

**FINDINGS FROM THE 2013 DIGITAL TRANSFORMATION  
GLOBAL EXECUTIVE STUDY AND RESEARCH PROJECT**

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# Embracing Digital Technology

A New Strategic Imperative

By Michael Fitzgerald, Nina Kruschwitz, Didier Bonnet and Michael Welch

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# Executive Summary

Companies routinely invest in technology, and too often feel they get routine results. Technology's promise is not simply to automate processes, but to open routes to new ways of doing business.

To better understand how businesses succeed or fail in using digital technology to improve business performance, *MIT Sloan Management Review* and Capgemini Consulting conducted a survey in 2013 that garnered responses from 1,559 executives and managers in a wide range of industries. Their responses clearly show that managers believe in the ability of technology to bring transformative change to business. But they also feel frustrated with how hard it is to get great results from new technology.

This report (as well as the survey) focuses on digital transformation, which we define as the use of new digital technologies (social media, mobile, analytics or embedded devices) to enable *major business improvements* (such as enhancing customer experience, streamlining operations or creating new business models).

## The key findings from the survey are:

- ▶ According to 78% of respondents, achieving digital transformation will become critical to their organizations within the next two years.
- ▶ However, 63% said the pace of technology change in their organization is too slow.
- ▶ The most frequently cited obstacle to digital transformation was “lack of urgency.”
- ▶ Only 38% of respondents said that digital transformation was a permanent fixture on their CEO's agenda.
- ▶ Where CEOs have shared their vision for digital transformation, 93% of employees feel that it is the right thing for the organization. But, a mere 36% of CEOs have shared such a vision.

Previous research with executives by the MIT Center for Digital Business and Capgemini Consulting showed that many companies struggle to gain transformational effects from new digital technologies, but also that a significant minority of companies have developed the management and technology skills to realize the potential of new technologies. Our current survey deepens this research by getting frontline perspectives as well as high-level ones, from staff to board member. (See About the Research, p.3.) It shows that frontline corporate employees believe they face a strategic imperative to successfully adopt emerging new technologies. Almost no organization is sheltered from the competitive disruption wrought by of the widespread adoption of digital technologies.

But the survey also shows that organizations are finding ways forward by taking steps such as developing business cases for technology adoption, creating cross-department authority for digital initiatives and realigning incentives to include metrics relevant to digital transformation. This report will delve into the challenges of digital transformation and how companies are meeting them to achieve competitive advantage.



# Embracing Digital Technology

## INTRODUCTION

**E**very company wants the technology it uses to transform its business. Executives see the potential for using digital technologies to achieve transformation, but they're unclear on how to get the results. They look at high-profile examples of companies using technology to galvanize their business, and wonder what they need to do to follow suit.

### Brewing Up Change at Starbucks

One company that has succeeded is Starbucks. In 2009, after dismal performance cut the company's stock price in half, Starbucks looked to digital to help re-engage with customers. It created a vice president of digital ventures, hiring Adam Brotman to fill the post. His first move was to offer free Wi-Fi in Starbucks stores, along with a digital landing page with a variety of digital media choices, including free content from publications like *The Economist*. It sounds simple, but as Brotman says, "we were not just doing something smart around Wi-Fi, but we were doing something innovative around how we were connecting with customers."

Brotman is now chief digital officer at Starbucks, where he and Curt Garner, Starbucks' chief information officer, have formed a close working relationship, restructuring their teams so that they collaborate from the very start of projects. Last year, they cut 10 seconds from every card or mobile phone transaction, reducing time-in-line by 900,000 hours. Starbucks is adding mobile payment processing to its stores, and is processing 3 million mobile payments per week. Soon, customers will order directly from their mobile phones.

Using social media, mobile and other technologies to change customer relationships, operations and the business model has helped Starbucks re-engage with customers and boosted overall performance. Its stock price has also bounced back up from roughly \$8 in 2009 to nearly \$73 in July 2013.

## DIGITAL IMMATURITY: A WIDESPREAD PROBLEM

**M**any companies want Starbucks-like results, but most are far from achieving them, according to our survey (see About the Research). At the end of the survey, respondents answered a set of questions about their companies' digital maturity. Using an index of digital maturity developed by the

### About the Research

The survey uses a definition of digital transformation that came from research done by MIT's Center for Digital Business (CDB) and Capgemini Consulting, which focused on how digital transformation plays out at traditional large companies, those having more than \$1 billion in revenues. To complement that research, which involved interviews with executives at 450 large companies, *MIT Sloan Management Review* and Capgemini Consulting conducted a broad-based online survey. It was completed by 1,559 people in 106 countries (the five with the most respondents were: United States, 37%; India, 11%; Canada, 5%; United Kingdom, 4%; Australia, Brazil and Mexico, 3% each). They represent companies and organizations across the business spectrum — nearly half (47%) work at companies with less than \$250 million in revenues, 10% work at mid-sized companies with between \$250 million and \$500 million in revenues, 9% at companies with \$500 million to \$1 billion in sales, and 33% work at organizations with more than \$1 billion in revenues, including 11% at companies with more than \$20 billion in sales. Respondents span the gamut of functions, from CEO to staff.

The survey asked the respondents' views on a number of topics related to achieving digital transformation. Respondents also took a separate digital maturity assessment, based on prior CDB research, to determine their digital maturity. Organizations were categorized either as *Digirati* (mature at both technology adoption and management), *Fashionistas* (early adopters of technology but without effective management skills), *Conservatives* (slow to adopt technologies but effective at managing them) or *Beginners* (possessing neither advanced technology or the ability to manage it).

MIT Center for Digital Business and Capgemini Consulting, we found that only 15% of respondents were in the most mature category alongside Starbucks. Sixty-five percent of respondents are in organizations that rank as least mature — the category the index refers to as Beginners (see Figure 1).

The world is going through a kind of digital transformation as everything — customers and equipment alike — becomes connected. The connected world creates a digital imperative for companies. They must succeed in creating transformation through technology, or they’ll face destruction at the hands of their competitors that do.

### The Digital Imperative

Even in a connected world, it takes time, effort and willpower to get major transformative effects from new technology. Executives need to lead the process

and make sure they’re managing and coordinating across the company. Employees know that technology matters: a full 78% of respondents said achieving digital transformation will become critical to their organizations within the next two years. Less than 5% of respondents say digital transformation will never become important for their organizations. Meanwhile, 81% said their organizations were already trying to achieve digital transformation (see Figure 2).

“The big thing is, technology change is happening so rapidly that every industry is being affected by this,” said George Westerman, research scientist at MIT’s Center for Digital Business, and one of the investigators leading the Center’s Digital Transformation Research.

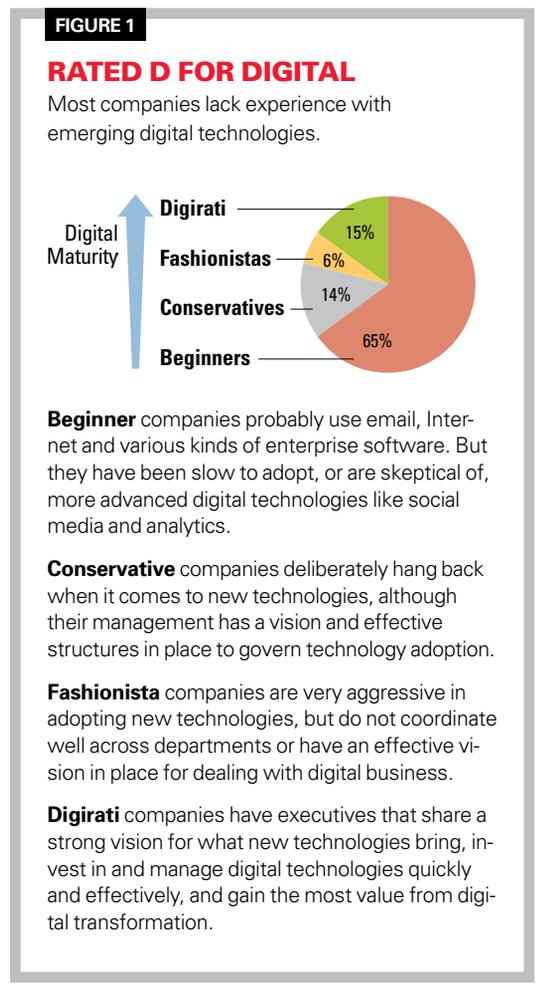
Previous research by Capgemini Consulting and MIT’s Center for Digital Business found that companies that invest in important new technologies and manage them well are more profitable than their industry peers. Respondents to our survey corroborate this view — they overwhelmingly believe that failure to effectively conduct digital transformation will harm their company’s ability to compete.

Of those working at organizations where digital transformation is a permanent fixture on the executive agenda, and a core strategic consideration, 81% believe their companies will be somewhat or much more competitive in two years. That’s a stark contrast from those at organizations where leadership is not focused on digital transformation — only 18% believe their companies will increase their competitiveness, and nearly half (46%) project a grim, less competitive future.

Despite growing acknowledgment of a digital imperative, few companies are responding. Only 38% of respondents said that digital transformation was a permanent fixture on their CEO’s agenda. Of the rest, 65% of respondents thought it needed to be more important than it currently is.

### Technology Everywhere

The pervasive nature of technology in consumers’ lives is causing rapid change in the business landscape. Lori Beer, executive vice president of information technology and specialty business at WellPoint, the nation’s largest Blue Cross/Blue Shield licensee, said that “[i]t’s not like we’re a consumer

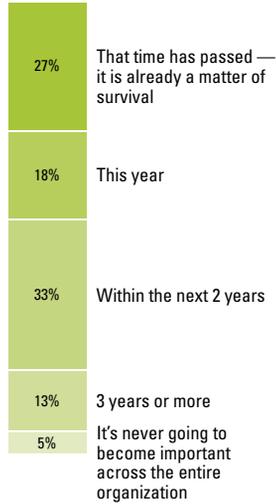


**FIGURE 2**

### A CURRENT AFFAIR

Almost half of employees think digital transformation is upon us, and a third say it looms.

*When will it become critical to implement Digital Transformation across your organization?*



Percentages don't add to 100% due to exclusion of those responding "don't know."

strategic move for non-tech companies, as well.

Responding effectively and quickly to new technologies affects the bottom line, and ultimately business survival. Effective management of new technologies is already creating winners and losers in measurable ways, like market share and profits — both areas where Digirati outperform their rivals. Business leaders who embrace the digital imperative will see boosts in their operations, customer relations and business models, as described in the next section (see Figure 3).

### THE BENEFITS OF DIGITAL TRANSFORMATION

Companies that effectively manage digital technology can expect to gain in one or more of three areas: better customer experiences and engagement, streamlined operations and new lines of business or business models. Though innovative new business models are what every CEO dreams of, companies more often see digital technologies help transform their customer experience or operations. Business model transformation is difficult, and far less prevalent, according to survey respondents.

Customer experiences reflect the clearest impact of digital transformation. The survey found that

products company, where you can put that product on the shelf. Our products and services really are supporting consumers, providing capabilities for employers, information, data, much more like a financial services type of scenario. Technology has always been important to our business, but it really is becoming much more strategic, especially today, when you're seeing the emergence of new technologies. You're seeing a transformation of how consumers are engaging with technologies."

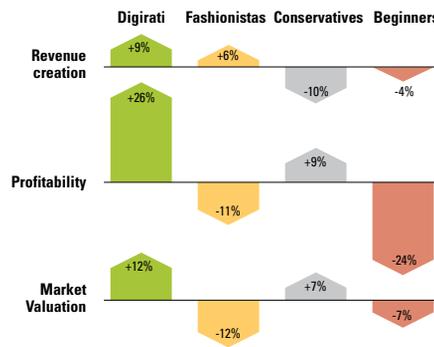
The rise of the tech-savvy, connected consumer across all facets of society changes the expectations consumers have of companies, regardless of their business, said Curt Garner, the chief information officer at Starbucks. "IT and digital is pervasive in people's lives now. So the advice I would give somebody starting it now is, think of yourself like a consumer technology company."

How do consumer technology companies act? One key point is, they update frequently. For non-tech companies, this translates into adapting by streamlining product cycles. Quicker product cycles often lead to adding some features later. Adding features into new versions of products can become a

**FIGURE 3**

### DIGITAL CASH REGISTER

Digirati — the best companies at managing digital technology — get the best financial results.



SOURCE: MIT's Center for Digital Business and Capgemini report "The Digital Advantage: how digital leaders outperform their peers in every industry (<http://ebooks.capgemini-consulting.com/The-Digital-Advantage/index.html>)"

improving customer relationships was the area where companies were having the most success with digital technology. Most prominent was improving the overall customer experience, followed closely by enhancing products and services in customer-friendly ways.

Survey respondents said their organizations also are seeing improvements in operations, in part in automating operations. A number of respondents said internal communications are sharply improved, especially through using social media. For example, Jon Bidwell, chief innovation officer at Chubb, a large specialty insurer, told us that social business tools and processes had transformed the company’s innovation culture, helping it develop products and understand risks as rapidly as new markets emerged.

The opportunity for digital technologies to create new businesses is real, and a quarter of respondents expect digital transformation to launch new prod-

ucts and services. General Electric is pushing an Internet of Things service strategy that will help it tell customers how to schedule maintenance and avoid part failures, improving operations. The company expects it will sell services related to maintaining its products.

Of course, more efficient products may well reduce demand for new GE goods. But William Ruh, vice president of software at General Electric, notes that “there’s upside for us in the services. We can grow on the services side, and they’re winning and we’re winning.”

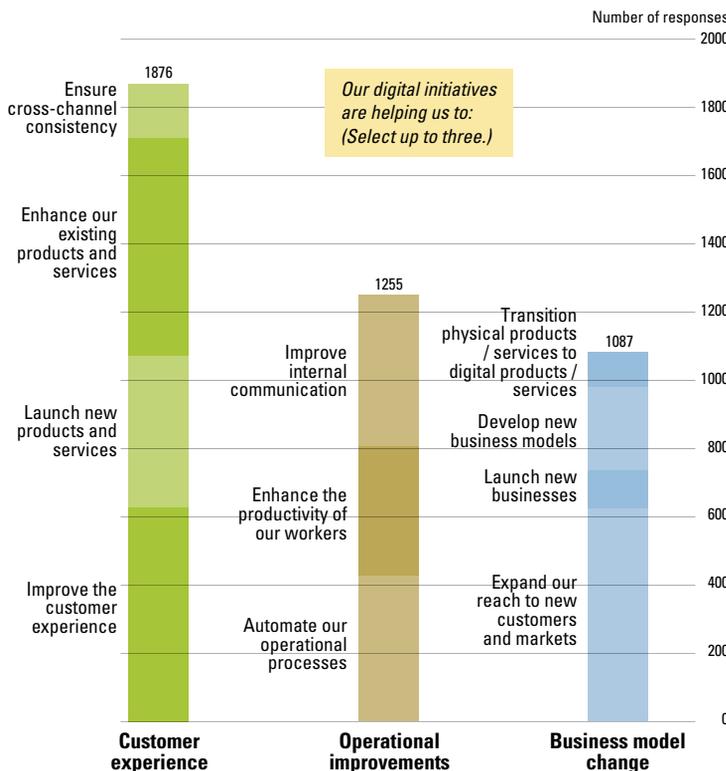
But business model transformation is also elusive. A mere 7% of respondents said that their company’s digital initiatives were helping to launch new businesses, and only 15% said new business models were emerging thanks to digital technology (see Figure 4).

It could be that these technologies are so new that they simply haven’t had time to be turned into new business opportunities. One respondent noted that in his company, “the belief is that digital technologies are not that effective yet in our marketplace.” Another said customers weren’t ready for new models yet, because they are “highly conservative and resistant to change.”

FIGURE 4

**WHAT HAS DIGITAL DONE FOR US LATELY?**

Companies are using technology to create real, transformative effects across customer experiences, internal operations and new business model.



**THE TROUBLE WITH DIGITAL TRANSFORMATION**

Despite growing acknowledgment of the need for digital transformation, most companies struggle to get clear business benefits from new digital technologies. They lack both the management temperament and relevant experience to know how to effectively drive transformation through technology.

Even companies where leadership has demonstrated it can effectively leverage technology can run into challenges with new digital technologies. Today’s emerging technologies, like social media, mobile, analytics and embedded devices, demand different mindsets and skill sets than previous waves of transformative technology.

There is no one factor that impedes digital transformation. Lack of vision or sense of urgency plagued many companies, culture at others, and organizational constraints problems at still others. Our

research highlighted nine specific hurdles in the broad areas of leadership, institutional obstacles and execution that companies need to overcome to achieve digital transformation.

### Leadership: Defining the Agenda

Many managers feel no urgency to achieve digital transformation. This may be because so few leaders offer a vision and a road map for digital transformation, leaving managers with no motivation for achieving it.

**Lack of urgency** Complacency affects more companies than any other organizational barrier cited in our survey, with almost 40% of respondents saying that lack of urgency/no sense of burning platform is the biggest single obstacle to digital transformation. One survey respondent working in higher education said “The organization has a long (70 years) history of success ... the need to change is not clear to some members of the old guard” (see Figure 5).

The survey shows a clear split in perception of urgency between the top managers at companies and those below them. In fact, the further down the organizational ladder one goes, the less satisfied workers are with the pace of digital transformation at their organizations. A third of C-level executives and board members think the pace of change is about right, and another 10% think it is fast, or even very fast. CEOs are particularly bullish — 53% think the pace is right, fast, or very fast, the highest of any category (see Figure 6, p.8).

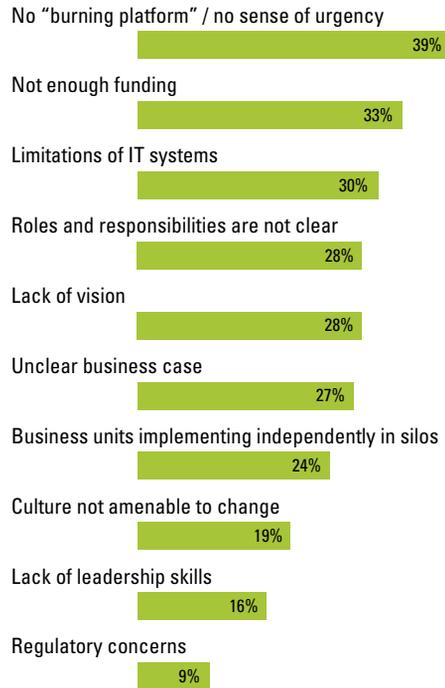
CEOs might know something their colleagues don’t, of course. Or it could be that as one gets into the trenches of transformation, conditions change. Only 25% of managers think the pace is right, and a mere 22% of staff agree. Of these, product development staff are the most positive — just over 40% say the pace is very fast, fast or just right. Management was guilty of “complacency, ignorance of modern technology,” said one respondent. “Clueless management,” commented another.

But employee skepticism can also impede pace — even when leadership is on board to promote digital transformation. “There is too much hype,” said one CEO. “I can’t push harder because of all the hype and the overselling from suppliers. I lose my credibility if

**FIGURE 5**

### THE BIGGEST TRANSFORMATION TRAPS

Desire, money and tools are the three big reasons organizations fail to use technology to make their business better.



*What are the most significant organizational barriers to Digital Transformation in your organization as a whole? Select up to 3.*

Percentages refer to respondents who clicked this option versus total number of respondents who answered this question.

I push it too hard. So we take a slower approach just to make sure we don’t give the naysayers their way.”

**The vision thing** Digital transformation starts with a vision from top leadership. Where senior leaders had shared their vision, it had huge buy-in — fully 93% of employees agreed that digital transformation was the right thing right now for their companies to do, and 73% strongly agreed.

“This idea that a thousand flowers will bloom and we will all be okay is a great way to get some ideas, but we have not seen any transformations that happen bottom up,” said George Westerman. “They’re all being driven top down. The big difference between the companies that are just doing technology initiatives and the companies that are leading a technology-based transformation is how they’re putting the leadership frameworks in place.”

FIGURE 6

OFF THE PACE

The pace of digital transformation is too slow — unless you're the CEO.



But only 36% of respondents said that senior leaders had shared a vision for digital transformation across their organization. Why would two-thirds of executives fail to articulate a vision for digital transformation? At least part of the reason comes from choosing the right way forward.

**Picking a direction** Creating a road map towards digital transformation is challenging. The survey showed impressive alignment around the idea that digital transformation is important — more than 80% of leaders at companies categorized as Digirati and Fashionistas, and more than 90% at Conservative-level companies, say leadership is “completely” or “somewhat” aligned.

There is much less alignment when it comes to the road map. Fewer than 25% of respondents at Conservative, Fashionista and Beginner companies thought leadership was completely aligned on a road map (it was less than 5% at Beginners), compared to a bit over 40% at Digirati companies. Digirati and Conservative firms were notably better overall at alignment, but such firms represent only 29% of all companies in the sample.

Developing a road map for digital transformation presents hard challenges because digital

transformation takes many forms. For instance, executives must decide what to transform first: Customer relationships? Internal operations? The business model? Any individual step requires multiple, coordinated actions. It can also require executives to reframe what they think about their business.

WellPoint’s Lori Beer recalled that when she ran operations for the company, it could only begin to transform customer service when it stopped looking at traditional service metrics like average speed of answer, and started asking questions like why customers who had talked to customer service would then call back. Reframing questions about the business is a real challenge, because doing so requires a company to challenge its own assumptions about itself.

INSTITUTIONAL CHALLENGES

Corporate behavior among line staff reflects a company’s history, its people, its leaders and the ideals they hold. Some of these reflect broader societal ideas about gender, age, education and other factors, which can be unspoken issues that affect every aspect of a company, including digital transformation. We will look at four major institutional barriers to change.

**Attitudes of older workers** Responses to the survey suggest a deep-rooted perception that older people will have trouble reframing. Bill Gates may be 58, and Gordon Moore of Moore’s Law fame is 84, but there’s still a perception that older people are technophobic, and older managers don’t want to deal with technologic change. “I sincerely doubt that managers who are over 50 share the same enthusiasm and excitement when it comes to digitizing business segments when compared to a younger person,” wrote a survey respondent in the construction industry.

Another respondent complained that “Management is composed of old people from 55 years and above, they know nothing about technology and its benefits and also don’t want to learn.” Another called management, “Dinosaurs [who] don’t

understand the opportunity and are reluctant [to change] old ways.”

Perhaps younger people haven't seen the pile of bones built up from myriad obsolete technologies. Older colleagues know that technology projects often fail to deliver what they promise. “Is this Y2K all over again?” one survey respondent asked of digital transformation. Older executives and managers need to understand that their age can undermine faith in their ability and interest in leading digital transformation, and develop approaches to make it clear that they want to see transformation occur.

**Legacy technology** That older people are technology-averse could be, at least in part, stereotyping. But problems arising from older *systems* are a legitimate issue. For one, such systems can be complex to update, especially when connecting to new kinds of technology. Limitations of IT systems ranked third on the list of significant organizational barriers to Digital Transformation, cited by 459 people.

As one respondent said, “senior leaders seem to understand the importance/relevance — they're not dummies — but they seem to be paralyzed by business systems and business processes that will take a good deal of effort and cash to change/adapt.”

Said another of an issue with a digital project, “Our implementation has vastly outpaced prob-

lems that it's trying to solve and has turned into numerous headaches and distractions for basically every team; doubly because we haven't replaced any of the existing systems, so everything is now being duplicated (or triplicated).”

Even companies in which the entire business is digital may not use technology very effectively. One executive responded to the survey by saying “Our service offering is digital collaboration solutions, so we know how to talk about it and how our clients should use it. Internally, we have not kept up the pace.” Said another, “We are an online (SaaS) org, so we built our infrastructure and tools on hosted tools, embraced social media, etc. all on day one. That said, we used a lot of disjointed, free or low cost offerings. To get to the next level, we need to migrate many of our digital operations/infrastructure items to more integrated solutions.”

**Innovation fatigue** For people of any age, there is also the possibility of technology fatigue. “I get the impression sometimes that a lot of the management teams at companies say, ‘would you please stop the technology innovation? We can take a break from this and just digest what we've been doing for the past few years,’” said Andrew McAfee. “Unfortunately, that's not going to happen, so a critical skill at the top of a company is to have someone who can keep scan-

## INTEL GETS URGENT

At Intel, there is no lack of a sense of urgency; the company knows mobile technology is upending its market. The company has failed multiple times to become an important provider of mobile processors, including turning down the opportunity to provide chips for the original iPhone. Intel's culture has long been built around maintaining market dominance through intense internal competition, said Kim Stevenson, its chief information officer. Now, Intel believes it needs a more collaborative culture to help it gain an edge in mobile processors.

To start this cultural change, Intel's top 25 executives gathered for a strategy discussion led by Stevenson and the head of human resources. First, the group had to agree on the

overall vision, the need for cultural change in order for Intel to compete effectively in the emerging mobile market. Then it had to create ways to bring people together. That would mean breaking down barriers to communication that existed in the company's culture of rivalry.

Among steps Intel took to improve communications were adding 220 video conferencing rooms, electronic white boarding, and adding search functions to its SharePoint implementation. All company employees are now on an internal social network. Intel has also set up teams based on accounts, not internal departments.

Intel is taking small, concrete steps towards changing its culture, rather than

massive, risky leaps. The small-step strategy is one many companies could adopt when trying to transform. As one survey respondent said, “The kind of transformation being adopted does not give much leeway for failure and the cost to the organization's reputation and brand is great. A thoughtful and piloted approach needs to be adopted.” Small steps do not mean companies lack urgency.

According to Stevenson, “We had the top 25 executives in the company buy in to the strategy. You have to admit that your competitive culture needs to change to be successful in the future, and we want to change before it's evident on the outside that we need to change, right? And I think that's a really key premise.”

ning the technology landscape and explaining it to the rest of the management team to say, gang, this is the cloud; it's actually a big deal. Inertia and complacency are deadly in the world that we live in today.”

It's hard not to get complacent, said Stevenson, Intel's CIO. "They've gone through ERP, they've gone through BYO, and they've gone through cloud, and they think they've done it all. But the reality is, we're only at the very, very beginning of this next generation of computing, and I think that every industry leader will be the ones that transform first. I don't care what industry you're talking about."

Similar attitudes came up in the survey, where barriers like "information overload," "the human capacity for implementation" and the need to "balance between conveniences, speed and superficiality of digital tools and human-brain thinking processes" were cited.

Andrew McAfee, principal researcher at the Center for Digital Business, told us in an interview that "[the] vexing thing about innovation and disruption is, they don't stop once you do it." Neither will competitors. Companies have to develop a continuous process for digital innovation.

**Politics** Internal power centers, controlled by departments or individuals, can inhibit changes that

dictate less power or different ways of working. More than 20% of respondents said that internal politics, including fear of losing power in the organization, impeded adoption of digital technology (see Figure 7).

Many companies work to limit the power of a single individual or department — 60% of companies, in fact, report using one of several governance mechanisms to manage and foster their digital investments. Cross-functional steering committees are the most popular, the choice at 19% of respondents' organizations. Other approaches include specific digital leadership in individual business units (15%) and cross-functional innovation groups (14%). Only 13% have adopted the much-hyped position of chief digital officer (CDO).

This diverse set of approaches shows that companies can follow many paths to structuring their digital transformation efforts. But it also creates problems for companies. There is enough resistance from organizational and cultural factors that not having clear structures makes it risky for workers to push for digital transformation.

**EXECUTING THE CHANGE**

**A**mong the obvious obstacles to digital transformation is lack of clarity about the pay-off. Companies want to know that they are getting something beneficial from investment in new technologies. Corporate leaders need to leverage metrics to help make digital transformation happen.

**Making a Case for Digital Transformation**

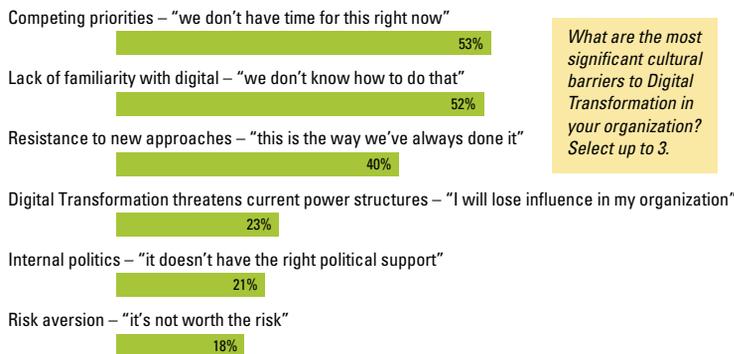
Only half of the companies surveyed said they create business cases for their digital initiatives. It can be hard to gauge a return on investment for emerging technologies. "It is still difficult to compute ROI on many social media activities (at least to the satisfaction of the executive board)" said one survey respondent.

Many organizations struggle to compute ROI. Merely one-fourth report having established key performance indicators to help them measure the impact of their digital transformation. The three biggest reasons why: companies have trouble defin-

FIGURE 7

**CULTURE CLASH**

Entrenched attitudes of fear and ignorance beat down digital transformation within many corporate cultures.



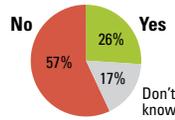
*What are the most significant cultural barriers to Digital Transformation in your organization? Select up to 3.*

Percentages refer to respondents who clicked this option versus total number of respondents who answered this question.

**FIGURE 8****METRIC SYSTEMS**

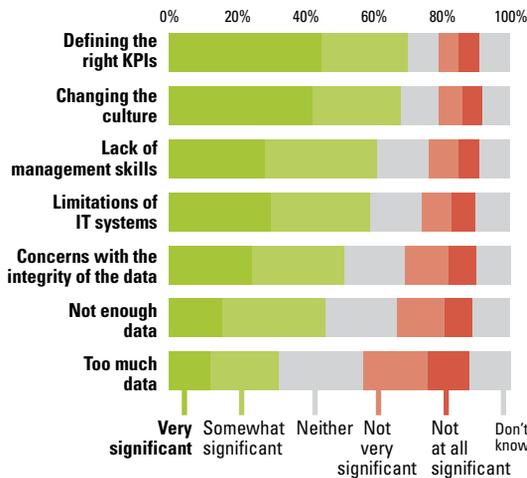
More than half of companies fail to set key performance indicators to gauge digital transformation ...

Have Key Performance Indicators (KPIs) been established to track the progress of Digital Transformation?



... even though they know they matter.

How significant are each of the following in managing Key Performance Indicators (KPIs) around Digital Transformation?



ing how to successfully define key performance indicators (KPIs), lack of management skills to carry through on KPIs, and needing cultural changes to make KPIs work (see Figure 8).

Those that do measure can be guilty of using fuzzy math. “We are not honest with ourselves about where our capabilities really lie, nor about how we are going to ensure there is accountability for instituting real, competitive change,” wrote one survey respondent. “We want to make it seem like we ‘get digital’ but our Digital Transformation is not holistic, and tends to occur in isolated incidents that are always positioned as ‘successful’ even when they really aren’t.”

Digital transformation is successful when the entire company aligns around a vision, but only a slight majority of companies have given cross-functional committees (37%) or a shared digital

**FIGURE 9****MARKET REWARDS**

Most companies fail to tie incentives to digital transformation



units (17%) enterprise-level authority on digital investments. Digirati do much better, at 66%.

**Incentives** One obvious way for executives to clear a path for digital transformation is to give employees incentives. Bonuses, raise structures, promotions and performance reviews are some of the tools that companies could use, but don’t. For Beginners, 61% of companies do not tie rewards to digital transformation efforts. The companies that do best at digital transformation

also do the best job of aligning incentives with digital transformation efforts: 68% of respondents at Digirati companies do connect digital transformation to incentives. Interestingly, these incentives tend to be based on “soft” factors (recognition, personal advancement) rather than “hard” financial factors (see Figure 9).

Better incentives might help ease employee concerns about digital transformation. One survey respondent noted that “at the operational level, there are some benefits (to digital transformation), but much of the day-to-day experience is the feeling of being reduced to being a Victorian machine minder: instead of the software servicing the people, it is the other way around.” Another said that the pace of digital transformation demanded such speed that it is “at risk of diluting employee morale.”

## CONCLUSION

If companies could give their relationship to digital transformation a Facebook status, it would be “it’s complicated.” It is complicated, but it can be managed. The stakes make digital transformation a digital imperative for companies. Digital transformation is a wide-open area, one that gives CEOs broad leeway to act. But the CEO and senior leadership must develop a vision to articulate to the staff, create a road map and commit to it, and then rally the organization with measurable goals and incentives to reach them.

Digital transformation needs to come from the top, and companies should designate a specific executive or executive committee to spearhead efforts. Companies should take small steps, via pilots and skunkworks, and invest in the ones that work. Corporate leadership needs to tweak its road map based on these smaller projects, and update its digital

vision as these smaller projects refine the vision. Executives and employees need clear rewards for making digital transformation a priority.

“There are two wrong ways to approach (digital transformation),” MIT’s George Westerman told us. “One is to say, ‘just go off and do something. And we don’t need to worry about coordination.’ Another is to hire a bunch of people and say ‘make this happen. I don’t need to be involved.’”

“If you’re an executive leading a company looking at these technologies, you need to lead the technology — don’t let it lead you,” Westerman added. “You want to think about, how is your company going to be different because this is here? And then, put in a framework, so you’re not just buying technology, you’re actually pushing your company forward in a different way, because the technology is there.”

The only wrong move for executives, then, would be not making any move.

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