Leading in the Digital Era

A Curated Collection of Research Articles from Harvard Business School Faculty

All articles by Linda A. Hill, Ann Le Cam, Sunand Menon, and Emily Tedards

Harvard Business School

The Leading in the Digital Era series, originally published in HBS Working Knowledge, features insights by Professor Linda Hill and colleagues about managing companies through a time of complex change.

Executive Education programs are developed and taught by HBS faculty members, who are widely recognized as skilled educators, groundbreaking researchers, and award-winning authors.

Linda A. Hill

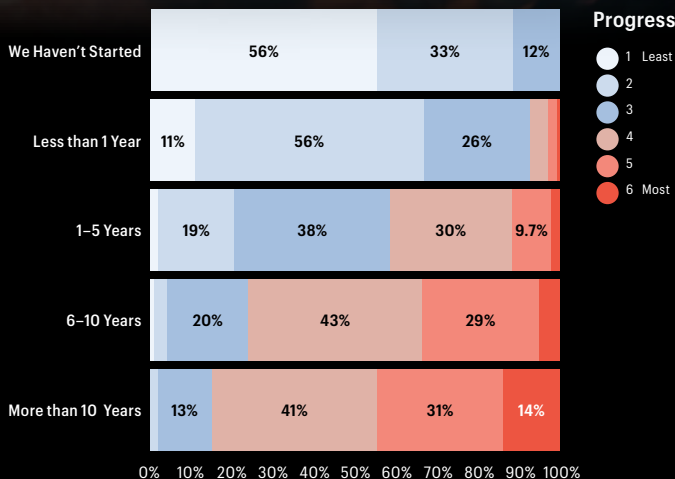# Where Can Digital Transformation Take You? Insights from 1,700 Leaders

Digital transformation seems like a journey without end, but many companies are forging ahead. Linda Hill and colleagues reveal six qualities that set digitally mature organizations apart.

Digital Transformation: A Long Journey

We asked executives to rate the progress of their companies' digital transformations. Those who had been working on their digital transformation for more than 5 years reported the most headway.

Duration of Digital Transformation Journey

					Progress	
We Haven't Started	56%	33%	12%		● 1	Least
Less than 1 Year	11%	56%	26%		● 2	
1–5 Years	19%	38%	30%	9.7%	● 3	
6–10 Years	20%	43%	29%		● 4	
More than 10 Years	13%	41%	31%	14%	● 5	
					● 6	Most

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Source: Leadership in the Digital Era survey, n=1,500

"Got a driver's license? Good! Now, step into this Formula 1 racecar."

This was how one executive of a Latin American e-commerce company described the challenge of digital transformation: Many of the tenets of effective leadership are familiar, but everything is happening much, much faster. And the task is not to cross the finish line and turn off the engine, but to get comfortable—as a leader and as a company—with this new pace and the attendant complexities.

Navigating through the digital era is not for the fainthearted. Most of us know how to drive—we have the basics—but we recognize we are ill-prepared to race against world-class competitors. While data and digital technologies were once enablers of efficiency and cost-cutting, today, they're the engines of innovation and revenue growth, offering organizations unprecedented opportunities to develop new products and services, and even reimagine their businesses.

In mid-2020, we set out to understand the challenges of leading in the digital era. Teaming with the Harvard Business School Global Research Centers and Salesforce's Ignite team, we held 21 roundtable discussions with more than 175 executives from companies around the world, ranging from dominant incumbents to digital-first start-ups. We also surveyed over 1,500 senior executives from more than 90 countries.

Their conviction was resounding: 97 percent of respondents "agreed" or "strongly agreed" that organizations will not remain competitive unless they radically adapt to the demands of the digital era. All but 3 percent indicated that their organizations were undergoing digital transformation.

How to do this successfully becomes the pressing question—one we will try to answer in this three-part series: first, to describe what it means to be a digitally mature company; second, to outline what it takes to create one; and finally, probing how leaders must change not just their organizations, but also themselves.

EVERYTHING IS CHANGING AND TECHNOLOGY IS A KEY DRIVER

When we asked executives to join our roundtable conversations about "digital leadership," they warned us that the term was too narrow: "leadership in the digital age" better describes the strategic questions they face. After all, they're wrestling with three major shifts in the global economy—changes born of technology that technology alone can no longer address:

New customer expectations.
Customers want frictionless, end-to-end experiences with companies, said roundtable participants. Digital natives in particular expect customer-company interactions, even in business-to-business industries, to be as fast and intuitive as tapping out a text or playing a video game. Not only must a company offer high-quality products or services, but the way they deliver them to the customer matters much more today than in the past.

Customers demand more value and innovation than ever before, but they're not always willing to pay more for that product or service. In fact, thanks to social media, dissatisfied customers can amplify their opinions about a company's long support wait times or hold organizations accountable for their environmental practices. Moreover, the accelerating pace of technological development and global interconnectivity can erode a company's competitive edge faster than ever.

New employee expectations.
Information has become democratized both inside and outside of companies. In the past, CEOs and other senior leaders were seen as the legitimate strategic decision-makers because they had more access to data and could decide if and when to share it. With much more information available to many more people, leaders' legitimacy must come from different sources, or they must share decision-making with employees—or both.

Workers increasingly resist one-way, top-down communication and commands; they expect to be heard and to help develop their organizations' plans and solutions collaboratively. They take the responsibility that comes with "co-creation" seriously, with younger generations of employees ready to be judged on their creativity as much as their expertise.

New societal expectations.
Roundtable participants said that Millennials and members of Generation Z seek purpose and fulfillment from their work, and care deeply about their organizations' long-term impact. They demand that leaders serve stakeholders, not just shareholders, and proactively build a more equitable and sustainable world. Customers increasingly want the same and are especially concerned about issues that affect them personally, such as data privacy and security. Social responsibility in the broadest sense, roundtable participants said, has become a competitive "must," essential for attracting talent and building trust with customers.

SIX QUALITIES OF DIGITALLY MATURE ORGANIZATIONS

Rather than waste time resisting, digitally mature organizations embrace and adapt to these key shifts in the business landscape, participants said. Companies able to navigate this unforgiving dynamic tended to have the following characteristics:

1
An Intimate and Dynamic Understanding of the Customer

With more and better data available, companies can get to know their customers like never before. Rather than expecting customers to buy whatever a company sells, the most successful companies proactively anticipate and discover customers' problems and desires and innovate accordingly. Because of the transparency afforded by

The Digital Transformation Imperative

Survey respondents consider digital transformation necessary, but fewer than half have the talent they need to compete.

97%

"Agree" or "strongly agree" that companies won't remain competitive unless they embark on a digital transformation.

60%

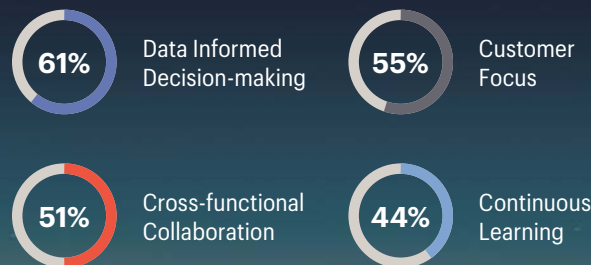Respondents whose organizations have been on the digital transformation journey for 1–5 years.

47%

Respondents who believe their organizations have the right talent to compete in the digital era.

Source: Leadership in the Digital Era survey, n=1,500

What Companies Need to Compete

Survey respondents ranked the following qualities as most critical to succeeding in the digital era.

61% Data Informed Decision-making

55% Customer Focus

51% Cross-functional Collaboration

44% Continuous Learning

Source: Leadership in the Digital Era survey, n=1,500

the internet, where customers can browse reviews and prices with ease, digitally mature companies aim to provide a unique, often more customized, end-to-end customer experience.

"Understand your customer" has long been a business mantra, but even roundtable participants from digital-first companies admitted that too often their organizations merely sell the products and services they have rather than develop new offerings based on evolving customer needs and desires. Interestingly, only 55 percent of survey respondents ranked customer focus as one of the most critical characteristics for success in the digital era.

Getting to know the customer has become a dynamic, ongoing process, and is fast becoming table stakes. For example, companies understand they need to get reacquainted with their customers after the COVID-19 pandemic and recalibrate their pain points and desires. One participant remarked, given the unpredictability of the pandemic and the economy, companies should "serve their customers, not sell to them," and build the connections needed to move to the next normal. Global strategies are also becoming more "glocal," with growing pressure to develop products and services for the needs and expectations of specific national markets.

2
Culture that's Data-informed, Not Data-driven

Digitally mature organizations embrace data—lots of it!— and use it to make better, faster decisions. However, data informs, not determines, their decisions. Analytics are important, but judgment and critical thinking ultimately set the roadmap. All employees, not just the data scientists, use data to develop new insights and foresight instead of relying on past experience. Given the speed of change, hindsight might be irrelevant to the task at hand. Digitally mature

companies have the right technical expertise (such as experienced data scientists or analysts), tools (dashboards and data visualization applications), and platforms (computing infrastructure and operating systems) to integrate data across their organizations.

Simply making data available doesn't guarantee that teams will use it. Can employees access data easily? Is it integrated into employees' workflows and processes? Do employees— regardless of seniority, experience, or age—know how to interpret the data? While 61 percent of survey respondents ranked "data-informed decision-making" as one of the most critical success factors in the digital era, judgment—an analog skill—is still required. Digitally mature companies have employees up and down the hierarchy who can look at data critically, knowing that some analyses will be incomplete, imperfect, or even biased.

3
A Challenger Mindset and Willingness to Disrupt

Digitally mature companies encourage employees to challenge the status quo—even if this means fundamentally rethinking the core business. Everyone in the organization is responsible for listening to signals from customers, suppliers, and other stakeholders outside the company. They're empowered to question all aspects of the business and suggest new ways to create value for customers. People who thrive in these conditions are actively curious about everything happening around them; they're comfortable admitting what they don't know, and are willing to unlearn, relearn, and embrace the latest and best practices.

Curiosity and creativity are vital resources for a digitally mature company. Even with the automation of many functions, participants were adamant that human ingenuity continues to be critical. Leaders of these organizations tend to look for people who apply their creative sparks to the

insights they gain from data, artificial intelligence, and feedback from colleagues. Learning and performance are twinned, not split as is often the case at companies that have yet to embrace agile approaches.

When hiring and promoting staff, these organizations look for candidates with a "growth mindset," who can adapt to changing conditions. One participant said their business assesses each employee's "AQ"—adaptability quotient—to gauge their capacity to be agile and grow even under stress.

4
Distributed Decision-making and Co-creation

Companies have been aspiring to bust silos for well over a decade, but growing demand for end-to-end customer experiences has made cross-functional work imperative. Roundtable participants agreed that digitally mature organizations are highly collaborative.

Leaders of digitally mature organizations see beyond functional silos and organizational levels to bring together individuals with varied skill sets to frame and solve problems.

These leaders view employees more as "collaborators" than "followers," in part because data and technology enable more employees to have input in decisions. For that reason, diversity, equity, and inclusion efforts that bring more perspectives and experiences inside companies have become critical to stimulating new thinking, some participants said.

Executives we talked to say leaders must carefully balance when to "weigh in" and "step back"; their ambition is to empower employees to own and act on their decisions. But these companies are also willing to go outside their organizations, sectors, and regions to harness talent who can deliver differentiated customer experiences.

Of course, the COVID-19 pandemic has forced leaders and organizations to reimagine collaboration, the participants said. We have all grown accustomed to the virtual meeting and collaboration tools that global companies are using to engage people from around the world at different organizational levels, but success requires more than technology:

- **Explicit discussions about shared purpose, values, and norms** can encourage ownership and collaboration.
- **Regular meetings—not just ad hoc troubleshooting**—help standardize processes.
- **Rituals can forge a sense of community and belonging** despite physical distance and cross-cultural differences.
- **Orchestrated "social" encounters** can foster mutual trust.

However, participants know firsthand the limits of virtual collaboration. When it comes to horizontal collaboration, there appears to be no substitute for face-to-face interaction for building trust and connection, even among digital-first companies and digital natives.

5
Continuous Experimentation and Learning

In a world where speed matters, digitally mature organizations act even when the appropriate move is ambiguous. They don't wait for perfect information before making decisions; they see their decisions as "working hypotheses" based on the best information available.

> **"In a world where speed matters, digitally mature organizations act even when the appropriate move is ambiguous."**

We've heard for years about the need for organizations to develop a workforce of calculated risk-takers, able to live by a "fail fast" and "learn fast" approach. Leaders still want this, and to get it they need to create an environment that makes room for uncertainty, experimentation, and well-intentioned failure. They themselves must be willing to have the courage, as one participant put it, to launch new products or programs, experiment with them, refine them, and even drop them.

Digitally mature organizations leverage design thinking, lean start-up, and agile methodologies to power innovation. They conduct rigorous, relevant experiments, and test, learn, and adapt in light of new developments—even dropping once-promising projects when the data suggest they no longer work. With customer intimacy guiding their operating models and cultures, these experiments put customer needs first. In fact, we heard examples of companies co-creating new products and services with their customers, for instance, in innovation labs designed for that purpose.

6
Ethical Decision-making and Proactive Governance

As technological advances give rise to previously unimaginable use cases, digitally mature organizations recognize that they are accountable for the unintended consequences of their actions within and even outside their organizations. Participants acknowledged that ethical dilemmas will arise, but that leaders must go beyond "do no harm" and establish the processes, habits, and talent that serve as the company's compass and guardrails. Millennials and Generation Z in particular want to work at companies that stay true to espoused values.

Leaders of digitally mature organizations align their employees around a shared purpose that puts ethical decision-making on behalf of stakeholders at the center. These companies earn the right to collect and use employees' and customers' data, for example, by being transparent about their intentions and relevant processes. When they use that data, they actively ensure they are abiding by the expectations they set when they gather it. Organizations want to get to the point where customers want to share their personal information because they trust they will benefit from its use. Building this trust needs to be a multi-pronged effort embraced by all in the company—not just policed by those in compliance roles.

We had lively discussions about the relationship between the private and public sectors and how that relationship needed to be reimagined given the challenges and opportunities emerging technologies have unleashed. Participants described how complicated it is to do business across the globe—where there is no standard or "level playing field" for handling employee or customer data, for example. American companies were seen as far behind those in Europe and much of Asia in working with governments to address the moral dilemmas associated with digital technology. Many participants, especially those in emerging economies, said they proactively partner with policymakers to develop regulations and practices that encourage competition, protect customers, and meet the needs of society.

DIGITAL TECHNOLOGY: ENABLER OR DISRUPTOR?

Companies around the world are trying to harness the potential of digital technologies and data to ensure their very survival. When we asked leaders what it takes to prepare organizations for this effort, they shifted quickly from talking about digital tools to talent and culture—a surprise to us. Many companies find the journey to digital maturity daunting, with its seemingly endless considerations and constantly shifting landscape. It's new ways of working and new relationships with customers and other stakeholders that separate digitally mature companies from those whose transformations are still underway or have stalled.

In part two of our series, we will share what we learned about achieving these hallmarks or simply getting in the race. Indeed, digital transformation can be an odyssey, but it has a destination: at the end of the journey, digitally mature organizations can test and learn, change course, and reinvent themselves while remaining true to their core values. ⊖

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Digital Transformation: A New Roadmap for Success

Is your company reaping the rewards of digital transformation yet? Linda Hill and colleagues offer seven guiding principles for transformations at any stage—nascent, progressing, or stalled.

For the past two years, we've been asking executives: Where is your company in its digital journey, and where do you want to go?

Roundtable discussions with 175 senior executives around the globe and a survey of more than 1,500 senior executives from over 90 countries helped form a picture of today's digitally mature company. However, it's one thing to know where you aspire to be, and another to understand how to get there. In this article, the second in a three-part series, we dive into the challenges these leaders confronted and strategies for how to address them.

Organizational change is never easy, but our roundtable discussions made clear that achieving digital maturity can be an especially arduous journey, even for digital-first companies. While the COVID-19 pandemic has made digital transformation an even more urgent need, companies must also morph iteratively to keep up with the speed of emerging technologies. It's a process of continuous learning and pivoting to adapt to an evolving competitive landscape.

Despite the recognition by participants that speed is critical, they reported that digital transformation takes significant

financial investment and time. Of those who reported making significant progress on their journey, 60 percent had been at it for at least five years. In calculating the resources, financial and otherwise, necessary for change, participants emphasized the need to plan for continual upgrading of technology, organizational capabilities, and talent.

With these dueling considerations in mind, we distilled our research findings into seven guiding principles for digital transformations at any stage—nascent, progressing, or stalled:

1
Recognize the Emotional Side of Digital Transformation

Digital transformation can be bewildering and exhausting for leaders and employees alike. Emerging digital technologies are disrupting everything from supply chains and manufacturing to selling and distribution, as companies battle to create differentiated end-to-end customer experiences in an unforgiving dynamic economy. As one executive put it, in a hyperconnected world, competitors can "pop up from anywhere and everywhere."

With rising expectations of customers and other stakeholders, no company can afford to stand still. Now more than ever, they must constantly attend to both top and bottom lines by launching new products, services, and experiences consistently. Leaders from software-as-a-service (SaaS) business models, for example, described how delivering at the price points and pace required today has required them to reimagine their processes and talent systems.

Embracing experimentation and the inevitable missteps and failures inherent to the innovation process is frankly nerve-racking for leaders and their teams. Step-change innovation takes courage, and even digital-first incumbents struggle to make the necessary longer-term investments when their investors focus on shorter-term metrics, participants say.

At the same time, companies must deliver value at speed. They're cutting costs through automation, and most people we talked to report running lean—conditions that make it hard for leaders and their employees to take the risks required for innovation. Unfortunately, according to our survey, only 5 percent of executives consider the employee experience one of their top two priorities. Those who did, though, reported greater and faster progress in their digital transformation journey.
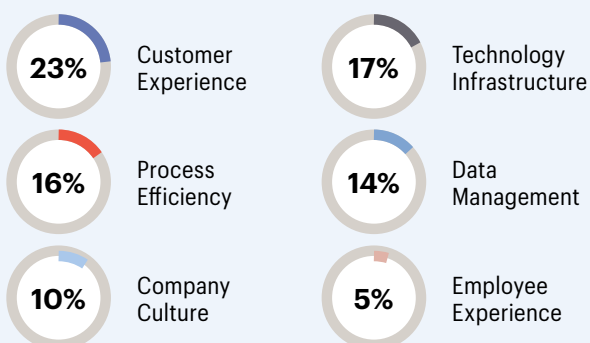
2
Align Around a Customer-Centric Narrative

Vision and strategy matter, but without a sense of shared purpose, employees aren't willing to do the hard work required to build a digitally mature organization. Employees not only want to know where they are going, but also why they are going there. We heard time and again that too often leaders neglect to connect the dots between who they are, whom they serve, and how digital technology will help them deliver.
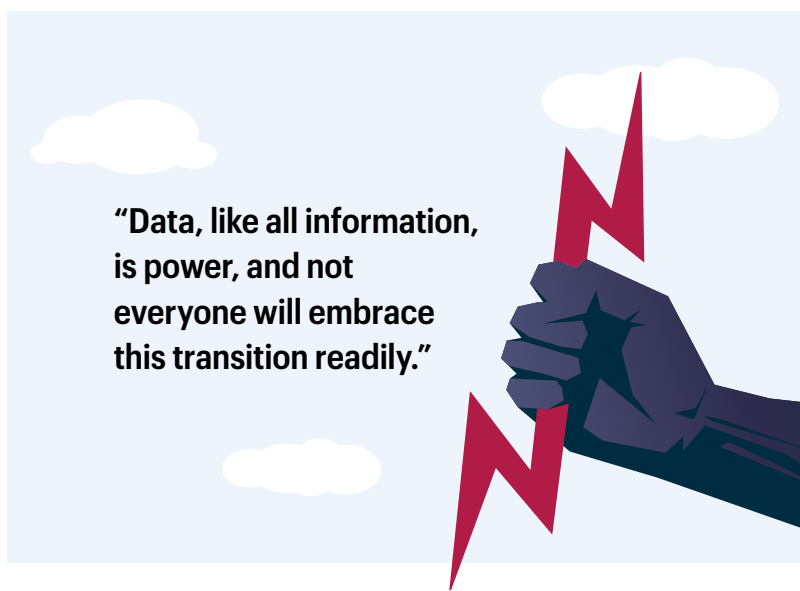
The sense of collective identity keeps employees aligned and committed to working in the new ways demanded of them in the digital era. Without it, employees, especially Millennials and Gen Z talent, don't find their work as mean-ingful. They don't develop the sense of belonging they need to collaborate and deliver innovative solutions to customers. A shared sense of purpose anchors the organization as its leaders distribute authority and delegate decision-making.

The Objectives of Digital Transformation

We asked survey respondents to identify their organizations' top two areas of focus in digital transformation. Here's what they said:

23% Customer Experience

17% Technology Infrastructure

16% Process Efficiency

14% Data Management

10% Company Culture

5% Employee Experience

Source: Leadership in the Digital Era survey, n=1,500

"Data, like all information, is power, and not everyone will embrace this transition readily."

Too often, leaders only communicate how digital transformation will improve the company's performance. Instead, they must develop a narrative—a human-centric story—for how digital transformation will improve the lives or livelihoods of their customers and other stakeholders. As one executive put it, "We must explain how digital assets will help us become a sustainable enterprise, both profitable and a force for good in the broader society." Attention to purpose throughout a digital transformation helps counter short-termism, and encourages the psychological safety necessary for cultivating a growth mindset among employees.

To nurture that sense of shared purpose, as well as customer-centric thinking, participants described how they sent cross-functional or cross-level teams to observe customers using their products and services. Others talked about the benefits of running design thinking labs with customers to incubate new offerings. These approaches helped employees across the organization develop a shared understanding of the customer journey. As leaders explained, customer-centric organizations develop solutions to address customers' evolving needs and desires, rather than simply selling their existing products and solutions.

3
Build a Data-informed Culture by Upskilling Talent

Fewer than half of survey respondents reported that their organizations had the right talent to compete in the digital era. Participants described the proliferation of "digital positions" in their companies, from Digital Project Manager or Digital Director to Chief Transformation Officer or Chief Innovation Officer. In one roundtable discussion, participants predicted that, over time, more senior leaders would have technical backgrounds. One media executive predicted that in five years, engineers would comprise a third of his company's workforce.

Today, digital transformation requires upskilling all employees so they can harness digital tools and data. However, participants emphasized that executives must first understand the different generations in the workforce:

- **Digital natives**, who grew up with digital tools
- **Digital immigrants**, who are open to learning and changing
- **Digital refugees**, who avoid digital tools they view as unsettling and scary

While not everyone needs to be able to code or understand the underlying dynamics of artificial intelligence (AI), participants say that almost all employees need a "basic understanding and comfort" of working with data—its potential and limitations. Digital specialists in an organization should implement user-friendly digital tools to help level the playing field for those who are less familiar with them. For some companies, visualization tools have been key to getting everyone (even those who fear numbers and math) to use data to inform their decisions and actions. Unfortunately, the consensus among participants was that too often digital transformations don't devote enough time and resources to developing the mindsets and capabilities all employees need.

Roundtable executives said senior leaders tend to be digital immigrants at best at most established companies. While they agreed that leaders urgently needed to expand their knowledge, they didn't see eye to eye on what digital literacy means. A few argued that leaders should understand data analytics and AI deeply, and even learn to code. Most contended, however, that what really matters is a leader's capacity to collaborate with and learn from digital specialists on their teams.

To increase digital literacy, some companies are using reverse mentoring programs, with Millennials and Gen Z'ers educating those more senior (because of age or position) about the potential of digital tools to create value. One participant in China described how "twenty-somethings" joined C-suite meetings to share their perspectives on the opportunities and challenges of various digital projects under consideration.

4
Manage the Power Dynamics that Come with Data

As we argued before, companies shouldn't aspire to create a data-driven culture, but rather a data-informed one. Data shouldn't be touted as a replacement for expertise or experience.

Instead, it should enable employees to question the organization's status quo, using insights from data rather than hindsight or past experience.

It's important to remember that data, like all information, is power, and not everyone will embrace this transition readily. Functional experts and leaders can become resistors to change, especially if the data challenges deeply held assumptions based on experience or expertise, or reveals unpleasant realities about customer or employee experiences. Some might consider the use of AI in "people decisions" dehumanizing. Again, leaders should prepare to manage the emotions associated with learning to use data to make better and faster decisions. Without a shared sense of purpose and attendant psychological safety, participants say that employees will likely reject data instead of incorporating it into the daily practices in their organizations.

It's also imperative to have team members represent diversity of thought, and some participants argued for demographic diversity. We have all come to appreciate how algorithms can lead to unintended bias that harms certain employees and customers, and the company's reputation (a bias story can go viral on social media within minutes).

Executives must understand the different generations in the workforce:

- **Digital natives**
  Who grew up with digital tools
- **Digital immigrants**
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5
Design for Inclusive and Agile Problem-solving

As they become more senior, executives often have less contact with those at the front lines of their organizations and, as a consequence, their customers. Leaders need to be aware of these blind spots and empower their employees—including those closest to the customer experience—to take ownership of customers' problems and innovate on their behalf.

As leaders develop and iterate their strategy for where they are going and how they will get there, they need to surround themselves with people who have their fingers on the pulse of the organization. Their advisers must closely monitor shifts in the competitive environment. Leaders need to actively "crowdsource" feedback and ideas from employees, customers, vendors, and regulators. They must spot even the weakest signals of change so their companies can proactively shape their future.

Participants acknowledge that there is no perfect organizational design. However, as much as possible, they recommend designing organizations to mirror the end-to-end experience of the customer so that employees solve problems "through the eyes of the customer." This structure tends to support an enterprise point of view, collaboration across functions, levels, or geographies, and more decentralized decision-making closer to the customer.

That said, participants say they're employing more ad hoc problem-focused teams as overlays to their more permanent organizational structures. These teams almost always include individuals with different expertise and perspectives—a critical ingredient for innovative thinking. The downside of this ad hoc approach is that it can add complexity and slow decision-making, just when speed is of the essence. When setting up these teams, clarity about decision-making rights and the rationale of decisions are critical: who should be consulted before making decisions; what decisions can they make; what should be escalated.

6
Encourage an Outside-in and Collaborative Ecosystem Perspective

Digital transformation requires continuous individual and collective learning. Forty-four percent of our survey respondents view continuous learning as key to success in the digital era. To help employees see the possibilities of a digital future, participants orchestrated visits to innovation hubs (like Silicon Valley) and opportunities to interact with people in other industries (at innovation labs or corporate accelerators, for example). Participants contend that an outside-in perspective can infuse the creativity and curiosity that digital transformation requires.

Companies can also no longer go it alone, given the speed and capabilities necessary to compete. Leaders must forge new partnerships with key players in their ecosystems, including private companies, government, and sometimes non-profits. Competitors are even becoming partners; to stay at the cutting edge, companies are turning over essential but non-core activities like cloud storage to organizations with whom they compete in other domains. The pandemic has reminded all of us of our interdependencies across sectors. Without basic infrastructure—public health systems, adequate internet bandwidth, childcare—businesses cannot function. Competitors have found themselves coming together to make sure shared suppliers survive these times of unprecedented turmoil.

7
Safeguard Ethics and Take a Proactive Approach to Governance and Compliance

Three-quarters of survey respondents say their organizations demonstrated ethical governance of data "often" or "always," a number that seems inconsistent with what we heard in our roundtables. Participants say there's still much work to do to embed ethical judgment throughout an organization and prepare for dilemmas on the horizon. While many

"Leaders must be empathic about the stress employees feel as they grapple with the complexity and change that comes with digital transformation."

companies have set parameters for using customer data, what about rules around employee data? Companies will need to confront these questions.

Only 18 percent of survey participants deemed ethical governance critical to success. However, those 18 percent were also significantly further along in the digital transformation process than those who reported otherwise. Some roundtable participants have added an "office of ethics" or ombudsman to provide oversight over ethics policies and practices and to adjudicate complex ethical challenges, engaging outside advisers, if necessary.

Participants are trying to stay ahead of new regulations and, as appropriate, help shape them (with the help of not-for-profit organizations more than traditional lobbying). In the digital world, leaders must stay informed of nascent and fast-changing compliance standards—globally and locally—as they make investment decisions.

Ultimately, leaders must articulate the values and principles that should guide how employees resolve inevitable ethical questions and create processes and habits that reinforce desired actions. These practices should provide the compass and guiderails for ethical decision-making—going beyond "do no harm." As technological advances open up new, previously unimagined use-cases, leaders must be prepared to ask and answer the question: "Just because we can do something, should we?" With regard to the use of data, leaders must be rigorous in encouraging employees to ask: "What expectations were set with employees or customers when we gathered

their data?" "How would I personally feel if my data were used that way?"

DIGITAL TRANSFORMATION IS MORE ABOUT PEOPLE THAN TECHNOLOGY

While these seven principles might seem obvious to some, we've found that few companies have fully internalized them. True adoption requires conviction at the top of the organizational chart and a spirit of determination that permeates every level below. And real success will come from the details—how the company weaves these concepts into its corporate DNA and day-to-day operations.

After all, companies trying to digitally transform must change employees' hearts (why they do their work), heads (how they see their work), and hands (how they do their work). It is no wonder leaders and employees often feel overwhelmed by the adaptations required of them individually and collectively in the digital age. Leaders must be empathic about the stress employees feel as they grapple with the complexity and change that comes with digital transformation. In time, the opportunity to deliver on a shared purpose helps align and motivate people.

Navigating the arduous journey of digital transformation requires certain mindsets and behaviors from leaders that are different from those required in the past. The final installment of this series will look at how leaders need to change if their companies are to reach digital maturity and be a positive force for customers, employees, and society. ◉

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Curiosity, Not Coding:
6 Skills Leaders Need in the Digital Age
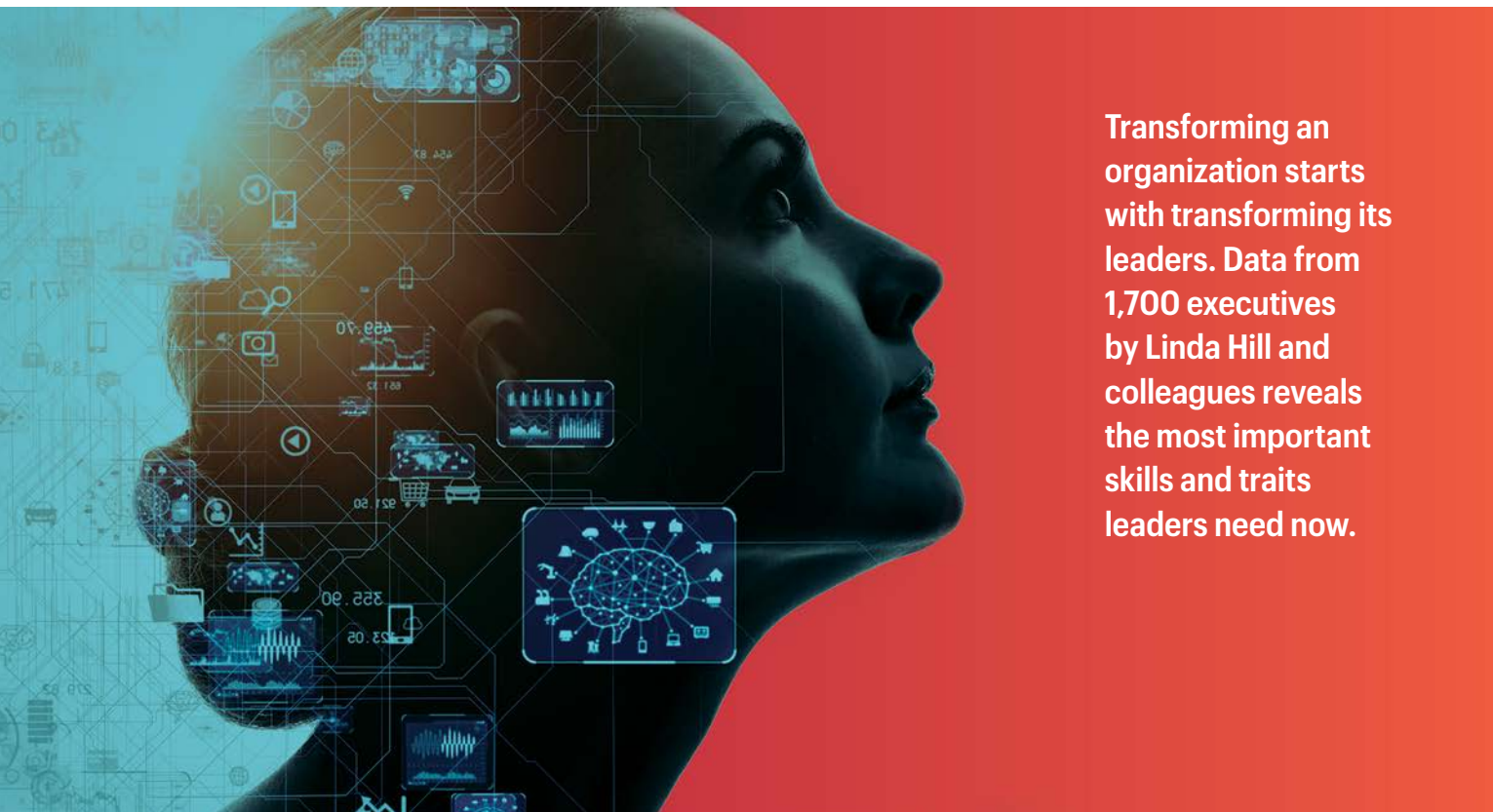
Transforming an organization starts with transforming its leaders. Data from 1,700 executives by Linda Hill and colleagues reveals the most important skills and traits leaders need now.

Leaders who set out to reshape their companies to compete in a fast-evolving digital world often come to a daunting realization: To transform their organizations, they must first transform themselves.

However, the qualities they need to develop aren't the ones you might expect. You might think an organization in flux needs a steady hand, someone with foresight and experience who plots a sensible route to cautiously and competently travel. And, of course, companies need leaders who are also digitally literate, right?

In actuality, our research highlighted that none of these characteristics matter as much as you might think when it comes to leading digital transformation. In fact, 71 percent of 1,500 executives we surveyed in more than 90 countries said that adaptability was the most important leadership quality in these times. Roundtable discussions with about 200 executives echoed those findings.

Our survey respondents also ranked creativity, curiosity, and comfort with ambiguity as highly desirable traits. "It's the soft skills that I argue are not soft anymore," said the chairman of a major African retailer at one of the 21 global roundtable discussions we held with leaders of digital-first and incumbent companies.

More troubling, though, was that fewer than half of our participants think that they or other senior executives at their organizations have the right mindset and skills to lead in the digital era. Those closer to the nuts and bolts of digital functions—the chief technology officers, chief information officers, and chief digital officers—feel more confident about their own capabilities but less so about those of their colleagues in other functional areas.

In light of the speed at which new technologies continue to emerge, digital transformation is not a one-and-done process, and neither is the leadership transformation required of leaders.

Here's our advice, based on our research, for leaders trying to recalibrate:

1

Be a Catalyst, Not a Planner

In the digital era, companies face a more dynamic competitive environment: key competitors are no longer the usual suspects, and customer and stakeholder expectations continue to evolve. The speed and complexity of technological change require digital transformations to be more iterative than other forms of corporate change.

Leaders need to catalyze change rather than plan for it. That means creating the initial conditions for the organization to achieve its ambitions and guiding their company through a process of continual learning, pivoting all along the way.

Though it won't be easy, even perfectionist Type-A personalities must open their minds to a more experimental approach. Those who rely on traditional strategic thinking—an approach one roundtable executive described as "linear and deterministic"—will be less attuned to emergent factors to which they must respond.

Leaders must be comfortable moving forward with ambiguous and incomplete information about what's happening around them and the potential impact of their actions. They must learn to see their decisions and actions as working hypotheses that they can only validate by collecting feedback on their impact as expeditiously as possible.

Leaders will be blindsided if they rely only on their past experience or expertise when making decisions. Even with more data and analytics, executives we talked to said that leaders still need to adopt holistic thinking and stay open to the unexpected. They must learn to stretch their "own imagination and creativity" to envision what the future could be for the company and its stakeholders, anticipate possible scenarios, and prepare to adapt to whatever unfolds.

It is important for leaders to think and act with an outside-in perspective, cultivating a 360-degree view of the dynamics within their organizations as well as of those of the ecosystems in which they operate. This requires what Harvard Business School professors Tarun Khanna, Anthony Mayo, and Nitin Nohria refer to as contextual intelligence. Only with an understanding of the most salient information or the most influential players in a given context can an executive figure out how to catalyze change rather than plan for it.

Leadership Qualities Necessary for the Digital Era

We asked survey respondents to identify the leadership traits most critical to success in digital transformation.

71% Adaptability

48% Curiosity

47% Creativity

43% Comfort with Ambiguity
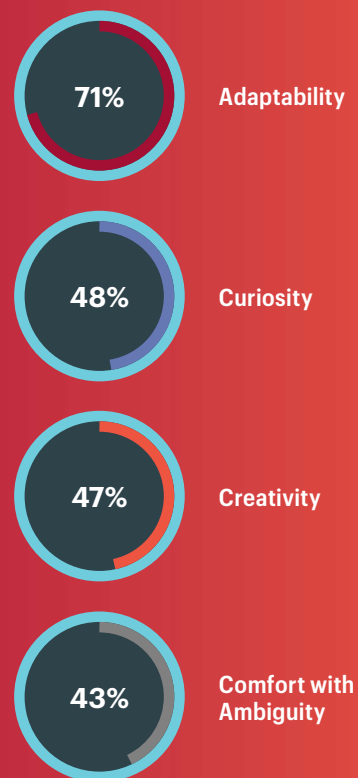
Source: Leadership in the Digital Era survey, n=1,500

How Leaders are Expanding their Digital Knowledge

We asked executives to share the approaches they're using to learn more about digital technology.

80%
harness digital and printed resources

77%
use external trainings and instruction

53%
engage in coaching or "reverse mentoring" with digital natives

2
Trust and Let Go

In today's world, vision and strategy are still essential, but the ability to orchestrate collective action—co-creation instead of top-down direction—has never been more important. To this end, leading in the digital era is an exercise in trust, executives said.

It's about inviting employees to share in decision-making and creating a culture that makes people feel safe enough to take risks and act on behalf of organizational interests. It's also about earning trust from and offering trust to increasingly diverse stakeholders outside of the organization and collaborating with them in new and uncharted ways. Trusting executives:

Distribute authority. It's important to shake the command-control model, which depends on hierarchy and rules. Leaders must learn to exercise influence without relying on formal authority. They set the organizational compass—communicate the purpose and values—and empower others to execute.

Lean on others. We're not talking about delegating to trusted lieutenants with similar backgrounds and the same life and career experiences. It means learning to collaborate with an increasingly diverse workforce across functions, levels, geographies, and even organizational boundaries.

Curate talent. Expanding their traditional network of talent requires leaders who can identify and assess the capabilities, mindsets, and values of individuals the corporation needs to deliver on its purpose. This might entail nurturing digital natives (by definition, those younger than most senior leaders) to help them reach positions of significant authority (and even become board members). Elevating promising talent will help the company embrace the new and diverse perspectives necessary to go beyond the company's core business to imagine growth platforms.

Build partnerships. No organization can go it alone. The COVID-19 pandemic reminds leaders of how organizational success depends on the resiliency of their ecosystems—a public sector able to provide basic infrastructure and a private sector able to provide critical resources and capabilities (e.g., a reliable supply chain). Leaders are discovering they must proactively invest in the ecosystem and build partnerships (turn vendors into partners; join with competitors to solve problems government can't) to create the conditions for sustainable success.

3
Be an Explorer

With so much changing around them, leaders must be explorers. One roundtable executive defines exploration as "curiosity in action." An explorer searches with an ambition in mind: What questions must they answer to lead their businesses today and tomorrow? Where might they find the answers?

Leaders must balance this curiosity with intentionality as they figure out when to be open-minded and broad and when to be focused and dig deep. They must learn to pick up "weak signals" about what is happening in their organizations and ecosystems. By the time a weak signal becomes a trend, as one participant said, "you are often too late, especially when first-mover advantage is at play." The best explorers:

Leave the office. Too often, participants acknowledged, senior leaders "live in a bubble." Explorers go beyond their organizations and their usual experiences and relationships to figure out how the future might unfold. They realize and accept the limits of their knowledge and actively seek out the views of people with different lived experiences and perspectives. Explorers adopt what one executive calls a "software mindset," committing to continual "personal upgrades."

Stay humble. Leaders, even in digital-first companies, should have the humility to ask questions and learn from in-house experts and digital natives at different levels in the organization. Leaders must be familiar enough with emerging technologies in order to ask the right questions about opportunities, risks, and legal and ethical danger zones, and set the boundary conditions to guide the deployment of digital tools and data.

Roundtable participants who are digital natives expect executives to have a "basic appreciation" of the digital tools and data their organizations are leveraging, especially those related to cybersecurity, AI (artificial intelligence), and cloud services. In particular, they should appreciate the underlying logic of AI so they can interpret and evaluate data and the results of analyses with a critical, if not skeptical, eye.

Roundtable executives described learning what they need to know through regular meetings (both in-depth and more informal) with engineers developing and deploying digital tools for operations and customer-facing functions, for example. Some roundtable participants indicated that they plan to sign up for coding or data analytics classes to acquire expertise but, more important, to show their teams that they too must become life-long technology learners.
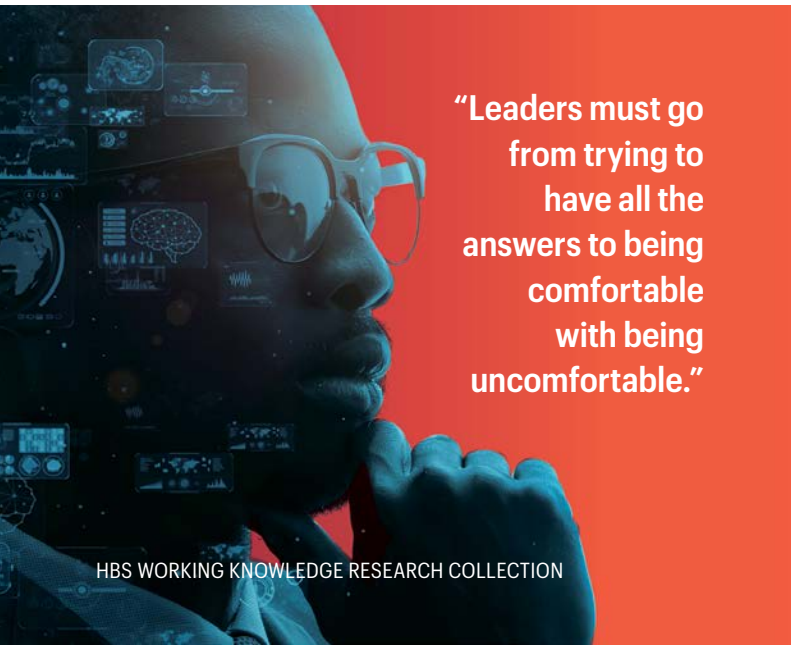
4
Be Courageous

Leaders need to learn to experiment, iterate, and pivot themselves if their organizations are going to be able to thrive. In order to get comfortable with the inevitable missteps and unconfirmed hypotheses of experimentation, leaders need a new attitude toward risk. Eschewing opportunities just to avoid failure is perhaps the riskiest position of all in the digital economy. In a fast-moving world with more risks than ever—cybersecurity, reputational risks, pandemics, social crises—executives need courage to make big bets.

Executives we spoke to acknowledged that they mostly don't feel psychologically safe, given the pressure they face from their boards and investors. However, if they want their employees to learn to live with the risk profile necessary for breakthrough ideas (as opposed to incremental choices) they must model what it means to act with courage and conviction: identifying as many risks as they can and working with their colleagues to mitigate them, while also having the fortitude to make hard decisions and move forward.

As roundtable participants pointed out, "standard safety vests" aren't available; best practices are still up for debate for many aspects of digital asset and data use. Leading through uncertainty takes not only good judgment, but also the emotional resilience to shake off self-doubt and fear.

While digital natives and digital-first executives have experienced the benefits of "failing quickly and often," leaders of less digital companies may find it hard to do so. Their outward confidence might mask fear and anxiety, but they must be ready to admit misconceptions and misinterpretations, and acknowledge early on what they don't know or what isn't working. Executives must be prepared to shoulder responsibility for mistakes and share credit for triumphs. One executive we interviewed said: "Leaders must go from trying to have all the answers to being comfortable with being uncomfortable."

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5
Be Present

The leaders we talked to acknowledged just how complex and demanding work has become for employees in the digital era. Employees are expected to take on more risk as they experiment and innovate, and experience new human-technology interactions. As one leader put it, "everything about work and careers is being transformed."

The best leaders stay present and emotionally engaged, communicating openly and authentically. During times of upheaval, these executives are:

Empathic. They monitor employee stress and anxiety and try to prevent overload and burnout, especially in the "next normal" of the pandemic. Many people are coping with social and economic unrest and insecurity both inside organizations and outside in their communities. Many people don't feel safe. The best leaders show compassion by asking the right questions and actively listening, even when the messages they receive reveal concern, skepticism, or fear.

Vulnerable. Participants said they're learning to be more comfortable with emotion-ladened interactions—what one referred to as "courageous conversations"—not only with employees, but with customers and suppliers, particularly those fighting to survive economically and physically in these traumatic times. Leading during the pandemic has led many participants to discover a resiliency they didn't know they had, while others admitted they were struggling.

Adept storytellers. Transparent communication and storytelling have never been so critical to leading. Authentic conversations go a long way toward engaging employees and fostering ownership. Data and visualization tools can bring more power to a leader's message—illustrating the what, how, and why of their decisions and actions. Savvy storytelling can align diverse stakeholders around a shared narrative about how digital transformation will help the company pursue its purpose.

Leaders must become "fluent in the use of virtual tools" and cultivate a digital presence with care and intention, participants said. A leader's words and actions are becoming ever more visible and saleable, and stakeholders are watching.

Leaders have to learn how to manage the conflict that will come with including new voices in their deliberations and seeking partnerships from even unexpected sources. Delivering a message that resonates with diverse stakeholders is a skill many roundtable participants acknowledged they have yet to master. Some have hired coaches to evaluate their digital presence and teach them to communicate more effectively on virtual platforms and through social media. Participants said that trying to be "authentic"—sharing more about themselves than they're accustomed to, for example—to connect with remote employees has left them feeling vulnerable.

Self-aware. Participants consider self-awareness and self-management crucial. They said that executives need to create space for "slow thinking" in a fast-moving world, making time to meditate and reflect on uncomfortable questions or choices. Leaders can't afford to be lured by quick fixes or the latest "shiny object." With clear minds, they can forego short-term wins for more long-term sustainability.

6
Live Values with Conviction

Many employees will resist changing their mindsets, behaviors, and skills unless they appreciate the value of doing so; leaders need to be clear about not just what they're doing, but why they're doing it. It's a complicated balance, participants said: on one hand, leaders need agility and courage to adapt to unfolding circumstances, but they also need determination and discipline to move a company toward digital maturity. They need to be bull-headed about the organization's shared purpose, its commitment to deliver on who they are (corporate values) and who they serve (customers and key stakeholders).

As much as leaders must be open to new ideas and changing circumstances, those without a sense of purpose will struggle, participants said. After all, diverting resources from core businesses to fund more speculative projects to fuel growth is fraught with uncertainty and risk. Making a compelling case for digital transformation—one that supports a vision co-created with stakeholders—helps keep people committed to doing the hard work demanded for success.

Corporate purpose and the organization's values become the compass for navigating the many complex ethical dilemmas that arise with technology and data. Ethical leaders say "no" to actions that put profits before corporate integrity and say "yes" to standards and safeguards even if they risk profits. They must always ask: "Just because we can do it, should we? Is it simply the right thing to do, even if it costs us in the short run?"

Employees and customers, especially of the younger generations, expect leaders to take a stand on controversial environmental, social, and governance (ESG) matters. Giving voice to values requires courage, emotional intelligence, and contextual intelligence. Leaders must share how corporate purpose and values shaped their decisions, and the principles and guardrails they relied on when weighing tradeoffs.

THE PERSONAL JOURNEY TO BECOMING A LIFE-LONG LEARNER

Executives we spoke to foresee only exponential change in emerging technologies and the demands of employees, customers, and broader stakeholders. Executives, particularly those who are digital immigrants, must be prepared to transform themselves and prepare for an arduous and uncharted road ahead.

The only reasonable response to the digital sea changes happening around us is for leaders to adopt a learning mindset and show generosity toward other people and themselves. Digitally mature companies, as it turns out, are led by people who can transition from taking center stage to setting the stage for organizational success. ⊖

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