

A HARVARD BUSINESS REVIEW ANALYTIC SERVICES REPORT



**Harvard
Business
Review**

COMPETING IN 2020: WINNERS AND LOSERS IN THE DIGITAL ECONOMY

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Digital transformation is fundamentally changing people's lives and the ways companies do business. Around the world, we're working to develop solutions that give time back, make us safer and healthier, and bring significant environmental benefits. People around the world are working hard to create a future where we're never delayed during air travel due to mechanical issues. Where smart buildings have ambient intelligence that allows meeting rooms to adjust to your preferences. They're envisioning a world where automobile accidents are almost nonexistent, and your car becomes a living room or office on wheels. And a world where medical treatment is personalized based on your DNA, dramatically improving your health and quality of life. This is what Microsoft calls the digital difference.

We asked Harvard Business Review Analytic Services to help us look at the pace of innovation and how prepared business leaders are for this change. We also wanted to know what projects mattered most and what industries were most receptive to and ready for change.

We were surprised by the strategy gap and encouraged by the optimism. Business leaders know their industries are ripe for transformation, and in most cases are eager to bring the benefits of technology to their businesses.

At Microsoft, we aim to partner with business leaders to find the digital difference they can make. Partnering with companies of all sizes, we recognize that one big idea isn't enough anymore. Decades ago an innovative shoe design, a beautiful device, or smartly designed software could lead a company to achieve market dominance for a long time. But now micro revolutions occur every 12-18 months, so companies must be in a continual state of transformation.

We are moving into a time when rapid innovation and speed to market are more critical than ever. This makes the partnership between humans and machines critical—when we combine people's ideas and creativity with advanced technology, we get digital leadership.

A business leader interviewed for the study said we need to transform “the engine of the company.” To do this, leaders need to bring in tech and cultural changes that empower their employees, engage customers in new ways, optimize operations, and transform products. Rebuilding an organization around these areas creates a fully digital company that can change ahead of its customers and competition.

COMPETING IN 2020: WINNERS AND LOSERS IN THE DIGITAL ECONOMY

If digital disruption can be viewed as a wave sweeping over industries, most are in the crest of that wave or soon will be, according to new research from Harvard Business Review Analytic Services. A vast majority (80 percent) of the 783 survey respondents believe their industry will be disrupted by digital trends. And most of those (84 percent) said their industry has either passed the inflection point of disruption or will pass it by 2020—just three years away. However, just which businesses will be the winners and losers in this digital economy is still being determined. Companies that form their strategies now, shift resources to new digital initiatives, and redesign their organization and culture will have a distinct advantage. Digital transformation is real and widespread, and while not all organizations are ready for it, surprisingly most business leaders see this as an opportunity rather than a threat.

Nearly half of the respondents say their organization's traditional business model will be obsolete by 2020, yet the new models and strategies are still evolving. Fewer than half of respondents have a fully formed digital strategy—surely a cause for concern, given the imminent threat of disruption most organizations say they face. Some of that is by design: With things changing so quickly, companies may value flexibility over formal planning as they take a test-and-learn approach. Others have pushed innovation out to the edges of their organization for more local relevance.

However, once a company goes all-in, with a major commitment to digital as a key revenue driver, it is more likely to elevate and centralize digital efforts. According to the survey, digital leaders (organizations where most of the products and operations depend on digital technologies) are significantly more likely to have developed and communicated a formal digital business strategy. They are also more likely to have the CEO at the helm of their digital transformation.

Most respondents recognize the opportunities the digital revolution is bringing, with the two biggest prizes being enhanced customer relationships and greater value chain integration. The highest digital priority, by far, is creating an exceptional, highly relevant customer experience. This is good news for consumers and business customers alike, as it foreshadows an era of customer-centered business.

The next-highest priorities are enhancing operations for greater intelligence and speed, and transforming existing products and business models to be more information-based (rather than replacing them with something altogether new). In other words, most plan to transform the things they're already doing rather than do something radically different.

Asked to identify the most significant barriers to their efforts over the next three years, most respondents named restructuring how the business is organized and managed. What this means varies from one enterprise to the next. It runs the gamut from shifting digital revenue streams from a central unit out to divisional P&Ls to a heavy reliance on cross-functional project teams for new initiatives. Pressed for time and short on resources, many organizations opt to forgo major reorganizations in favor of this more expedient and organic approach. Silos still exist, but they've become much more porous.

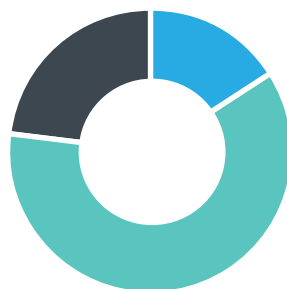
Resistance to change among managers and employees followed closely as a major barrier. Digital leaders attack this challenge with a lot of communication and dialogue about not just what is happening but why: what it means to the company, the role of particular groups or individuals, and how they will benefit.

By 2020, we are likely to see some thinning of the field across industries. While non-digital companies recognize the change that is coming—nearly three-quarters say their industry will be disrupted by digital trends, and 60 percent say that is likely to happen within the next three years—they are not participating in the digital economy. [figure 1](#) Over the next three years, while digital leaders are realizing and quantifying the benefits of their digital investments, hybrids should focus their efforts and bring them closer to the core of the business. Non-digitals should make it an urgent priority to find their place in the new digital landscape.

FIGURE 1

FEW ORGANIZATIONS ARE HIGHLY DIGITAL

Percentage of respondents who said their organization is mostly dependent on digital technologies



16% DIGITAL

MOST PRODUCTS/OPERATIONS DEPEND ON DIGITAL TECHNOLOGIES

61% HYBRID

SOME PRODUCTS/OPERATIONS DEPEND ON DIGITAL TECHNOLOGIES

23% NON-DIGITAL

FEW IF ANY PRODUCTS/OPERATIONS DEPEND ON DIGITAL TECHNOLOGIES

SOURCE HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2016

While non-digital companies recognize the change that is coming—nearly three-quarters say their industry will be disrupted by digital trends, and 60 percent say that is likely to happen within the next three years—they are not participating in the digital economy.

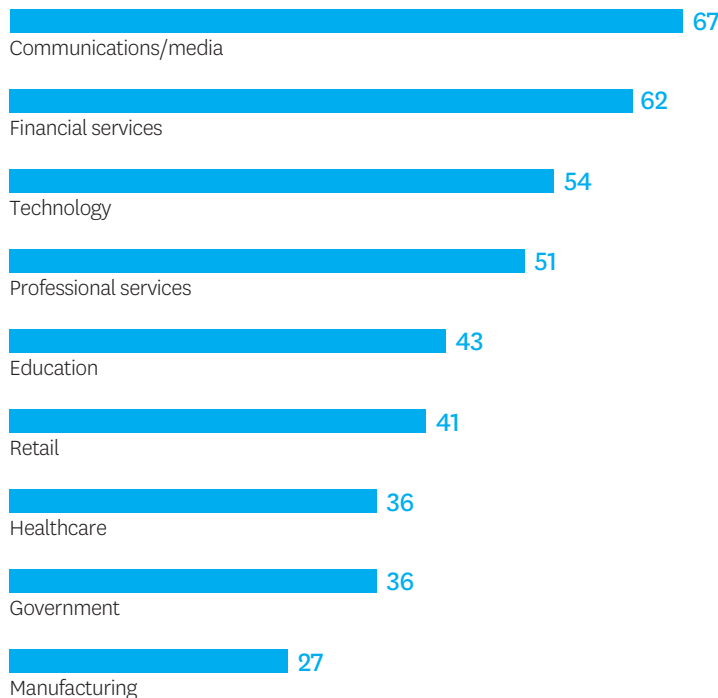
2020: THE CREST OF THE DIGITAL WAVE

The market has moved quickly from talking about digital transformation to doing it. This has been precipitated by business leaders' growing understanding of the disruptive nature of digital trends. A full 80 percent expect their industry to be disrupted by digital. Forty-four percent say this disruption is very likely. This “very likely” number shoots up significantly for certain industries: communications/media companies (67 percent), financial services (62 percent), and technology companies (54 percent). [figure 2](#)

FIGURE 2

DISRUPTION “VERY LIKELY” FOR SOME INDUSTRIES

Percentage indicating how likely it is that their industry will be disrupted by digital trends

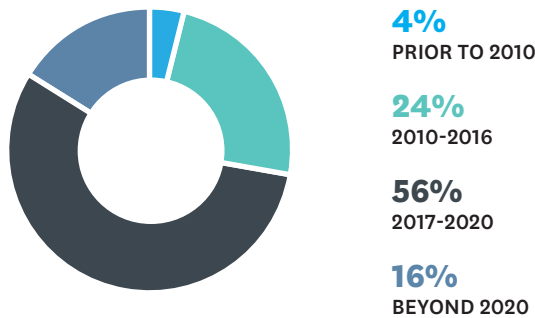


SOURCE HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2016

FIGURE 3

DIGITAL INFLECTION POINT IS IMMINENT

Percentage indicating their industry has already reached its point of disruption or will within the next three years



SOURCE HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2016

Respondents don't just see disruption as likely; they believe it is imminent. Twenty-eight percent of respondents said their industry has already passed the digital inflection point, with another 56 percent saying that will happen by 2020. [figure 3](#)

Creating a real sense of urgency here is that, overall, 47 percent of respondents believe their traditional business model will be obsolete by 2020. This should be of particular concern to the 36 percent of non-digital respondents that hold this view. To date, these firms have developed few if any digital capabilities, and will likely be caught short.

However, saying that a traditional business model will be obsolete does not necessarily mean it will be retired. Many business leaders expect their old business model to coexist with the new for some time to come. For example, the head of insight for a global media company believes that their main business (broadcast TV) will still produce the majority of the company's revenue 10 years from now. But they also have to be a leader in on-demand viewing, which is growing increasingly important. This raises two main challenges: how to get the timing right as your business plans for the future, and how to manage and support two different models with existing resources.

Some industries anticipate fairly dramatic shifts. For instance, the business model for commercial truck manufacturers could be radically different once self-driving autonomous vehicles become the norm. Will companies that currently operate their own fleets of trucks opt instead to lease shipping services from truck manufacturers, resulting in fewer truck sales? The head of product planning in Asia for a commercial vehicle company said, "Things are changing very fast, but it's unclear how quickly people will shift to driverless vehicles."

Some go so far as to predict an Uber-like model for trucking, but the COO of an early-stage logistics company in Asia doesn't see his large, fast-moving consumer goods customers making that shift anytime soon. "You can't do Uber when you need 5,000 trucks a month," he said. "They need consistency and reliability. It doesn't work quite the same way as Uber."

Twenty-eight percent of respondents said their industry has already passed the digital inflection point, with another 56 percent saying that will happen by 2020.

A European commercial catering and food-service company is making a shift from a purely B2B model to B2B2C. This company operates cafeterias and restaurants for businesses and other organizations such as hospitals, schools, and corrections facilities. In the past, the company had little direct contact with the largely captive-audience diners that it served. But “digital is a major enabler of engaging consumers,” said the company’s CEO. “We can now link to them directly through their mobiles”—especially with their business clients. This has tremendous implications for the company’s business model, starting with a shift to more of a concession-based logic (a model the company already employs in operating restaurants in airports, railroad stations, and motorways). In these cases the company assumes more of the risk, which it manages by engaging directly with consumers on what they want and how to price things. “We go to the businesses and say, ‘Let me open a restaurant and take the risk of managing it.’” Because of the direct connection with consumers, “we can use pricing levers in ways we couldn’t before.” This new model is most relevant in work communities rather than hospitals, schools, and certainly corrections facilities.

Of course, managing multiple business models complicates operations. “We try not to duplicate costs, so people work in a matrix,” said the CEO. Once the new model reaches critical mass, it will be funded and resourced more fully. “It’s complicated operationally in the meantime.” Similarly, the global TV company is stretched thin as it tries to devote sufficient resources to innovation in digital while those same people maintain the existing business. While more than half of respondents (57 percent) say their company has shifted assets (funding, people, and other resources) away from legacy lines of business to support new digital business models, only 9 percent say the extent of this shift has been substantial (moving 50 percent or more of assets to digital), with another 30 percent claiming the shift to be significant (moving 25 percent or more). Not surprisingly, digital leaders are more likely to say they have shifted assets (72 percent) and to describe the extent as substantial (15 percent) or significant (49 percent).

Of course, business leaders want to know their investments will pay off, and proving the value of new digital initiatives isn’t always easy. A Mexican food producer is planning to shift significant spending from traditional advertising channels to digital—from 10 percent last year to 40 percent in the year ahead—based on exceeding expectations for consumer engagement in digital channels. “The mindset internally has changed dramatically, from digital being a nice complement to our marketing to being a key driver of brand creation,” said the company’s chief marketing officer (CMO). However, they have yet to prove that this greater engagement drives actual sales. So to make sure the investment is worth it, the company is working with a couple of partners to directly link online engagement to the point of sale. “We’re assessing our level of investment in traditional media to see how fast we can move to digital,” said the CMO.

STRATEGY AND LEADERSHIP

Fewer than half of respondents (47 percent) say their organization has developed and communicated a formal business strategy for the digital future—surely a cause for concern, given the imminent threat of disruption most organizations say they face. This varies significantly, depending on organizations’ position on the digital spectrum. For example, 72 percent of digital leaders have a formal strategy versus only 49 percent of hybrids and 24 percent of non-digitals. [figure 4](#) It’s time for these organizations to move beyond experimentation and think seriously about their place in the digital economy.

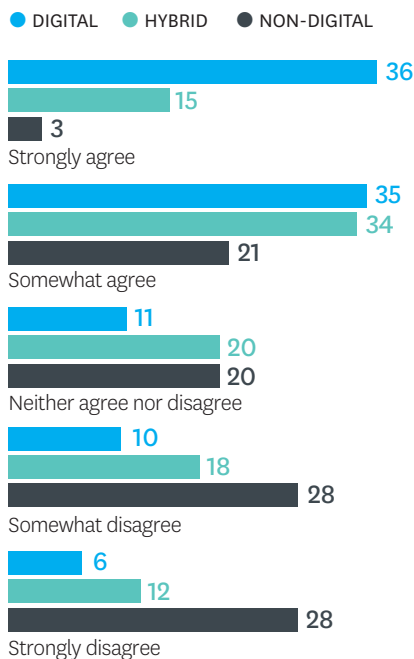
There is some variation in this by industry, with 70 percent of technology companies and 58 percent of financial services firms having a formal business strategy. Government, healthcare, and retail are the least likely to have a digital strategy, at 27 percent, 34 percent, and 39 percent, respectively. That could be about to change, especially in retail. A global fashion retailer is holding a meeting of its top executives from around the globe to discuss the company’s future business model.

Timing is everything. Until two years ago, there was a clear mandate from the CEO of the Mexican food producer not to invest in digital marketing. When it became clear that consumers were migrating online and increasingly using social and mobile channels, the company ran some digital

FIGURE 4

DIGITAL FIRMS HAVE A STRATEGY

Percentage indicating that their organization has developed and communicated a formal business strategy for its digital future



SOURCE HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2016

tests. In mid-2016, faced with unexpectedly high digital engagement from consumers, the CEO announced a broader initiative and strategy—not just the fourfold increase in digital marketing, but investments in distribution and digital engagement with consumers in stores as well.

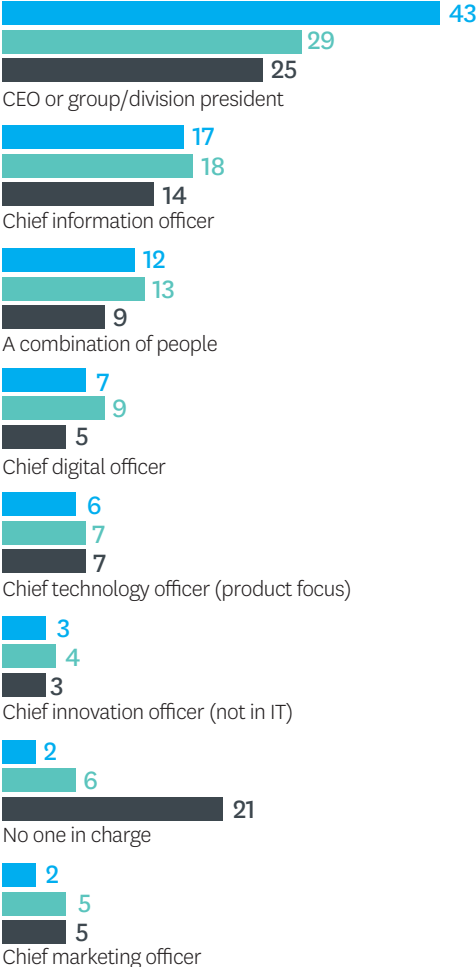
Overall, a third of organizations say their CEO leads digital transformation efforts—more than any other position. This is especially the case at digital leader companies, where 43 percent say the CEO is in charge. The closer digital efforts get to a company’s core business model and revenue streams, the more likely the CEO is to lead. In contrast, a fifth of non-digitals have no one in charge. [figure 5](#)

FIGURE 5

HOW DIGITAL TRANSFORMATION IS LED

Percentage indicating who in the organization is leading the digital transformation

● DIGITAL ● HYBRID ● NON-DIGITAL



SOURCE HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2016

The digital revolution offers exciting opportunities for those willing to assume some risk. In fact, 86 percent of respondents view digital disruption more as an opportunity than as a threat to their business.

The CIO is the second-most-likely executive to lead digital transformation at 17 percent. However, even when the CIO is not leading, he or she is central to most firms' digital efforts. Overall, two-thirds of respondents (67 percent) see their IT leader as essential to digital transformation.

Even non-digital firms believe this to be the case. This is a positive finding, as research from the MIT Center for the Digital Economy shows that the most successful firms have highly collaborative relationships between IT and whomever is primarily accountable for digital.

This mandate changes the role of IT in various ways. CIOs are reassessing priorities and changing the way they run IT. For example, the CIO of the large events business is outsourcing or moving to the cloud anything that doesn't contribute directly to the company's competitiveness (things like HR systems and expense management).

OPPORTUNITY IN THE AGE OF THE CUSTOMER

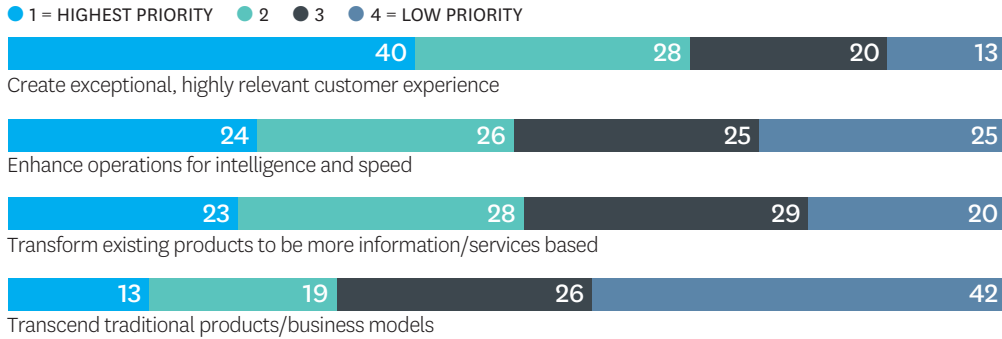
The digital revolution offers exciting opportunities for those willing to assume some risk. In fact, 86 percent of respondents view digital disruption more as an opportunity than as a threat to their business. Sometimes that means creating something completely new. For example, the early-stage logistics company in Asia aims to displace existing third-party logistics companies using a digital platform and apps to create the first open-book marketplace for shippers and transporters. "The existing model is closed-book, with a lot of hidden margins built in," said the company's COO. Proof of delivery (POD) is still paper-based, which delays payments to transporters by weeks or months. When there is an open marketplace for bids, all transporters have the opportunity to bid on a job. This lowers prices for shippers, and improves utilization for transporters, who are more likely to be able to pick up a return shipment (or back haul). Once shippers begin to accept electronic POD, they'll get paid faster too. This will happen sooner in countries like India, which is moving to digital faster than other markets like China or Indonesia. In the future, incorporating blockchain into shippers' apps will provide a more reliable and secure means to confirm and approve delivery, manage invoicing, and process payments.

The primary focus for most organizations' move to digital has been to create an exceptional, highly relevant customer experience, with 40 percent of respondents naming it their number one priority—nearly twice the percentage of those who named it the next-highest ranked priority. [figure 6](#) Financial services companies were most likely to name it their top priority at 52 percent, while government and manufacturing were least likely at 24 percent and 26 percent, respectively. Overall, nearly three-quarters of respondents (72 percent) expect the shift to digital to create closer relationships with customers.

FIGURE 6

EXCEPTIONAL CUSTOMER EXPERIENCE IS HIGHEST DIGITAL PRIORITY

Percentage of respondents who ranked the following as a priority for their organization



SOURCE HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2016

For the large events business, that means providing the ability to do as much as possible online, from placing orders to approving graphics, and being able to customize that according to individual clients' preferences. "And it has to be ridiculously easy," said the company's chief information officer (CIO), with the standard for the experience being set not by competitors but by digital leaders in the technology space. The company has hired a creative consultant to "help us envision what some of those cool things are," such as virtual fly-throughs of events spaces and 3-D printing of components.

The global fashion retailer is using a technology that had been tried and abandoned by other retailers—RFID—combined with consumer technologies like tablets to enhance shoppers' experience in stores. In Poland, items are scanned when they arrive in the store and again at checkout for real-time stock management, according to the general manager. Because the online channel is integrated, store clerks equipped with small consumer devices can offer customers sizes or colors that might be out of stock in the store from their "virtual stockroom." The company is testing a smart fitting room concept in its home country, with both RFID scanners and tablets built into the fitting room walls. Items are scanned automatically as a shopper enters the fitting room, and if the item isn't the right size or color, rather than having to dress to go get another, the shopper just touches a button and a shop assistant will bring the desired items. In the future, this company expects virtual or mixed reality to help increase sales by showing shoppers an entire look to go with the dress they've tried on.

ENHANCED OPERATIONS AND VALUE CHAIN INTEGRATION

While new business models and new ways of engaging customers get most of the attention in digital transformation, companies that are gaining maturity in digital understand that succeeding in those areas also requires changes to operations. Creating exceptional, differentiating customer experiences requires operations that are enhanced for greater intelligence and speed.

The director of digital at a luxury brand company headquartered in Europe sees it this way: The first age of digital was just connecting with customers online. The second age focused on the customer journey and creating a seamless experience across channels. She sees the third age being the transformation of other functions—“the engine of the company,”—to “shorten the path from product conception to production to distribution.” In other words, it’s being able to give customers what they want almost before they know they want it. In fact, retailers are more likely than most other industries to prioritize this, at 35 percent compared with 23 percent overall. (Government ranked this the highest, with 45 percent naming it their number one priority.)

The Chinese division of a global food company has invested heavily in factory automation over the past five years. The division has reduced costs by being able to “significantly downsize the labor force in plants,” said the head of finance and IT. “At the same time, we’ve invested in business intelligence and big data, improved processes and forecasting on the demand side, and optimized the supply chain to further improve financial performance.”

One of the edges digital leaders have over hybrids and non-digitals is the degree to which they use data and analytics—both to understand what customers want and to improve operations and forecasting. There is a significant performance gap here between digital leaders and the rest, with 84 percent of leaders saying they currently use big data and analytics, compared with only 34 percent of non-digitals, and 51 percent saying they use cognitive computing/AI, compared with only 7 percent of non-digitals. Digital leaders are three times as likely as non-digitals to have specialized skills like data science and data engineering on staff (62 percent versus 20 percent) and more than twice as likely (76 percent versus 30 percent) to say all professionals in the organization have the ability to work with and make sense of data and analytics. A strong analytics capability is key to digital business, and it’s not something that can be spun up overnight. Companies that want to remain competitive in the digital economy will have to invest in the people, processes, and technology of data and analytics.

Manufacturing and technology companies are more likely to prioritize transforming their existing products and business models with information (33 percent versus 24 percent for respondents overall). Creating intelligent products enables manufacturers to offer a whole new set of services—predictive maintenance, for example. Sixty-seven percent of manufacturers ranked this either number one or number two.

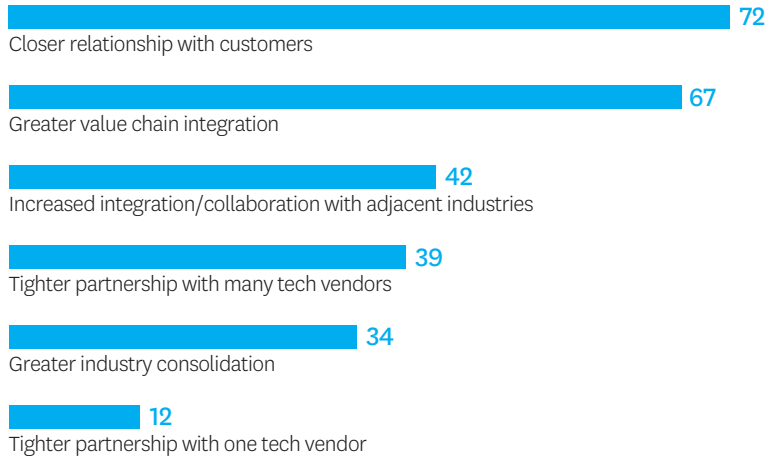
Digital also makes it possible for businesses to operate more easily as part of an extended business ecosystem or value chain. Two-thirds of respondents (67 percent) expect digital to enable greater value chain integration. [figure 7](#) The logistics company in Asia wouldn’t have a business model without this capability.

Innovation, invention, and change all involve risk, and digital leaders are significantly more open to taking risks in pursuit of new digital business opportunities than are hybrids and non-digitals. More than half (54 percent) make this claim, compared with only 19 percent of non-digitals and 37 percent of hybrids. [figure 8](#) A global internet company builds risk-taking into its culture, according to a head of brand marketing in Europe. This is supported by stories about the value of taking a risk and failing fast. “We get those messages and stories out there that it’s OK to try and fail. This goes all the way up to senior management.” The company runs on design thinking and a minimum viable product approach. “We get something in front of customers fast and learn from that.”

FIGURE 7

FIRMS AGREE ON DIGITAL SHIFT'S MAIN EFFECTS

Percentage of respondents who cite how the shift to digital will affect their company or industry

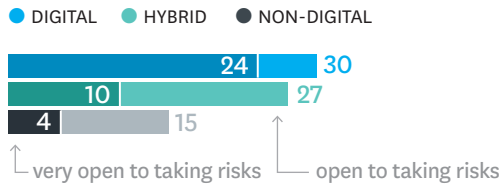


SOURCE HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2016

FIGURE 8

HALF OF DIGITAL FIRMS ARE OPEN TO RISKS OF DIGITAL OPPORTUNITIES

Percentage of respondents open to taking risks in pursuit of new digital opportunities



SOURCE HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2016

DIGITAL REQUIRES RESTRUCTURING AND COLLABORATION

Shifting to new digital business and operating models requires significant changes in many aspects of the business—skills, technology, organization structures, and more. Asked to identify the most significant barriers to their efforts over the next three years, most respondents named restructuring how the business is organized and managed. [figure 9](#) Digital leaders were almost as likely to name this as were others. The challenge of doing this cannot be overestimated—in large part due to the second-greatest barrier: resistance to change among managers and employees.

FIGURE 9

BARRIERS TO FUTURE TRANSFORMATION

Percentage of respondents citing obstacles to digital transformation



SOURCE HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2016

The need for restructuring results from the fact that digital requires collaboration across traditional silos. This starts at the top, in the C-suite, and continues down through the organization. Digital leaders are tackling the hard work of reorganizing away from traditional silos, functions, and hierarchies to encourage more collaboration and coordination (77 percent are doing this compared with 62 percent of hybrids and only 40 percent of non-digitals).

Given the urgency to get digital efforts under way, large-scale restructuring is often superseded by more expedient means: more regular engagement between C-level peers and conversations across functions at multiple levels. “Collaboration is key,” said the CIO at the large events business. “Organization structures don’t change as fast as we’d like. It comes down to reaching out and creating relationships.” Indeed, the ability to collaborate was named one of the top two skills necessary for organizations’ success in 2020.

Given the urgency to get digital efforts under way, large-scale restructuring is often superseded by more expedient means: more regular engagement between C-level peers and conversations across functions at multiple levels.

It's becoming common practice to use cross-functional teams to take on a specific problem for a period of weeks or months, then to dissolve them. New teams are formed as new challenges and opportunities arise. "We have too many silos today," said the head of insight at the global media business, which makes regular use of such cross-functional project teams. Increasingly, though, "we don't worry about which silo you're from. My team reports into marketing, but no one thinks that way. Roles, responsibilities, and reporting lines are more fluid than they used to be." Rather than focus on the mechanics of organizational design, this company has put effort into building a culture of collaboration and investing in people. "We can see it paying off now."

Such an approach requires a different mindset. The global internet company hires people who "thrive on chaos, are open-minded, and get energy from change," said the head of brand marketing.

Digital leaders also use financial levers to drive this change. For example, until recently, the global fashion retailer's online operations were run as a separate entity from headquarters. Today online revenue is recognized as part of country managers' P&Ls. This move has accelerated store managers' buy-in to using consumer devices to incorporate online inventory as their "virtual stockroom," said the general manager in Poland. "We spent lots of time working to change the mindset, and the results have been phenomenal," he said, with Poland delivering the highest growth in sales by such devices.

NEW WAYS OF WORKING: SKILLS, TOOLS, AND EMPOWERMENT

Non-digital firms are more than twice as likely as digital leaders to cite a lack of digital skills as a barrier over the next three years (49 percent versus 21 percent). Broken down by function, marcom professionals are the most likely to name this a top barrier at 56 percent. From an industry perspective, retail is most worried at 48 percent while financial services firms are least worried at 27 percent.

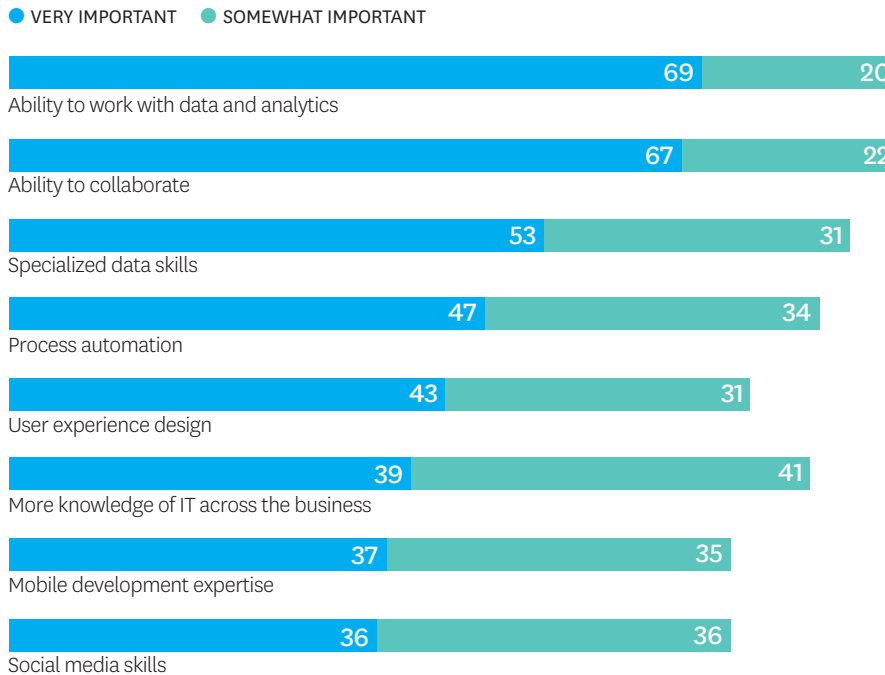
The skills that respondents deem most critical for success in 2020 are 1) the ability of all professionals to work with data and analytics and 2) the ability to collaborate with a variety of people and organizations; both were rated as important by 89 percent of respondents. [figure 10](#)

Digital leaders have a significant edge over their hybrid and non-digital rivals when it comes to these critical skills, with 76 percent saying that professionals across their organizations have the ability to work with data and analytics, compared with only 30 percent of non-digitals and 59 percent of hybrids. Non-digitals perform better when it comes to collaboration, at 56 percent, but this still trails the leaders (72 percent). There's a huge gap in skills for both user-experience design expertise (68 percent of digital leaders have this skill compared with only 11 percent of non-digitals

FIGURE 10

MOST IMPORTANT SKILLS FOR 2020

Percentage of respondents who cite how important each will be for their organization's success in 2020



SOURCE HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2016

and 39 percent of hybrids) and specialized data skills like data science and data engineering (62 percent versus 20 percent and 46 percent, respectively).

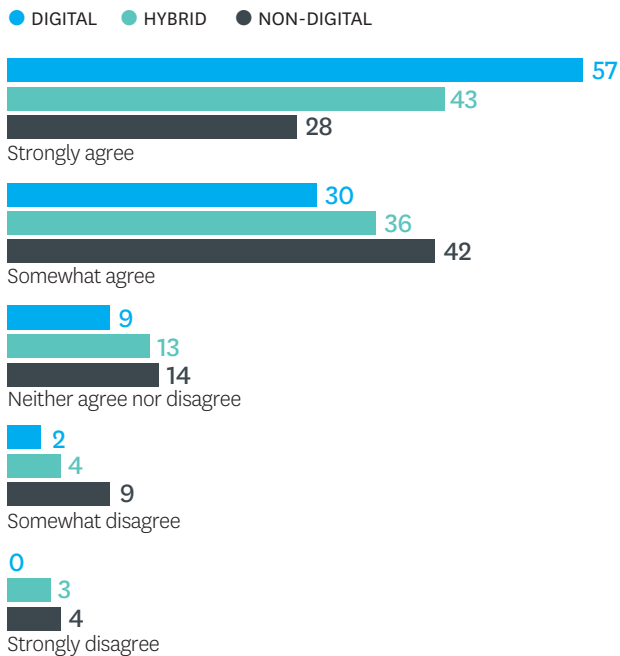
Digital leaders have achieved this edge by providing access to tools, data, training, and support to help employees transform their roles. Close to three-quarters of digital leaders (70 percent) make this claim compared with only 38 percent of non-digitals and 56 percent of hybrids. This is crucial, and companies that have yet to invest in such reskilling will need to start. More than half of all respondents predict a significant impact on employees' job roles as a result of adopting new technologies—meaning that 25 percent or more of jobs will change or that parts will become redundant. Without reskilling these employees, we're likely to see an employment crisis.

Artificial and machine intelligence has emerged as an area of both great interest and great concern among business leaders. Three-quarters of respondents believe their future success will depend on the successful collaboration between human and machine intelligence. [figure 11](#) Even non-digital firms believe this to be the case, with 28 percent strongly agreeing and another 42 percent agreeing somewhat. At the same time, a full third of respondents worry that the use of artificial intelligence and automation will cause a loss of jobs in their industry. This is especially the case in the financial services and professional/business services industries, where 45 percent and 43 percent, respectively, anticipate job loss from AI and automation.

FIGURE 11

FUTURE SUCCESS WILL DEPEND ON INTEGRATING HUMAN/MACHINE INTELLIGENCE

Percentage of respondents who agree that future success will depend on collaboration between human and machine intelligence



SOURCE HARVARD BUSINESS REVIEW ANALYTIC SERVICES SURVEY, DECEMBER 2016

CONCLUSION

The choices business leaders make over the next three years will determine their position in the digital economy. Digital leaders are doing today the things they need to do to be successful in 2020—the acknowledged inflection point for most industries’ digital disruption. Non-digitals, while they appear to be aware of the threat, have yet to take action.

While some businesses are exploring radical new business models, more are betting on digital transformation of their existing business models and operations. Fashion retailers will still sell clothing and an events business will still put on live events, but they’ll do it in some very different ways. And while the primary focus for many has been on understanding and engaging with customers in new ways and creating an exceptional experience, leaders increasingly realize that to truly be customer centric also requires changes to operations more broadly, including the way products are conceived, developed, sourced and delivered. Digital leaders are enhancing their operations for greater intelligence and speed.

To remain relevant, business leaders should develop and communicate a strategy for the digital economy while at the same time remaining flexible...

The future for many is unclear. While two-thirds of digitals (66 percent) say their organizations' leaders have a sound understanding of which business models will drive success for them in 2020 and beyond, only 44 percent of hybrids and 25 percent of non-digitals hold this view. The leaders have learned by doing and, to a large extent, are themselves creating that digital future. But given the speed with which new trends are emerging, not even the leaders can predict the future with certainty. There are just too many factors at play.

To remain relevant, business leaders should develop and communicate a strategy for the digital economy while at the same time remaining flexible and ready to shift gears as the market changes. This requires a willingness to take risks, and the investment of resources—funding, people, and technology. One of digital's most distinguishing characteristics is the need to bring many disciplines and functions to bear. Digital leaders are restructuring their organizations to integrate and optimize new digital channels while also creating a culture and mindset for cross-functional collaboration. Hybrids and non-digitals can learn from the leaders, but they'd better not take too long to get started—2020 is less than three years away.

METHODOLOGY AND PARTICIPANT PROFILE

A total of 783 respondents completed the survey, including 578 who are members of the Harvard Business Review Advisory Council. All of these indicated they were digital decision makers or influencers.

ORGANIZATION SIZE

Only organizations with 100 or more employees took part in the survey. Fifty-three percent were in organizations with more than 10,000 employees, 26 percent were in organizations with 1,000 to 9,999 employees, and 21 percent were in organizations with 100-999 employees.

SENIORITY

Twenty percent were executive management or board members, 36 percent were senior management, 30 percent were middle management, and 14 percent were at other levels.

KEY INDUSTRY SECTORS

Manufacturing/resources, financial services, and technology topped the list, at 17 percent, 15 percent, and 12 percent, respectively. Nine percent of respondents worked in each of the following: healthcare, professional/business services, and retail/goods. Eight percent came from the education sector, and 6 percent each were from government/not-for-profit and communications/media. Other industries were represented by 5 percent or less.

JOB FUNCTIONS

Fifteen percent of respondents worked in operations/product management, 10 percent were from HR/training, 9 percent were from general management, 8 percent each were from sales/business development and IT, and 7 percent were from marketing/communications. Other functions represented 6 percent or less of the total respondent base.

REGIONS

Thirty-five percent of respondents were from North America, 35 percent were from Europe/MEA, 23 percent were from Asia/Pacific, and 7 percent were from South/Central America.

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