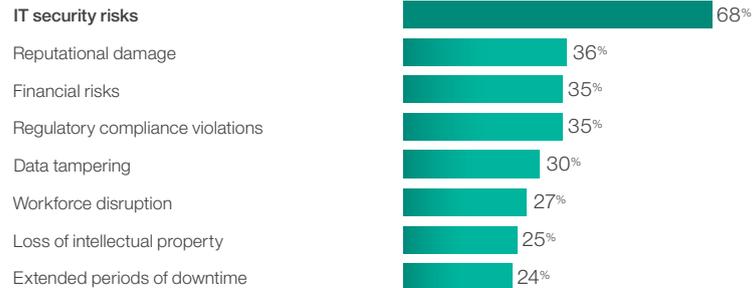
**Laston Charriez**, Senior Vice President Americas Marketing, Product and Market Development, Western Union, United States

---

But CxOs see a downside. In 2013, when we conducted our previous C-suite study, security concerns made just a blip on their radar screens.<sup>7</sup> Today, the majority of CxOs, irrespective of role, think IT security is the top risk (see Figure 11). “The more things are connected, the more vulnerable we all are,” the CMO of an Australian financial services provider stated.

**Figure 11**

**Red alert:** Security is rising to the top of the agenda, as more things become connected



### Understand the undercurrents

Conversely, very few executives seem to have registered the broader consequences of implementing new technologies. The CMO of another Australian financial services firm was one of only a handful of respondents to note, for example, that cloud computing is expediting even more digital disruption. It’s not just helping large enterprises become more efficient; it’s also opening the doors to the ankle-biters nipping at their heels.

---

Advanced manufacturing technologies could have profound ripple effects as well. The supply chain is becoming more multi-directional, due to rising demand in non-OECD countries. Consumer preferences are also changing very rapidly, so the supply chain must become more agile, the CEO of a multinational specializing in supply chain management observed.

Automation will alleviate this challenge. But as robots play a bigger role in the factory, materials and shipping will account for a larger share of production costs. The rationale for manufacturing in distant countries with low wages will thus decline, while countries that are rich in natural resources or near the markets they serve will become more attractive. Sophisticated 3D printers will bring the manufacturing of many goods even closer to home, as well as transforming their design.<sup>8</sup>

The CIO of a global pharmaceuticals giant was among the CxOs pondering the potential of cognitive computing. He firmly believes computers will eventually “be able to determine the best course of action to prevent or fix health issues, based entirely on data patterns,” and will radically transform the pharmaceutical sector’s existing industry model.

In the long run, new technologies often cause far more disruption than might first be apparent. And CxOs need to look beyond the upstream currents to the downstream cascade.

### **Put more feet on the beat**

However, many members of the C-suite freely admit they find it hard to see what’s coming next, let alone reflect on the wider implications. “It’s impossible to predict what will affect our business because there are so many variables,” the CMO of a South African bank stated.

---

*“3D printing will have a big impact on materials development. What differentiates many products in the future will be the materials they’re made of, not how they’re made.”*

**Shizuya Yoneda**, COO, Menicon, Japan

---

*“We need to ask ‘what’s next?’ and be proactive, not just react to what’s already happened. And we need to do this whether we’re considering the short- or longer-term future.”*

**Jyrki Mäki-Kala**, CFO, Neste Oil, Finland

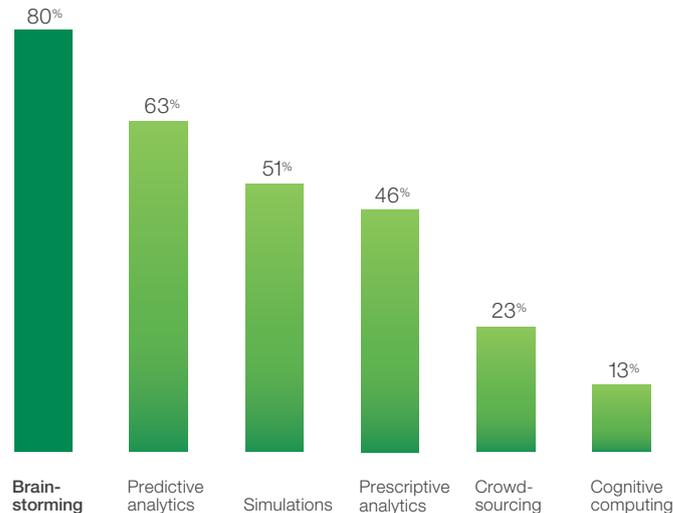
---

So how do our respondents try to fathom the future? There are two stages to the process: flushing out new trends and fleshing out the implications. Brainstorming, crowdsourcing and cognitive technologies can be used for both steps, whereas predictive analytics, prescriptive analytics and simulation are more relevant for exploring “if-then” questions.

Most CxOs use brainstorming and predictive analytics. But barely half use simulation or prescriptive analytics. The number of executives who use crowdsourcing or cognitive computing is even smaller (see Figure 12). The majority of CxOs, it seems, still rely heavily on traditional practices for projecting the future.

**Figure 12**

*Old habits: CxOs still use conventional techniques to identify new trends*



Similarly, most CxOs turn to a limited range of external agents for help. Their first port of call is thought leaders (see Figure 13). Roughly half also use customer feedback and market research, as well as watching their competitors. But the fact that *only* half draw on their customers for input is surprising. What's almost equally remarkable is that so few executives look to companies in adjacent industries or to social media, even though these sources can cast a completely different light on things.

Partners are another key source of intelligence. The members of an ecosystem compete collectively, but each has its own angle on the world. Pooling their perceptions to create a collective understanding of future trends and technologies, and how best to capitalize on them, enables all the members of the ecosystem to compete more effectively.

**Figure 13**

**Restricted range:** CxOs draw on a limited number of resources to help them forecast the future

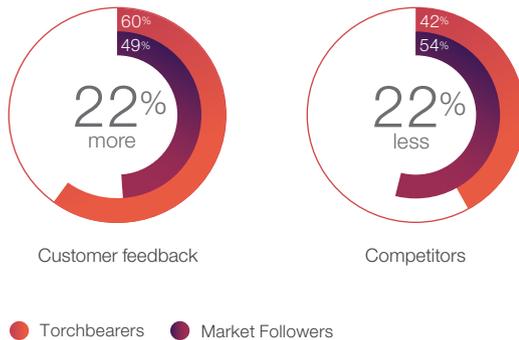


*“In the future, our customers will create greater value for us. They not only generate income for us, they can also help us evolve.”*

**Zhu Bin**, CEO, GuangDong Create Environment & Technology Co., China

**Figure 14**

*Eyes right: Torchbearers pay more attention to their customers than to their competitors*



Of course, an ecosystem is only as good as its weakest member, so it's imperative to ensure every partner pulls its weight. Nevertheless, aggregating and analyzing information from the numerous different perspectives of all the participants in an ecosystem provides much clearer pointers to the future than relying on internal knowledge alone.

Consider the success of Global Pulse, the United Nations program to direct humanitarian aid more effectively. Global Pulse mines data from social networks, blogs and online commerce to identify spikes in unemployment, price rises, disease outbreaks and other signs of distress. It also utilizes information from its partners. When cellphone operator Orange supplied it with blinded records of the calls made by 5 million users in Ivory Coast, for example, researchers used the call location data to analyze travel patterns. They found that minor infrastructure changes could cut the average commute time in Abidjan, Ivory Coast's biggest city, making it easier for children to get to school and to reduce pollution.<sup>9</sup>

Drawing on multiple sources of information gleaned from multiple viewpoints is the only way to make sense of the "many variables," to which the CMO of the South African bank referred. Indeed, when we used Watson Analytics to scrutinize what CxOs had to say about the most unpredictable external issues affecting their enterprises, it rapidly identified 33 distinct variables. It also distinguished technological changes, geopolitical challenges and market factors as the three top drivers.

### **Torchbearers look all around – all the time**

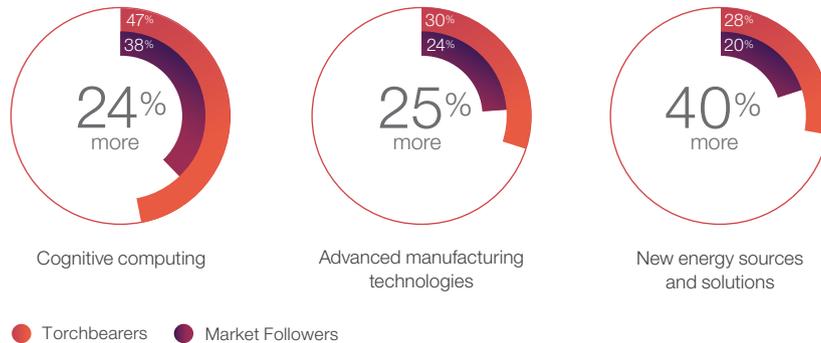
Many of the Torchbearers in our study have already figured out the advantages of taking a panoramic view. They keep an eye on their rivals but pay even greater heed to their customers (see Figure 14). More than two-thirds also use predictive analytics to identify new trends.

The upshot? Torchbearers see the future differently. They place less weight on mobile solutions and cloud computing than Market Followers do, because many of them have implemented these technologies earlier. But they place *more* weight on cognitive computing, advanced manufacturing technologies and new energy sources and solutions (see Figure 15). So they're already seeking the next big profit pool. They're also willing to invest in emerging technologies with higher entry costs and higher pay-offs.

To sum up, Torchbearers are better able to discern future trends because they look sideways as well as outward. They adopt an ecocentric – not an egocentric – perspective, drawing on the insights of their customers and ecosystem partners to monitor the landscape from multiple vantage points. And they use rigorous analytical techniques to decipher this input.

**Figure 15**

**Head start:** Torchbearers are focusing more heavily on “big-bet” emerging technologies



*“The biggest challenge is developing the future while dealing with the past. It’s like trying to repair a leaky house at the same time as installing new solar panels.”*

**Rob Briggs**, CHRO, Aviva Insurance, United Kingdom

**Our recommendations***Cultivate your cognitive capabilities*

There's no technology that can tell you exactly what will happen in the future. However, using predictive and cognitive analytics to scrutinize the real-time data you receive from the marketplace and your partners will help you forecast the future with a greater level of confidence. It will also enable you to generate "what-if" scenarios and risk assessments, allowing you to prepare for different outcomes before they occur.

*Form your own futures squad*

Set up a specialist forecasting team, equipped with the right technologies and skills. Recent research shows people trained to use probabilistic reasoning techniques, and to recognize and eliminate bias, produce better forecasts. Working in teams likewise increases the odds of predicting the future accurately.<sup>10</sup> Consider designating someone in the team specifically to scan for new technologies and monitor the marketplace.

*Take an ecocentric view of the world*

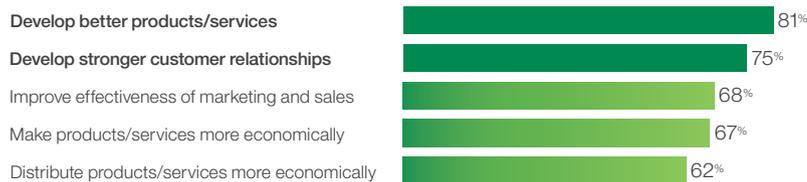
Assess the caliber of all the enterprises in your ecosystem. Are you leveraging all their contacts, skills and assets? Are there any weak links? Are there any missing skills? Ask yourself whether your ecosystem has the right expertise to exploit new trends and technologies and boost its power to compete. If not, where should you look? The fate of your organization now rests on the collective abilities of the ecosystem in which you operate, including its ability to read – and prepare for – the future.

## Be first, be best, or be nowhere

The way the members of the C-suite see the future shapes what they do. Most executives view technology as a means of creating value, for example, although they're not ignoring the opportunity to cut costs (see Figure 16). The majority of our respondents plan to reassess their company's product/service portfolio, as well as its operating model, in light of the technology they ranked first.

**Figure 16**

**Plus factor:** *CxOs see technology primarily as a means of adding value rather than subtracting costs*



In addition, four-fifths of CxOs are experimenting with alternative business models or thinking of doing so. They're concentrating primarily on the "open" and "platform" variants (see Figure 17).<sup>11</sup> Both models are particularly conducive to collaboration, within and across industries. Both also offer a lot of flexibility, which is essential for coping with sudden external changes.

*"Technology will change our business models . . . There will be a profit shift in the value chain, with the move from product to total solution."*

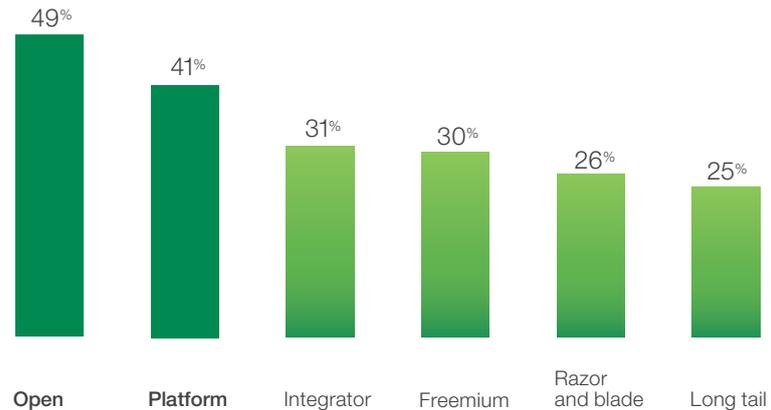
**Frans van Houten**, CEO, Royal Philips, Netherlands

*“We know expectations are rising but what, exactly, will customers expect? We don’t know that yet. And those expectations aren’t set by us or by our competitors; they’re set outside our industry by Apple or Amazon. That’s who we’re competing against, really.”*

**Scott C. Campbell**, Executive Vice President and CMO –  
Multiple Line, American National Insurance Company,  
United States

**Figure 17**

**Top forms:** CxOs are focusing, first and foremost, on open and platform business models



This makes sense, since there’s compelling evidence that business model innovation is more profitable than product innovation, evidence the digital newcomers have amply reinforced.<sup>12</sup> As the CMO of a U.S. car rental company noted, “Uber has a market cap that exceeds the market cap of all the car rental companies combined, and it’s only an app.”

CxOs also realize the influence of the digital invaders goes far beyond the sectors where the disruption has been greatest. And they can’t ignore the impact, even if their own organizations haven’t yet brushed with the giants or felt the sharp teeth of the ankle-biters.

---

### **Establish a living laboratory**

However, most executives are cautious about making major changes. “The trickiest issue is choosing the *right* new business model,” the COO of a French agricultural cooperative told us. “When you’re testing a new model, there aren’t any companies whose mistakes you can learn from,” the COO of a Polish financial services provider added.

Concerns about investing too much too soon or cannibalizing current revenue streams also cropped up regularly. “The biggest hurdle is profitability. Will the model be profitable, and will there be enough market penetration?” the CFO of a German life sciences firm warned.

Other CxOs remarked on how hard it is to test new models within the existing corporate framework. “You need belief and perseverance to experiment,” the CIO of an Indian conglomerate said. But large companies often look for quick wins. And even when short-termism isn’t an issue, there’s organizational inertia to contend with.

These are all legitimate worries. Yet they miss one key point: to create a successful new business model, you usually need to experiment *outside* the normal organizational setting. You have to develop and test numerous different ideas, nurture the most promising ones and unleash them only when you believe they can work in the real world.

---

*“There are no rules or prior case studies on what we’re trying to do with our business and business model. We feel like we’re operating on the edge of the market.”*

**Debra Hall**, Director, Rose & Thorne, New Zealand

*“We live in a moment where individual creativity and continuous innovation are essential. We should be thinking in terms of ‘return on inspiration.’”*

**Natascia Radice**, CMO, TEDxDubai,  
United Arab Emirates

### **Explore the outer edges**

Many CxOs also appear to be taking an unduly constrained view of their options. Some of them want to move up the value chain. But few are considering going the other way, despite the fact that moving down the value chain can open up new opportunities. When tomato paste manufacturer Morning Star ran into supply problems, for example, it began planting and harvesting tomatoes itself. This enabled it to create a wider range of products by cultivating varieties that yielded different flavors.<sup>13</sup>

Moving down the value chain can likewise provide a defense against ankle-biters, many of which get off the ground by targeting low-end markets. Airbnb is a typical instance; it started off serving impoverished travelers willing to sleep on the living room floor, although it now has 29 castles on its books.<sup>14</sup> Controlling the lower parts of the value chain reduces the cracks through which digital intruders can squeeze.

Yet only a small number of CxOs seem to be thinking along these lines and planning to go after a completely new customer base or break into a new industry. The vast majority of C-suites presumably have no intention of trying to “uberize” the Ubers themselves.

### Torchbearers forge ahead

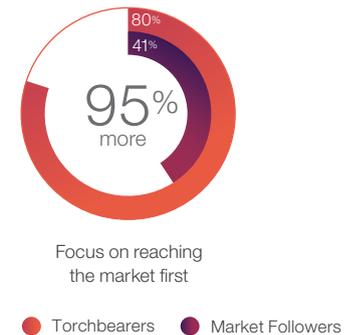
Again, however, significant differences are apparent in the strategies Torchbearers and Market Followers are pursuing. For a start, Torchbearers have made greater headway in developing superior business models: 38 percent are already using open business models, and 27 percent platform business models, compared with 29 percent and 20 percent of Market Followers, respectively. Moreover, whether they're launching new business models or new offerings, Torchbearers are far more intent on reaching the market first (see Figure 18).

So why the deep desire to be a first mover? The speed at which technology evolves is accelerating; in fact, Moore's law – that the “capabilities” of technology double every two years – has just been reconfirmed.<sup>15</sup> The CxOs running our Torchbearers are clearly aware of the implications. Almost all of them know coming to market second or third is a luxury they can't afford. And thanks to their panoramic perspective, they're more comfortable than Market Followers about taking the risks associated with being a pioneer.

But being first isn't enough. History shows that many innovators have fallen by the wayside because they've failed to maintain their edge. Who, after all, remembers SaeHan's MPMan, the first widely available MP3 music player launched in 1997?<sup>16</sup> In the digital economy, it's more important than ever to be – and stay – one of the best.

**Figure 18**

*First thirst: Most Torchbearers want to be market pioneers*

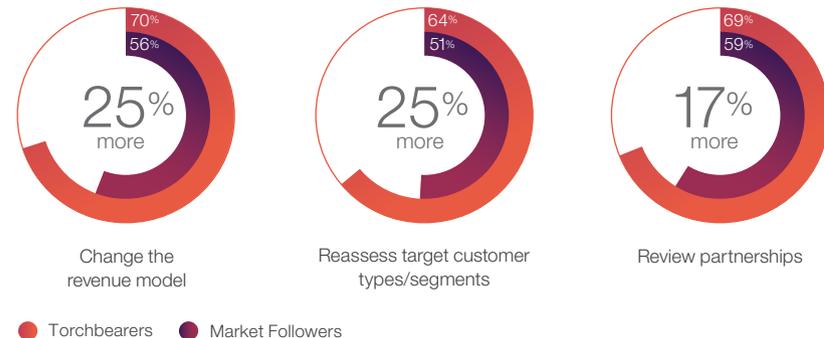


The Torchbearers in our study understand this. They plan to put considerably more effort into targeting new customer segments and developing new revenue models, recognizing that whoever controls the gateway to the customer “wins” the battle. They’re also more likely to push the potential of game-changers like learning systems, and intend beefing up the networks they’ve formed (see Figure 19).

In other words, Torchbearers are focusing on satisfying the desires of their most discerning customers – those who demand the very best. And they’re seeking alliances to help them fulfill the expectations of such customers. Market Followers, by contrast, are starting from a more “self-centered” perspective: what’s happening within their own organizational walls and how to use existing resources most effectively.

**Figure 19**

*Outward-oriented: Torchbearers focus on the features that will help them be best*



---

## **Our recommendations**

### *Investigate unfamiliar territory*

Focusing on your existing strengths and learning from your immediate competitors will only help you do the *same* things you're already doing – slightly better. Listen to your customers and the other members of your ecosystem, and actively collaborate with them. Concentrate on building broader networks and look at what companies in unrelated industries are doing to get completely different ideas.

### *Go offline to test for the best*

Set up an innovation center outside your current organizational structure for incubating and piloting new business models and offerings. Give it the latitude to experiment properly, including sufficient time and resources. Test the most promising prototypes on a select group of knowledgeable, impassioned customers; you'll learn far more from them than you will from a throng of uninformed users. And be ruthless about discarding all but the very best options. 'Good' isn't good enough in a transparent digital environment.

### *Create – and capture – the moment*

Once you've decided to launch a new business model, product or service, move fast – and be prepared to bet big. It's difficult to triumph as a market pioneer when technological advances are occurring so rapidly they can render even recent innovations obsolete. You have to seize control of the market before anyone else does, and this is where resources really count. If you have a strong brand name and deep pockets, and you're ready to flex all your technological and marketing muscles, you'll be much more likely to succeed.

---

*“I want to simplify everything, so that we make fewer bets and faster decisions.”*

**Anders Thulin**, Head of Group Function Business Excellence & Common Functions and CIO, Ericsson Group, Sweden

---

## Scope, scale, speed

The competitive arena is experiencing colossal upheavals, as new rivals from adjacent industries and digital upstarts jointly challenge the incumbent players. These assailants are capitalizing on cloud computing, mobile solutions and other such technologies to straddle the boundaries between sectors, develop radically different business models and cut out established providers. They're "exploding the market," as the CFO of a French bank put it.

The digital giants wield enormous clout, but at least they're a visible threat. New entrants from formerly separate sectors and ankle-biters are much harder to detect, and the biggest danger comes from "the disruptor we don't know about," the CEO of a Belgian insurer cautioned. A number of ankle-biters are also growing very rapidly. The 50 firms on CNBC's list of the world's most disruptive start-ups have jointly raised more than US \$22 billion in private equity, enough to help more than one pup become a huge pooch.<sup>17</sup>

Many traditional organizations are struggling to fend off the newcomers. But the Torchbearers in our study are better placed than the rest because they've grasped three imperatives:

- *Scope:* Torchbearers are more forward-looking and bolder about exploring the opportunities in related industries. They define where they want to play, while keeping their options as open as possible in an era of discontinuous change. They also understand that they compete as part of a bigger ecosystem of interdependent entities, which greatly enhances their potential impact on the market.

- 
- *Scale*: Torchbearers are braver about investing in emerging technologies with high risks and returns, and more aware of the need to preserve their competitive advantage and scale their expertise. They back their best ideas to the hilt because they know the biggest slice of the economic pie will go to just a handful of enterprises.
  - *Speed*: Torchbearers are more agile, more willing to experiment and more confident about taking the lead. Once they've developed a new product, service or business model, they race for the finishing line, recognizing the pace at which technology is evolving and the importance of dominating the market before their competitors do.

In short, our Torchbearers are better armed against all kinds of assaults. They're also better placed to turn the tables and invade the invaders' space.

What can *you* learn from the Torchbearers?

---

Executives:

5,247

Industries:

21

Countries:

>70

---

## How we conducted our research

Between January and June 2015, we surveyed 5,247 business leaders from 21 industries in more than 70 countries. Our sample comprises 818 CEOs, 643 CFOs, 601 CHROs, 1,805 CIOs, 723 CMOs and 657 COOs. We used a two-dimensional rake weighting process to correct for oversampling issues arising from differences in the number of respondents in a given role or region. We also drew on various techniques, including descriptive statistics and multivariate methodologies, to analyze the responses.

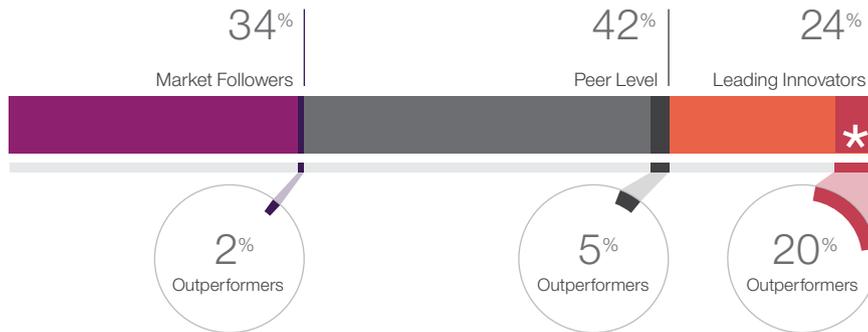
As part of our analysis, we wanted to identify the traits that distinguish the most successful enterprises. So we asked all our respondents to rank their organization's position in the industry in which it operates on two dimensions: market perception of its innovativeness; and financial performance over the past three years, measured in terms of revenue growth and profitability (or budget growth and efficiency for enterprises in the public sector).

We classified enterprises ranked 1-3 in the first category as Market Followers, those ranked 4 as Market Peers and those ranked 5 as Leading Innovators. Similarly, we classified enterprises ranked 1-3 in the second category as financial underperformers, those ranked 4 as peer performers and those ranked 5 as financial outperformers. We cross-validated the responses to our second criterion by comparing them with two objective financial measures – compound annual growth in revenue and profit before taxes between 2009 and 2014.

Our analysis revealed a small group of enterprises with a strong reputation in the marketplace and a superb financial track record – the Torchbearers in our study (see Figure 20). We compared this elite group with the Market Followers, most of which are much less financially successful, to find out what makes Torchbearers so effective.

**Figure 20**

*Elite cadre: Torchbearers have a strong reputation and excellent financial track record*



## \*Torchbearers

100%  
are Leading Innovators

20%  
of Leading Innovators are  
Outperformers; thus

5%  
of the total population  
are Torchbearers

**For more information**

To learn more about this IBM Institute for Business Value study, please contact us at [iibv@us.ibm.com](mailto:iibv@us.ibm.com). Follow @IBMIBV on Twitter and for a full catalog of our research or to subscribe to our monthly newsletter, visit: [ibm.com/iibv](http://ibm.com/iibv)

Access IBM Institute for Business Value executive reports on your phone or tablet by downloading the free “IBM IBV” app for iOS or Android from your app store.

**The right partner for a changing world**

At IBM, we collaborate with our clients, bringing together business insight, advanced research and technology to give them a distinct advantage in today’s rapidly changing environment.

**IBM Institute for Business Value**

The IBM Institute for Business Value, part of IBM Global Business Services, develops fact-based strategic insights for senior business executives around critical public and private sector issues.

---

## Notes and sources

- 1 Christensen, Clayton. *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Harvard Business School Press, Boston, 1997.
- 2 McDonnell, Tim. "Monsanto Is Using Big Data to Take Over the World." *Mother Jones*. November 19, 2014.
- 3 Jayakumar, Amrita. "Lockheed Martin's latest health partnership is very personal." *The Washington Post*. January 13, 2015.
- 4 "The Customer-activated Enterprise." IBM Institute for Business Value. October 2013.
- 5 Johansen, Bob and Karl Ronn. *The Reciprocity Advantage: A New Way to Partner for Innovation and Growth*. Berrett-Koehler Publishers, October 2014.
- 6 Kuhn, Thomas, S. *The Structure of Scientific Revolutions*. Second Edition, Enlarged, The University of Chicago Press, Chicago, 1970 (1962).
- 7 "The Customer-activated Enterprise." IBM Institute for Business Value. October 2013.
- 8 Peterson, Steve, Mark Bedeman and Daria Godunova. "Shifting transport paradigms: Understanding the implications of 3D printing on the global transportation industry." IBM Institute for Business Value. September 2014.
- 9 Lohr, Steve. "Searching Big Data for 'Digital Smoke Signals.'" *The New York Times*. August 7, 2013, [http://www.nytimes.com/2013/08/08/technology/development-groups-tap-big-data-to-direct-humanitarian-aid.html?\\_r=0](http://www.nytimes.com/2013/08/08/technology/development-groups-tap-big-data-to-direct-humanitarian-aid.html?_r=0)

- 10 Mellers, Barbara et al. "The Psychology of Intelligence Analysis: Drivers of Prediction Accuracy in World Politics." *Journal of Experimental Psychology: Applied*. 2015. Vol. 21, No. 1, pp. 1–14, <http://www.apa.org/pubs/journals/releases/xap-0000040.pdf>
- 11 Open business models entail systematically collaborating with outside agencies to create and capture value in new ways. Platform business models entail creating a forum in which buyers and sellers can interact directly, and charging a commission on each transaction.
- 12 Gassman, Oliver. "The danger in missing the innovation moment." *ft.com*. September 7, 2014, <http://www.ft.com/cms/s/2/b2ef363c-31c4-11e4-b377-00144feabdc0.html#axzz3WjhAmVp0>
- 13 Staats, Bradley and David M. Upton. "It's OK to Move Down (Yes, Down) the Value Chain." *HBR*. June 2015, <https://hbr.org/2015/06/its-ok-to-move-down-yes-down-the-value-chain>
- 14 Scola, Alex. "29 baller castles you can rent on Airbnb." *Matador Network*. March 27, 2014, <http://matadornetwork.com/trips/29-baller-castles-can-rent-airbnb/>
- 15 Gibbs, Samuel. "Moore's law wins: new chips have circuits 10,000 times thinner than hairs." *The Guardian*. July 9, 2015, <http://www.theguardian.com/technology/2015/jul/09/moores-law-new-chips-ibm-7nm>
- 16 Martin, David John. "MP3 Players - Past, Present and Future." *EzineArticles.com*. July 27, 2007, <http://ezinearticles.com/?MP3-Players---Past,-Present-and-Future&id=676665>
- 17 Ioannou, Lori. "50 disruptive start-ups revolutionizing business – and the world." *CNBC*. May 12, 2015, <http://www.cnn.com/2015/05/12/the-2015-cnn-disruptor-50-list.html>

© Copyright IBM Corporation 2015

IBM Global Business Services  
Route 100  
Somers, NY 10589

Produced in the United States of America  
November 2015

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

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

The information in this document is provided "as is" without any warranty, express or implied, including without any warranties of merchantability, fitness for a particular purpose and any warranty or condition of non-infringement. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.

This report is intended for general guidance only. It is not intended to be a substitute for detailed research or the exercise of professional judgment. IBM shall not be responsible for any loss whatsoever sustained by any organization or person who relies on this publication.

The data used in this report may be derived from third-party sources and IBM does not independently verify, validate or audit such data. The results from the use of such data are provided on an "as is" basis and IBM makes no representations or warranties, express or implied.

**IBM**