Harvard Business Review

A REPORT BY HARVARD BUSINESS REVIEW ANALYTIC SERVICES

The Digital Dividend: First-Mover Advantage

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EXECUTIVE SUMMARY

There is a correlation between the early adoption of new technologies and better business outcomes, according to a new survey from Harvard Business Review Analytic Services of 672 business and technology leaders from around the world. IT Pioneers—companies that believe strongly in the benefits of adopting new technologies and that pursue first-mover advantage—are more likely to lead in both revenue growth and market position. They adapt more easily to new ways of doing business and are transforming all aspects of their businesses faster than other companies.

The drive for transformation is changing how new technology-enabled business opportunities are identified and exploited. Increasingly what would have been seen as IT decisions are now being taken up by business leaders as strategic decisions. This is causing a shifting and blending of roles across IT and other parts of the business, with leaders from across the organization more involved in formulating technology strategy (in partnership with IT) and deciding how technology is used to enable business change.

Change can be disruptive—and hard. It requires an increased level of collaboration between IT and marketing, operations, engineering, and more. CIOs and business leaders who want to get the most from new technologies must devote time and attention to their organizations' ability to work together in new ways and adapt to change. This includes working collaboratively and iteratively across functions. The benefits of doing so are compelling and include increased market insight and responsiveness to customers, as well as the abilities to access global markets and to differentiate offerings from competitors. These are key factors in achieving profitable growth and increasing market share.

But the advantage provided by new technologies can be fleeting, as other companies soon follow in the Pioneers' footsteps. Many executives interviewed for this research described the need for constant innovation and a culture of change in order to stay one step ahead. The main reason given for *not* adopting new technologies was cultural resistance to change within the respondent's organization. While legacy *technology* is an inhibitor for many established companies, entrenched ideas about how the organization works—legacy *culture*—can be just as limiting. Business leaders must address both.

HIGHLIGHTS

57%

of respondents view IT as an investment that drives innovation and growth

54%

of Pioneers have seen significant change to their business models

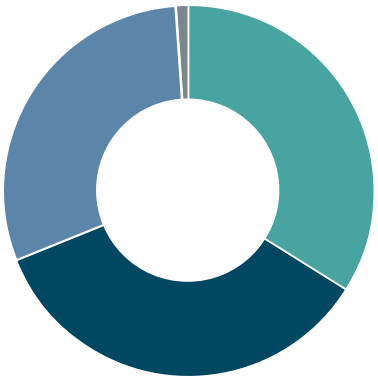
34%

say legacy technology gets in the way

Figure 1

Attitude Toward New Technology Adoption

Which one of the following best describes your organization's attitude toward adopting new technology?



34% PIONEERS
STRONGLY BELIEVE IN BENEFITS AND SEEK TO GET FIRST-MOVER ADVANTAGE

35% FOLLOWERS
WATCH LEADERS AND INVEST ONCE BENEFITS ARE PROVEN

30% CAUTIOUS
CAUTIOUS AND GENERALLY WAIT UNTIL TECH IS WELL-ESTABLISHED

1%
DON'T KNOW

Technology Pioneers See First-Mover Advantage

The business world is split into three fairly equal groupings when it comes to new technology adoption. figure 1 About a third of respondents (34%) identified their companies as IT Pioneers, saying they strongly believe in the benefits of new technology and seek to get first-mover advantage. Roughly another third (35%) said they watch the leaders and invest in new technologies once their benefits have been proven. A little under a third (30%) described themselves as Cautious, generally waiting until a technology is well-established before adopting it.

There were some interesting variations by industry and geography when it came to these profiles. figure 2 Not surprisingly, technology companies are more likely to identify as Pioneers, and their business models are being affected more dramatically than many other industries. The organizations least likely to identify as Pioneers were in the public sector.

Despite being heavy users of information technology, financial services companies were more likely to identify as Followers when it comes to new technology. Given the sensitivity of financial data, the regulations these companies face, and the value of the assets that flow through their systems, finance companies understandably are less likely to embrace new technologies without clearly understanding the potential risk. However, there are still benefits to being in the vanguard of their peer group.

North American companies were also more likely to be Followers, perhaps because of their greater base of legacy systems. In contrast, companies in emerging markets (MEA and Latin America in particular) were significantly more likely to be Pioneers, possibly as a result of not having to work with aging technologies.

By far the most intriguing finding in the research is the correlation between the early adoption of new technology and company performance. Pioneers are growing faster than other companies and beating their competition. Twenty percent have experienced more than 30% growth—twice that of Followers and more than three times that of the Cautious. Firms that identified themselves as Cautious were the most likely to report no growth.

Pioneers are also more likely to have a positive view of their market position; 64% said they were ahead of their competition, compared with 56% of Followers and 39% of the Cautious. In a world that is increas-

ingly digital and connected, the decisive adoption of new technology capabilities leads to competitive advantage. Pioneers lead in launching new products and expanding into new markets. figure 3 They are transforming their operations, products, and business models faster than other companies are, and they're more likely to take risks where doing so will benefit the business.

Change from the Outside In

A number of forces are driving change inside the modern enterprise. Most significant, named by 65% of all respondents, are changing customer behaviors and expectations, closely followed by cost. figure 4 Today's consumers are mobile- and tech-savvy. They expect to be connected, to have access to information, and to be able to conduct transactions anywhere. Any company that wants their business must cater to these expectations.

Figure 2

New Adoption Profile: Industry and Geography

HEAVIEST CONCENTRATION OF RESPONSES: > 60%

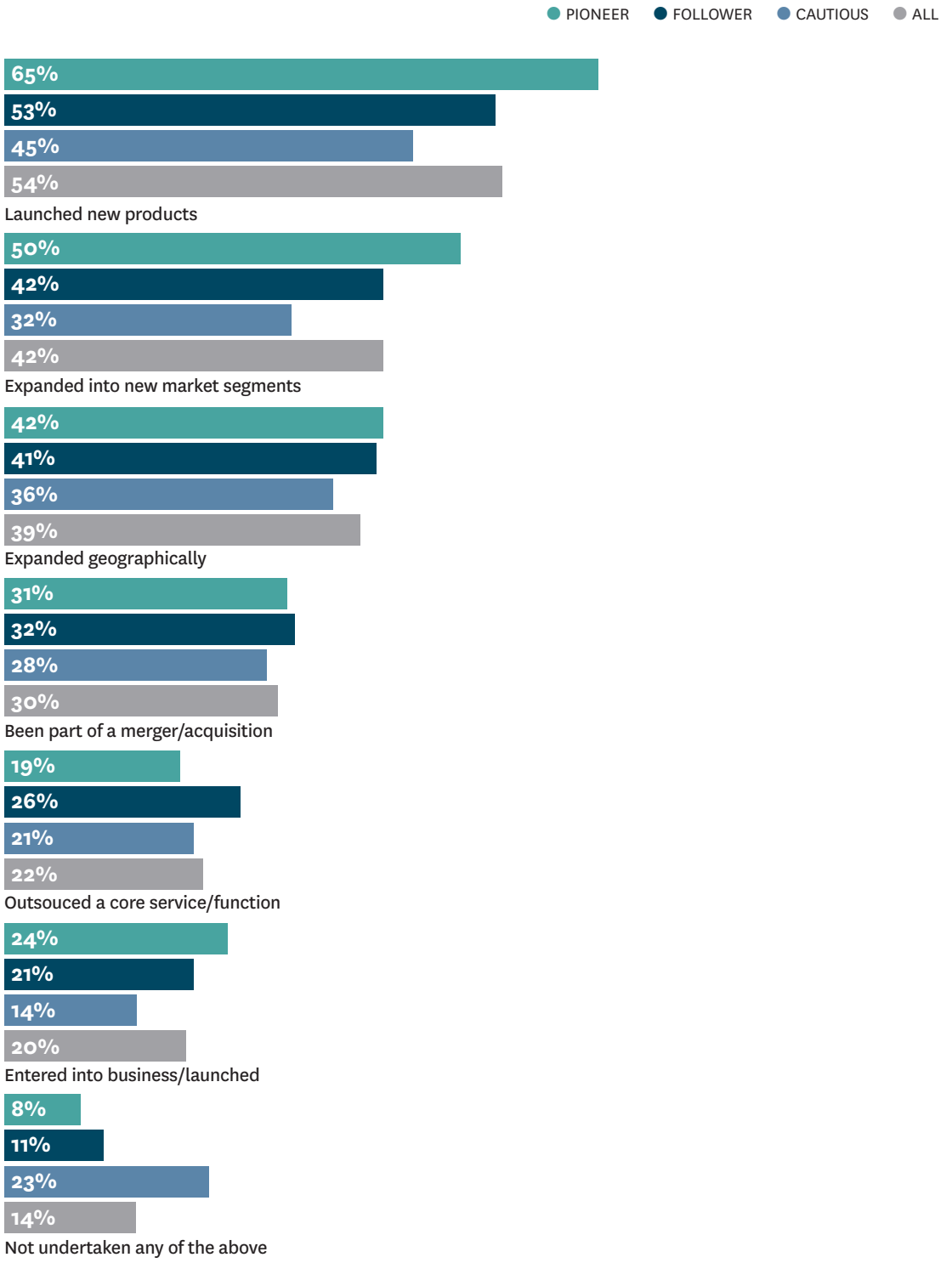
LOWEST CONCENTRATION OF RESPONSES: < 20%

	PIONEERS	FOLLOWERS	CAUTIOUS
All	●	●	●
VERTICAL SECTOR			
Consulting/business services	●	●	●
Energy/utilities	●	●	●
Financial services	●	●	●
Healthcare	●	●	●
Manufacturing	●	●	●
Public sector	●	●	●
Technology	●	●	●
Other	●	●	●
REGION SECTOR			
North America	●	●	●
Asia-Pacific	●	●	●
Europe	●	●	●
Rest of world	●	●	●

Figure 3

Pioneers Are Investing in Products and Markets

In the past three years, our company has...



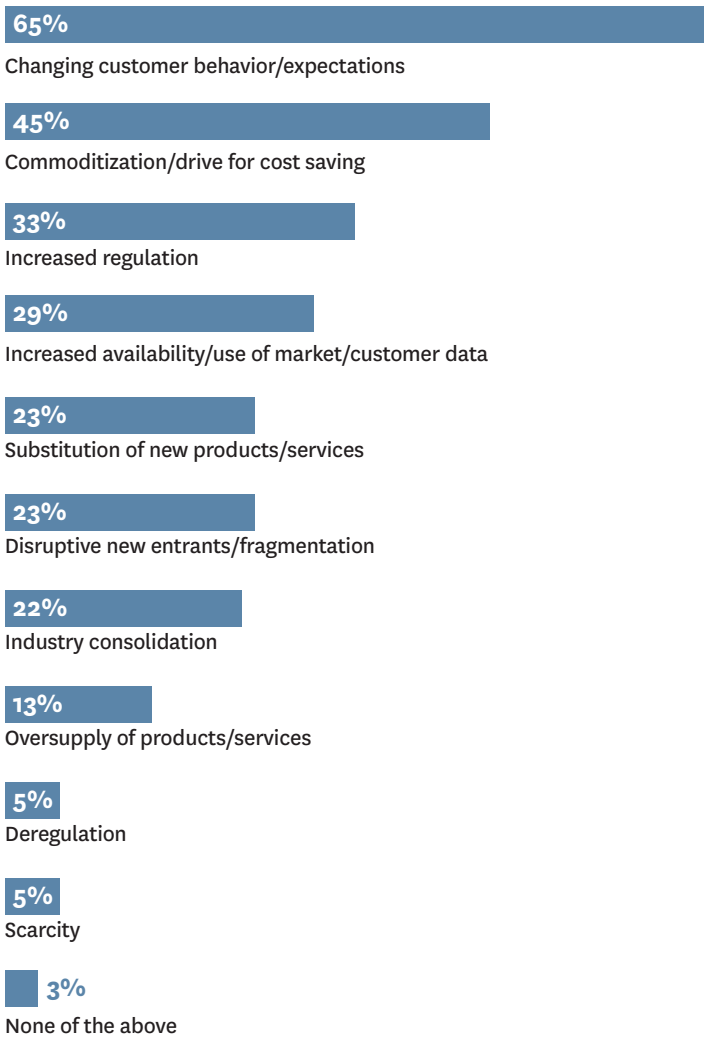
There is an interesting link between the top two drivers—customers and cost. Consumers can access products and services from literally millions of vendors—from independent eBay sellers to main-street stalwarts. It is easier than ever before for them to find exactly what they want at the best possible price. This is having a commoditizing effect on a whole host of products and services and putting significant cost pressures on companies.

To win customers, companies have to be able to sense and respond quickly. This means immediately understanding customers' needs, being ready to fill them, and then letting the customer know they have what they want—all in a very compressed time frame and while managing costs. "We have to be able to cater to an infinite range without incremental costs," said the head of supply chain for a large Australian retailer. Tech-

Figure 4

Customers and Costs Are Driving Market Change

What are the primary factors driving change in your market?



nology is what makes this possible; 72% of respondents said their use of new technologies has increased responsiveness to customers.

The other factor in changing customer expectations is the "iPhone effect." "When customers get in their vehicle, they want the same experience that they have with their mobile device," said the U.S.-based CIO for a large automobile company, who referred to the car as "the original mobile device." The iPhone effect is being felt in all kinds of products—even hearing aids, said the CFO for a maker of healthcare devices based in Italy. "Products need to be easy to use, without any issues."

But it's not just tangible products that are being affected. Consumers are expecting more from services too. Changing customer expectations was also the number-one change driver for financial services and healthcare, though increased regulations wasn't far behind; 62% of financial services companies and 57% of healthcare organizations named this a top driver.

Energy and utility companies are less driven by customer expectations than other industries; only 41% put this in their top three. Their top item was commoditization and the drive for cost savings—number two for most other industries. Energy/utility companies are also more affected by deregulation and scarcity, at 25% and 18%, respectively (other industries were in single digits for both).

When asked how they regard IT, more than half of respondents (57%) said they view IT as an investment that drives innovation and growth (64% of Pioneers hold this view), and 40% said they see IT as necessary to transform operations and manage costs—very important, given the degree to which commoditization and cost pressures are driving market change. Just 3% said they see IT as a drain on resources. This is a dramatic change from a decade ago, when Nicholas Carr argued that "IT Doesn't Matter." Even Cautious companies are more likely than not to believe in the top-line benefits of technology, at 51%—which raises the question: What's holding them back from embracing new technology?

Transformation to Digital Business

Change is happening in every dimension, and Pioneers are experiencing this more dramatically than most. Over half of Pioneers (54%) have seen significant change to their core business strategy or business model because of their use of new technologies, and 52% have seen significant change in the products and services they sell. figure 5

From an industry perspective, this is especially the case in technology companies. Half have seen significant change in their business model and over half (58%) have had significant change in their products and services. For instance, software companies have traditionally had long product cycles and invested a lot of time and money in getting things right up front, said a long-time industry executive now working at an enterprise cloud company. "We had to predict the future," he said. Now with cloud services, "we ship all the time." His current company rolled out dozens of new features last year. Working iteratively in response to immediate customer needs is a very different approach and demands new ways of working and new ways of managing the business.

When the company rolled out a new feature with a different pricing model last year, it created a revenue report that blended new data with its existing financial reporting information so that the compamy could understand which customers were switching and the revenue impact as they moved from the older to newer products. Advanced analytics is a critical capability in a "sense and respond" world, where the company that can meet new customer needs first wins.

Manufacturing companies have seen the least change in their business models from new technologies; only 18% said they had seen significant change. And the public sector has seen the least change in products/services, at just 20%.

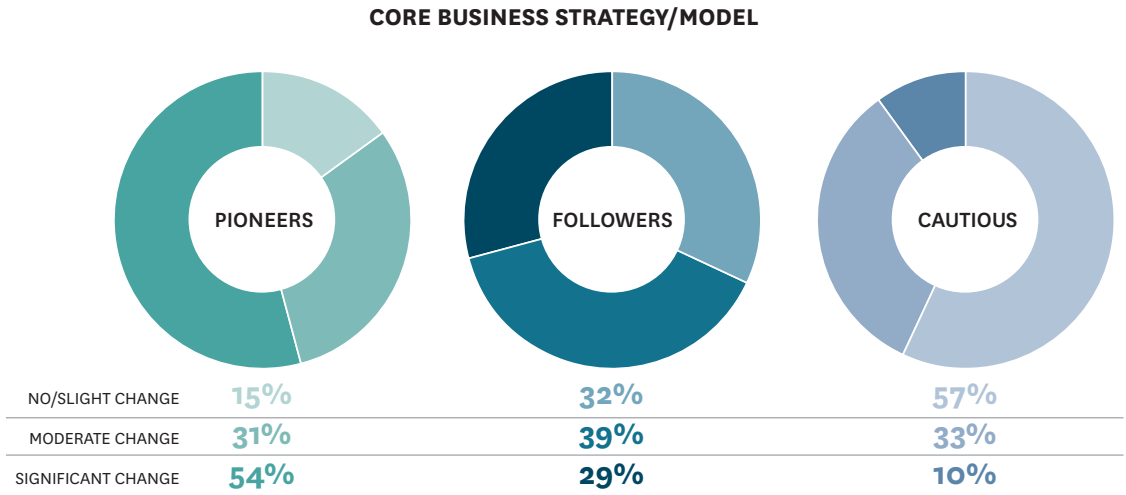
Viewed by region, Asian companies have seen the most significant change in products, at 41%, compared with 28% in Europe and 30% in both North America and the rest of the world.

Dramatic changes in business models and products are matched by changes in all aspects of how companies operate—from sales and marketing to IT itself. This companywide adoption of new technology-enabled ways of working is the very definition of what makes a "digital business." And while respondents report that they've already seen significant change, they predict even greater change over the next three years—including in how their companies are managed. figure 6

Figure 5

New Tech Has Transformed Pioneers' Businesses

To what extent have your core business strategy and business model changed because of your use of new technologies in the past three years? To what extent have your product/service offerings changed because of your use of new technologies in the past three years?



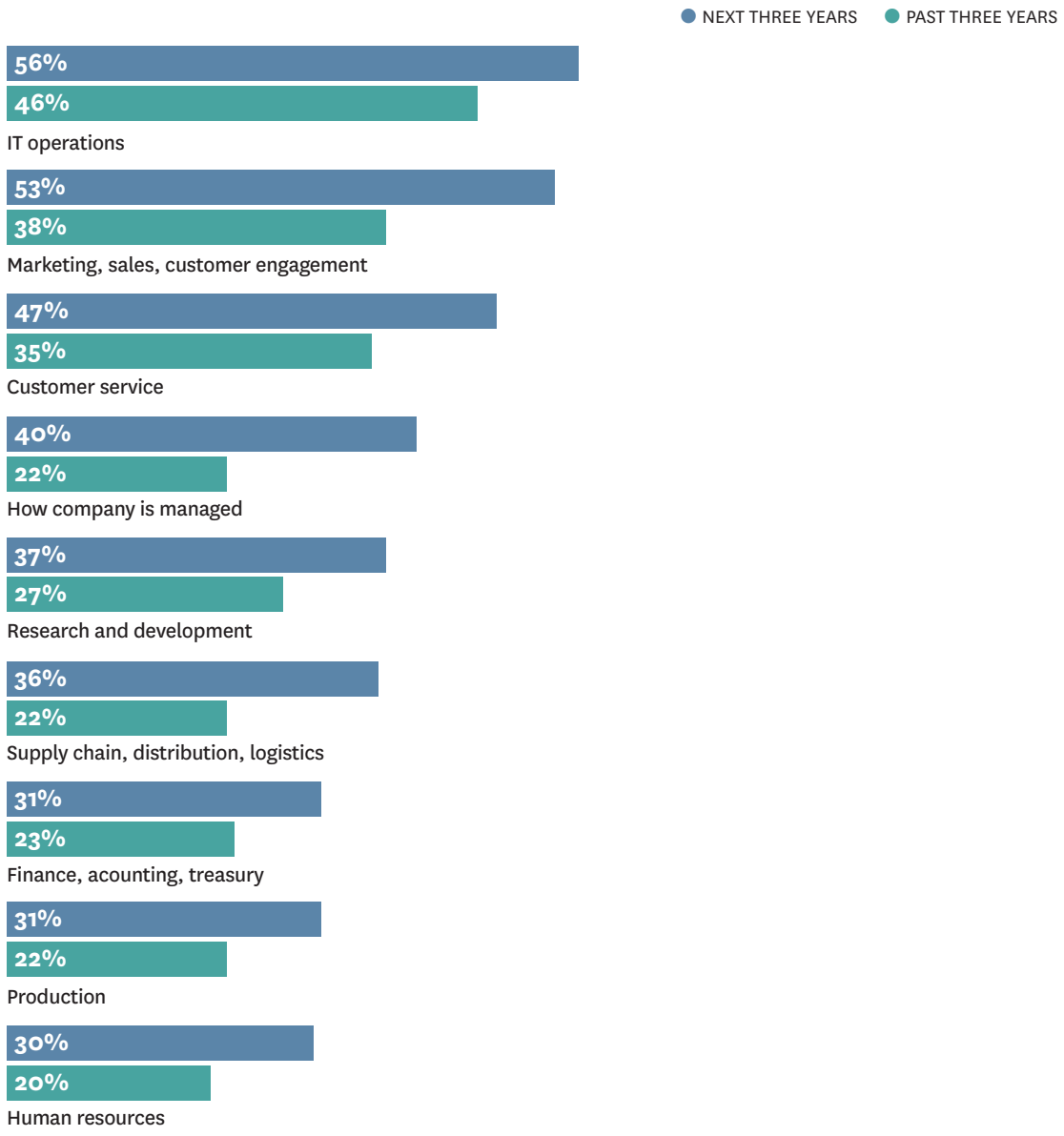
Breakthrough Technologies—and What Gets in the Way

This research focused on the impact of five key technologies—"the Big Five"—that have emerged to change the face of business today—mobile, social, cloud computing, advanced analytics, and machine-to-machine (M2M) communications.

Figure 6

New Technology Transformation Rate Set to Increase

To what extent have operations in the following areas of your business changed because of your use of new technologies over the past three years? Where do you anticipate the most significant changes in your business operations will be over the next three years?



Most organizations have adopted mobile technologies, with a majority describing their use as "extensive." While few people think of mobility as "new" technology, consider that the iPhone was only launched in 2007. The impact that smartphones and tablets have had on organizations in less than a decade is remarkable.

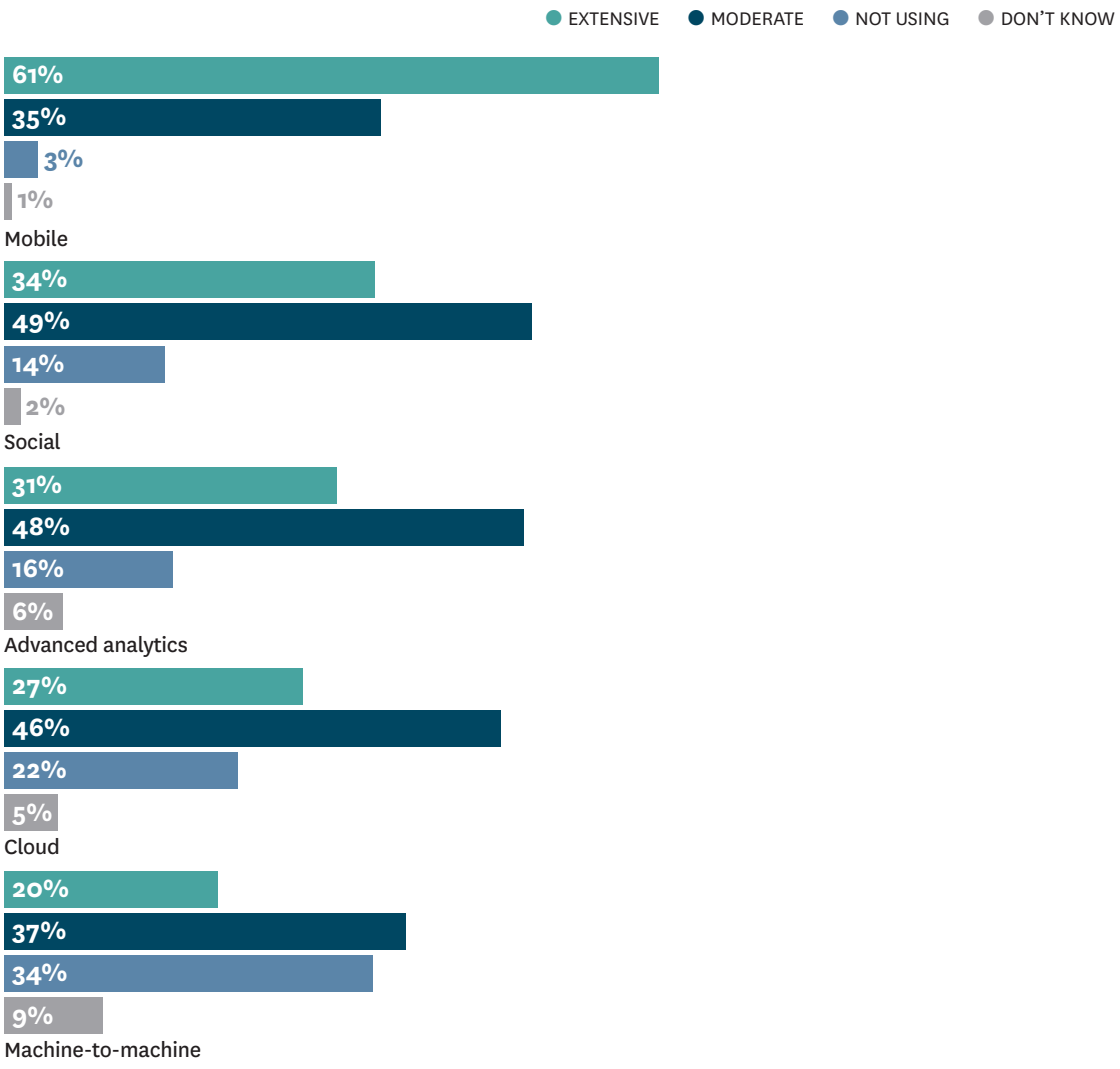
At the other end of the spectrum, M2M communications—making objects from pacemakers to production lines "smart" by adding connected sensors—is just taking off. figure 7 Again, few of the underlying technologies are truly new; however, miniaturization, falling prices, the growing pervasiveness of networks, and the emergence of intelligent platforms are inspiring new solutions.

When we look at who is using these technologies most extensively, Pioneers lead in every one. For example, more than three-quarters claim extensive use of mobile technologies, compared with 58% of Followers and 48% of the Cautious. The gap is even greater for other technologies. While 52% of Pioneers claim

Figure 7

New Technology Adoption

To what extent has your organization adopted the following technologies?



extensive use of advanced analytics, only 13% of the Cautious do. This is important because the insights and abilities that analytics provide directly translates into competitive advantage.

The maturity of the Big Five technologies varies greatly, as do the potential benefits that they offer and the challenges that they present.

MOBILE: NOW BUSINESS AS USUAL

All five of these technologies have had an impact on business operations—none more so than mobility. Given the speed with which consumers have embraced mobile computing, it's not surprising that three of the top four areas affected by it relate to the customer. figure 8 This is true across industries, as consumers now research and buy everything online—from coffee to clothes to insurance—often using their mobile device. This has changed the selling process, as customers do their own research and find out about products from sources other than the company itself. "Everyone's at least a little bit informed," said the managing director of an Indian insurance company. While this was possible with the PC, it wasn't until the advent of smartphones and tablets that it really took off.

"People are time-poor," said the head of supply chain for the Australian retailer. "They want to engage with retailers in an efficient way, and they do a lot of comparison shopping before they even enter the store"—or while they're in it, for that matter, through their smartphone.

Initially retailers saw mobile as a threat, as consumers used physical stores as "showrooms" to see and touch products they might then buy online. Now many offer free Wi-Fi and see mobile as a new way to engage customers, using personalization to make more relevant and appealing offers.

Financial services companies have seen the most change in their products and services, as mobile banking has taken off. In many cases, less-developed countries are leading the way as they "leapfrog" the fixed infrastructure stage and embrace services that avoid the need to use cash or visit a branch. Mobile banking services can be truly transformative in a region that doesn't have a network of branches or readily available—and affordable—broadband. Innovations from developing nations are now finding a foothold in the developed world.

SOCIAL: YET TO REACH ITS POTENTIAL

Social networking has had its most significant impact on customer-facing functions (sales and marketing, customer service, and products/services), this is the case across all geographies and industries.

Many companies are using sentiment analysis of social media traffic to determine customers' reactions to new product launches and marketing activities—not just their own but those of competitors too. And that's just the beginning. For example, the automobile company is using social data to calculate how inclined a particular consumer is to make a purchase—and consequently when to incentivize a sale with a special offer and when not to.

Over half of those who said their organizations are not using social media cited cultural resistance to change as the reason, with around a quarter saying it is not appropriate for their customers or market. Executives are much less likely to cite cultural resistance to change as a barrier, at 30%, compared with 64% of senior managers—perhaps indicating that those in the corner office are out of touch with the real pulse of the organization.

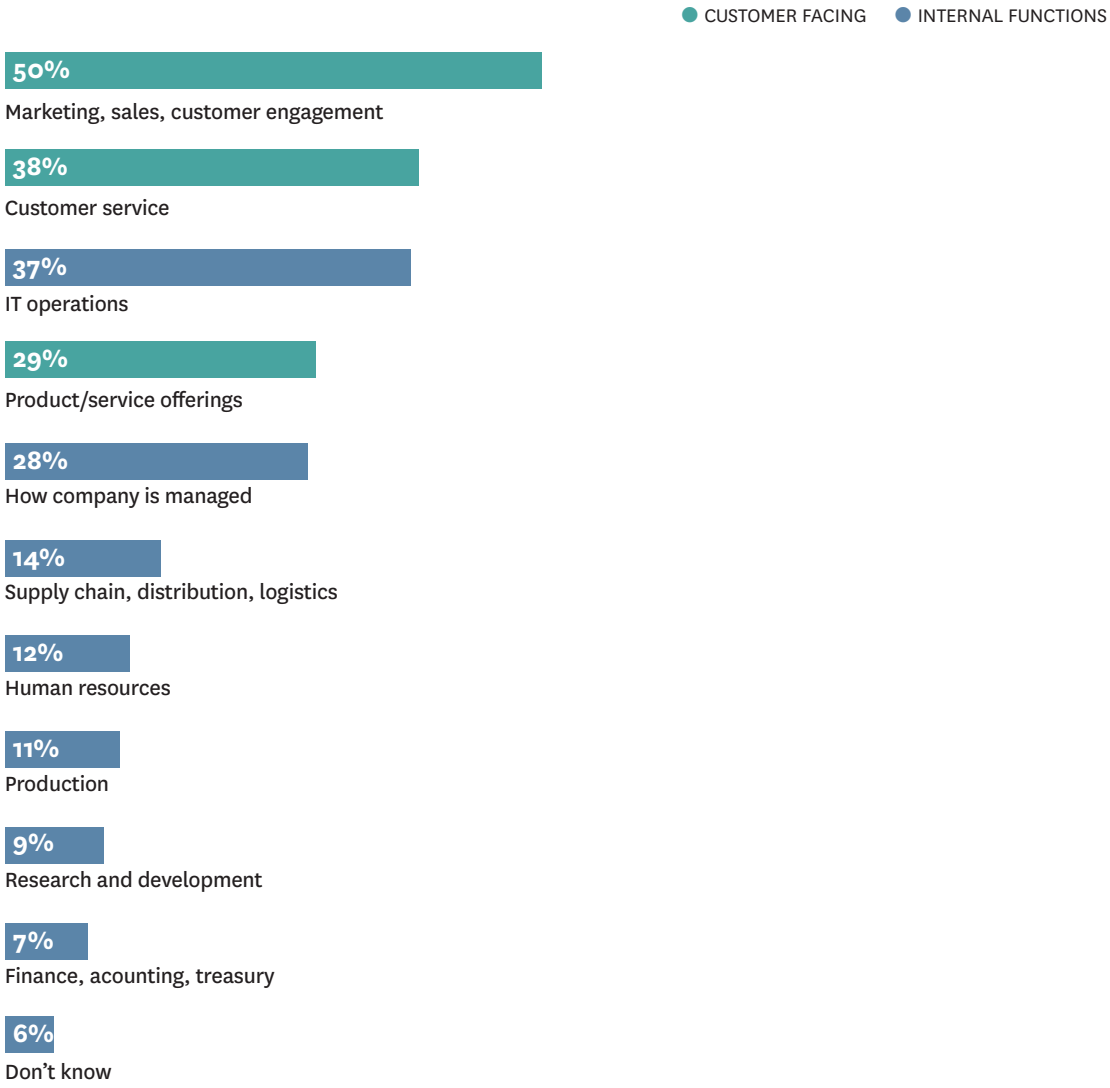
BIG DATA AND ANALYTICS: THE POWER TO DISRUPT

It can be argued that the other four technologies are all enablers for better analytics. While they each offer benefits, it's when they are combined with advanced analytics that the potential for disruption is the greatest. There is broad agreement across industries that so far advanced analytics have had the most

Figure 8

Mobile Tech: Greatest Impact on Customer Areas

Which parts of your business have been most significantly affected by your adoption of mobile technologies?



impact on marketing, sales, and customer engagement. For example, a large U.S.-based retailer is using information from its loyalty program to deliver custom offers to customers' mobile devices when they enter a store.

The impact of analytics on product and service offerings varies widely by industry. Only 17% of manufacturing respondents named it as one of the top three areas affected, compared with almost half (49%) of respondents in consulting/business services. Technology (40%) and financial services (39%) fell in between. Energy and utility companies are significantly more likely to see the impact of analytics in production, at 41%.

"Resistance to change" led the reasons why companies are not using advanced analytics—especially at Cautious companies. figure 9 Pioneers were much more likely to say either that it's not appropriate for their customers or market or that there's no proven ROI. Their greater experience with new technology adoption makes them less susceptible to resistance and savvier about what they take on, and why, when it comes to new technologies.

CLOUD: THE DEFAULT OPTION FOR MANY APPLICATIONS

Unsurprisingly, the impact of cloud computing is felt most strongly by IT, with 55% of respondents saying this is the most affected function. This rises to 76% of those working in the IT function itself. Of course, respondents from every function have a heightened sense of the impact of new technologies on their own area.

Figure 9

Reasons for Not Using Advanced Analytics

Why is your organization not currently using advanced analytics?

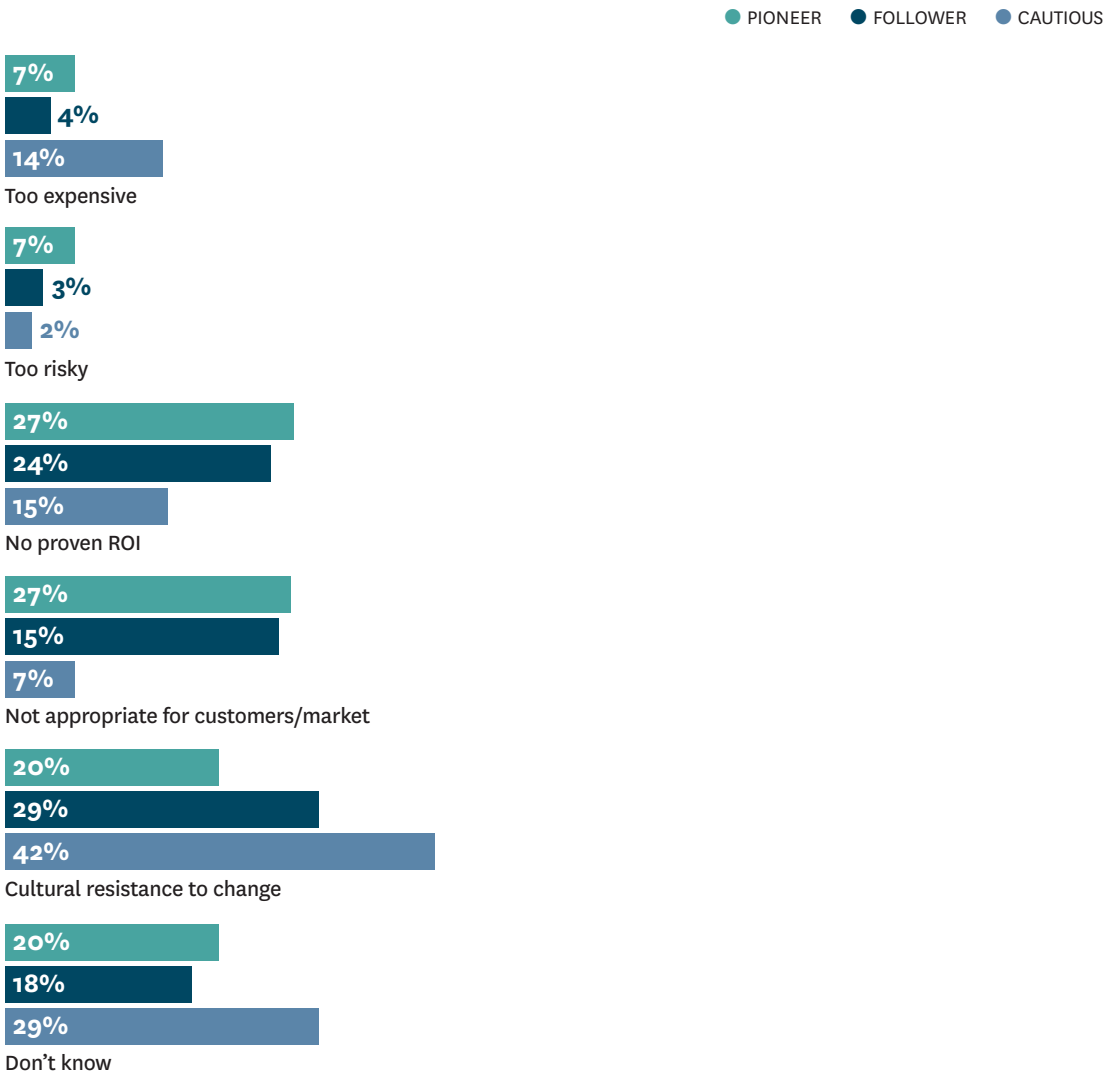
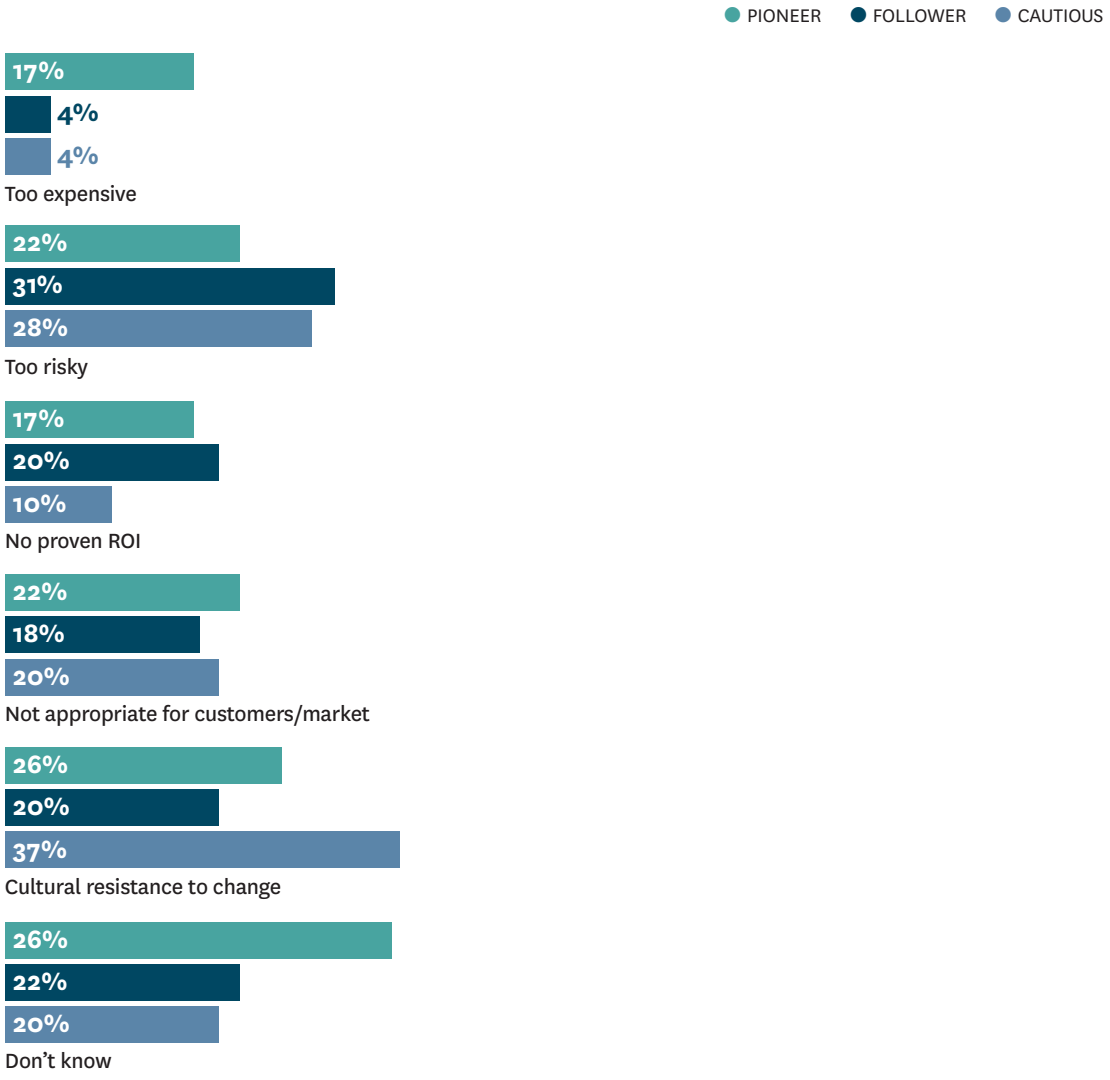


Figure 10

Reasons for Not Using the Cloud

Why is your organization not currently using cloud computing?



Among those not using cloud, resistance to change was the top reason given (cited by 30%). The riskiness of the technology was a close second, at 28%, with Followers giving it as their top reason. figure 10

Even those who are using cloud are concerned about data security, with over half (53%) believing it weakens security. Respondents from manufacturing (63%) and the public sector (60%) are most likely to have this concern, while HR leaders are least likely to worry that cloud weakens data security, at 41%.

Pioneers are as likely to be concerned about security as other businesses, but they don't let that stop them. Security is always a concern when adopting new technologies; Pioneers balance the risks and rewards and move forward anyway, factoring security in as part of their implementation.

The most intriguing finding is the correlation between the early adoption of new technology and company performance. Pioneers are growing faster than other companies.

MACHINE-TO-MACHINE (M2M) COMMUNICATIONS: THE SIXTH SENSE FOR BUSINESS

M2M, or the Internet of Things, is the least mature of the Big Five technologies, with just a fifth of respondents claiming significant adoption. It is most prevalent in energy and utility companies—over a third said they were using it extensively, largely driven by government-mandated smart meter rollouts. Least likely to be using M2M are organizations in the public sector and financial services.

After IT operations, the biggest area of impact is production, named by a quarter of respondents. Energy and utility companies (51%) and manufacturing companies (46%) are significantly more likely to see an impact here.

A multinational maker of alternative fuel technologies uses sensors to monitor and manage fuel systems on ships. "Our system is actually a chemical reactor system," said the COO. "It produces a product in real time that is injected into the engine based on need. Our system monitors the engine diagnostics, the throttle, the airflow. It monitors the system metrics of the engine and adjusts itself and its own chemical reactivity and production based on the need of the engine. That's all in real time, and it's driven by software, by new technology, by a really solid array of sensors." His company's value proposition has changed dramatically because of cloud, GPS, and global connectivity, he said. "We've been able to add value to our product with items like fleet management software, real-time GPS data, real-time global synchronization and product software updates, and the ability to manage our clients' product remotely around the world while they're running."

While today's cars already contain a lot of sensors and communication capabilities, the future will look very different, according to the automobile company CIO. By model year '16, all vehicles will be connected, but a lot has to happen to fulfill the promise of the connected car, he said. "You've got to build a very complex ecosystem of robust technology [vehicle-to-vehicle and vehicle-to-infrastructure] that can allow the Internet of Things to connect, to be updated and patched, and to keep the security to a level that's always evolving and keeping the bad guys out—at a price point that is very low. And you have to understand the value of that data."

The reasons given for not using this technology reflect its emerging nature; more than a third (36%) of those not using M2M said they didn't know why. There is tremendous potential in this technology for any business that sells physical products or operates with physical assets, but we are still on the very front edge of what it can do.

Obstacles and Enablers

While resistance to change was the primary reason given for not adopting new technologies in the first place, the biggest obstacle identified in being able to successfully leverage new technologies was legacy technology getting in the way—cited by 34% of respondents. This was especially the case for Followers (41%), companies in North America (40%), energy and utility companies (48%), and financial services companies (46%).

Given the complexity of systems in banking, change has to be more of an evolution than a transformation, according to the chief architect for the banking industry of a large enterprise software company. The managing director for a Latin American bank agreed. "The highest complexity is associated whenever you have to do a structural change in the technology platforms," he said. "You have to ensure that the modification is not going to have an impact on your customer base. We have around 21 million customers. So when you're implementing a new technology, a new platform, there is initially that [concern about] change."

Having to address different customer segments adds to the complexity. "Customers are fragmented," said the software company's chief architect. "We have to simplify on the back end and then build the integration points to be more flexible and responsive on the front end for a better experience." To understand what that should look like, his company starts with customer stories—how does a young man in his 20s, for example, research car loans? He might start the process on his tablet when he gets up in the morning and continue it over his smartphone or office computer later in the day. This is leading banks to pursue an "integrated omni-channel customer experience," he said.

A number of leaders interviewed for this report talked about the importance of "solutions architecture"—thinking much more holistically about opportunities as innovation happens, and looking not just at the technology requirements but at people and processes across multiple areas as well. To increase speed to market, a U.S.-based commercial real estate company will develop one-off solutions to address particular business opportunities. But instead of going straight from requirements to development, they step back to see if something similar might already exist elsewhere in the company. Conversely, they might find that the proposed solution will benefit another part of the business and should be developed with that in mind. They make sure to architect new solutions so they can be configured and scaled for other uses. "With the world moving so fast, we need to create the right touch points in the process," said the company's VP of IT. "The key to being flexible is to make sure you are having the right conversations to connect the dots."

Indeed, connecting the dots is what it's all about, and business and IT leaders need to rethink everything from a network perspective. The power of these new technologies comes not from what they can do on their own but rather from what they enable together. Social data would be just a lot of noise without advanced analytics. The benefits of mobility would be limited without the capabilities of the cloud. Companies' ability to compete successfully in this digital and connected world depends on the strength of the underlying data center and networking infrastructure.

Collaboration and a Culture of Change

Cautious companies are twice as likely as Pioneers to say their companies are risk-averse (37% vs. 18%), their business leaders can't envision what's possible with technology (32% vs. 16%), and their company cultures do not foster innovation (30% vs. 15%). This is a leadership problem, pure and simple, and CEOs and boards of directors should take note.

Fostering a customer-centric culture of innovation and change emerged as a critical enabler—and that has to start at the top. "The most important thing companies can do is build that culture of change," said a senior director of strategy and planning at an enterprise software company.

For the Australian retailer, that meant the CEO going out to stores and talking with customers directly and then publicizing that throughout the company. The message was clear—it's important to get close to and listen to customers. "We used simple symbols to demonstrate what the change needs to look like," said the head of the supply chain.

Figure 11

Degree of Shared Responsibility: IT and Business

	IT	MOSTLY IT	IT & BUSINESS EQUALLY	MOSTLY BUSINESS	BUSINESS
Application deployment	●	●	●	●	●
Data management	●	●	●	●	●
Application purchase	●	●	●	●	●
Evaluating new technology	●	●	●	●	●
Digital products	●	●	●	●	●
Application selection	●	●	●	●	●
Strategic vendor management	●	●	●	●	●
Application requirements	●	●	●	●	●
Business intelligence and analytics	●	●	●	●	●
Use of social media	●	●	●	●	●
Business process design	●	●	●	●	●

The infusion of technology into all aspects of business requires a new approach to identifying and developing opportunities. The Latin American bank uses "translators" who operate at the intersection of business and IT; the real estate company has established the role of "business partner"—a kind of next generation of the traditional business analyst role. These are "IT people embedded in the lines of business who participate in their meetings, help define roadmaps, and make sure projects are strategically aligned so we can execute against that," said the VP of IT. "They're part of the leadership team for that part of the business." The result has been that IT is now seen as a strategic partner providing value—not as overhead that the business has to carry.

Shifting to a customer focus means that all parts of the business have to work more closely together. The Australian retailer has a matrix structure in which support functions sit with business managers in

category teams in an open-office environment. “Communication is simplified; we’re very connected,” whether in person or through the use of smartphones and tablets. The real estate company addresses this by having some IT people aligned with specific lines of business and others—the solutions architects—working across multiple areas of the business.

This closer collaboration is critical as business leaders become more involved in technology strategy decisions. A full quarter of respondents are very involved in making such decisions, with another 48% being somewhat involved. This is significant, given that less than 10% of the people participating in the study said that they work in the IT function. The more senior the leader, the more likely he or she is to be very involved, with 42% of executive leaders very involved, compared with 30% of senior managers and 14% of other managers.

The research also shows a shifting and blending of roles for technology-related activities. figure 11 Business units are mostly or completely responsible for business process design and optimization at 63% of respondents’ companies. IT is more likely to be responsible for evaluating, acquiring, and deploying new technologies.

When it comes to data, business is most likely to be responsible for business intelligence and analytics as well as the use of social media, while IT is mostly responsible for overall data management. It appears that business leaders are taking on more of the value-adding work, which IT enables with technology and infrastructure. It may also be the case that some respondents might not know the extent to which IT is involved. For example, CIO surveys show IT is much more involved in business process design.

The roles in determining requirements, selecting new applications, developing new digital products, and managing strategic vendor relationships are less clearly delineated. Clearly, the ability to collaborate effectively across functions is a critical success factor in the evolution to a more digitally enabled, connected enterprise.

A quarter of all companies, including Pioneers, said that they lack good mechanisms for prioritizing IT investments. This is perplexing, given the demand for new technology capabilities and the realities of finite budgets. It may be that traditional approaches to assessing and funding IT are not sufficient when it comes to digital innovation. “You have to change the game,” said the CIO of the automobile company, who hosts innovation fairs in which ideas are presented and selected, and then domain experts are paired with IT experts to develop prototypes. “Now we’ve got business leaders saying, ‘I want to fund this.’ We’re engaging the business in a way that they’re part of the solution, they see the excitement, they see the capabilities, and they want to invest in it.” An important part of the CIO’s role is to be the catalyst for this vision casting, leading from behind and letting business leaders assume ownership of new solutions.

Conclusion

The competitive advantage gained by adopting new technologies can be fleeting as other companies catch up and potentially avoid the challenges Pioneers faced. To stay ahead requires constant innovation and the ability to adapt to new realities. “Our goal is not to worry so much about the competition but rather to worry about staying ahead of a curve, so we’re constantly innovating,” said the alternative fuel technology company COO. “We’re constantly talking to our clients about their value needs and striving to fulfill them with a product.”

In large organizations, getting that right requires tapping into expertise, insights, and capabilities from across the enterprise. Companies that operate in functional silos or segregate IT from the rest of the business are at a significant disadvantage.

Leaders need to rethink everything from a network perspective. The power of these new technologies comes not from what they can do on their own but rather what they enable together.

In some instances, radical innovation across the company might just be too complicated. "Being a conglomerate, we can be slow to react to competition," said the CFO of the healthcare device manufacturer. His parent company identified an emerging business opportunity that would draw on the capabilities of three of its existing businesses. Company leaders determined that they could move faster by creating a "company within the company" to focus on this new opportunity than by trying to get the different business units to work together.

Being adaptive requires having people who can act on their own, within the context of a clearly ingrained culture. "If you're going to switch to a really agile mentality," said the director at the cloud services provider, "not only do you have to hire smart people, but you also have to hire smart people who have really good judgment. And that's hard."

New technology can provide a genuine competitive edge, but today's business environment is dynamic, with both technology capabilities and customer expectations shifting from day to day. Companies need to become more adaptive and make innovation part of their culture. The whole innovation cycle—from generating new ideas to refining and implementing the best—has to be a continual process that taps into an ecosystem of employees, partners, customers, and suppliers.

Methodology and Participant Profile

A total of 672 respondents completed the survey, including 509 who are members of the Harvard Business Review Advisory Council.

PARTICIPANT PROFILE

Size of organization
Only organizations with more than 1,000 employees (U.S.-based) and more than 500 employees (non U.S.-based) took part in the survey. Forty-one percent were in organizations of fewer than 5,000 staff, and 46% were in organizations with more than 10,000 staff, with the remaining 13% having 5,000–9,999 people. Thirty-six percent of companies had 2013 revenues of $5 billion or more. Thirty-three percent of organizations generated less than $1 billion.

Seniority
A fifth (19%) of respondents were executive management or board members, and just over a third were senior management (36%), with a similar proportion (31%) being middle management. Fourteen percent came from other grades.

Key industry sectors
The technology sector provided 16% of respondents. Twelve percent were in manufacturing, consulting/business services, financial services, or public sector organizations; 11% were in healthcare, and 9% were in energy/utilities. Other sectors were each represented by 4% or less of the respondent base.

Job function
Eighteen percent of respondents were in operations or management, 14% were in sales/marketing, 11% were in HR or training, 9% were from IT, and 8% were from finance. Other functions were represented by 6% or less of the base.

Regions
Thirty-seven percent of respondents were from North America, a quarter (25%) were from Asia, and a similar proportion (22%) were from Europe. MEA and South/Central America provided 8% each.

Sponsor's Perspective

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ANTHONY RECINE

SENIOR VICE PRESIDENT AND CHIEF MARKETING OFFICER

VERIZON ENTERPRISE SOLUTIONS

This report explores the connection between adoption of new technologies and business performance, focusing on cloud, mobile, advanced analytics, and machine-to-machine (M2M) communications. It provides compelling evidence that a company's attitude toward new technology correlates with its competiveness: 64% of respondents who identified their company as a Pioneer also said they were ahead of the competition; just 39% of those from Cautious companies felt the same.

Pioneers also lead when it comes to growth. One in five Pioneers reported growth rates of more than 30%. Only 10% of Followers could match that; and the numbers of Cautious firms seeing such growth were even lower. Indeed, Cautious companies were the most likely to have not grown at all.

As you'll see, Harvard Business Review Analytic Services' analysis indicates that the first-mover advantage is quite significant. And so companies that constantly lag their competitors in embracing new technology are likely to be putting themselves at a major disadvantage.

It's unlikely to come as a surprise that we at Verizon believe in the power of technology; it's what we do. What's possible when you start combining mobile, social, advanced analytics, and M2M communications using advanced networks and cloud computing is truly amazing. From reducing downtime through proactive maintenance, to revolutionizing healthcare—quite literally saving lives.

This report suggests that not only are Cautious companies behind now, but they also are likely to stay behind. Respondents from Cautious companies were twice as likely as those from Pioneers to say their business leaders can't envisage what's possible with technology.

We're more optimistic about the future. Pioneers are growing rapidly and building a competitive advantage, but if watching IT transform businesses has taught us anything, it's that everybody is at threat of disruption. And it's not just small start-ups doing the disrupting. In many industries, established players have shown how they can reinvent themselves with the help of new technologies.

As this research shows, cloud computing, a source of massive disruption just a couple of years ago, is now mainstream—though still revolutionizing the delivery of IT services. And even established technologies are changing. The humble network, something that's been around for decades, is transforming at great speed in order to be able to join all these technologies together and support the enormous growth in data that we all expect to see.

The lesson is that it's not too late to become a Pioneer, as the pace of change isn't slowing down. While respondents said that they've already seen significant change, they also said that they expect to see even greater change over the next three years. Your attitude toward adopting new technologies is likely to remain a strong indicator of business performance for years to come.

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