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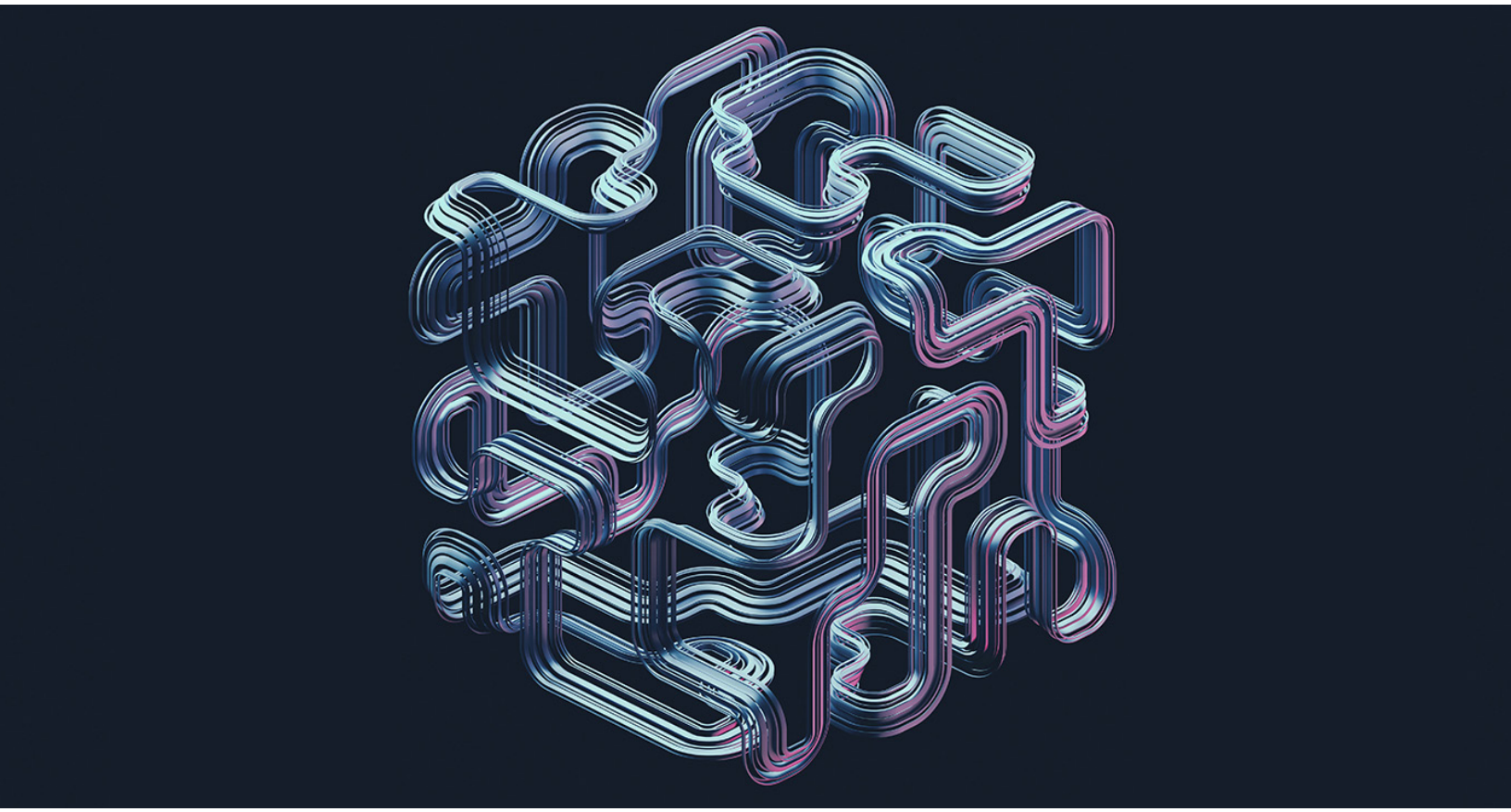
Seven lessons on how technology transformations can deliver value

Our annual IT strategy survey shows how technology investments are proving their worth, especially at companies making more tech-based changes and bridging more of the technology-business divide.



March 2021

In the past year, the COVID-19 crisis has made clear the business imperative of making technology-driven changes, which are more ubiquitous now than ever.[1] Indeed, our latest McKinsey Global Survey on technology and the business suggests that even in the crisis's earlier days,[2] respondents were reporting progress on their integration of technology and business—and that these efforts were creating tangible business value across four measures, including new revenue streams and lower costs. The results also suggest that on average, some transformation activities result in more impact than others (namely, those related to talent and capabilities). And according to the data, the companies with top-performing IT organizations[3] have differentiated themselves from others in their efforts to create value, adopt new technologies, and bring technology and business closer together.

More specifically, the results point to seven key lessons about technology transformations.[4]

Lesson #1: Technology investments are creating significant business value

In the latest survey, companies' tech-transformation activities appear to be paying off. The survey asked about ten different types of transformation initiatives (for more information on the ten plays in our "tech forward" approach,[5] see sidebar, "A tech-forward transformation").[6] According to respondents, more than three-quarters of the initiatives their companies pursued have yielded some or significant cost reductions and improvements to employee experience. What's more, *more than two-thirds of respondents say these change efforts increased revenue from existing streams, and more than half cite the creation of new revenue streams*: for example, a new product line or new business (Exhibit 1).

The results also suggest that these investments aren't one-off attempts to catch up, with nearly all respondents reporting plans to pursue at least one transformation play in the next one to two years.

Lesson #2: People-focused plays result in the most value

With regard to impact, the results suggest that not all types of transformations are created equal. Across the ten transformation initiatives, respondents say that changes to their companies' people and talent strategies are among the highest-value moves to make (Exhibit 2). At companies that have transformed their approaches to technology talent—that is, changing practices to attract, retain, and upskill talent with digital and engineering skills—respondents report the greatest impact on all four measures of business impact.

Meanwhile, those that pursued changes to their sourcing strategies report a significant impact on three of the four measures: realizing new revenue streams, reducing costs, and improving employee experience. And according to the results, scaling up data analytics is a critical enabler of new revenue and increases to existing revenue streams. By the same token, respondents whose companies saw no or negative value across these measures say they were least likely to pursue talent transformations or the scaling of their data and analytics capabilities.

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[1] "How COVID-19 has pushed companies over the technology tipping point—and transformed business forever," October 5, 2020, McKinsey.com.

[2] The online survey was in the field from April 14 to April 30, 2020, and garnered responses from 487 participants. Of these, 275 have a technology focus, and the remaining 212 are C-level executives representing other functions. The participants represent the full range of regions, industries, company sizes, and tenures. To adjust for differences in response rates, the data are weighted by the contribution of each respondent's nation to global GDP.

[3] We define "top-performing IT organizations" as those that, according to respondents, had an average effectiveness score in the top 25 percent of the survey sample, based on ratings of 15 key IT activities that were tested in the survey.

[4] We define "technology transformations" as large-scale change efforts—which are more comprehensive than short-term improvement programs—to modernize the technology function.

[5] Anusha Dhasarathy, Isha Gill, Naufal Khan, Sriram Sekar, and Steve Van Kuiken, "How to become 'tech forward': A technology-transformation approach that works," November 2, 2020, McKinsey.com.

[6] The ten initiatives the survey asked about were changing IT's delivery model (for example, lean IT, agile at scale); digitizing of end-user experience (that is, digitization of end-to-end business processes or end-user/customer journeys across the organization); enhancing IT architecture (for example, using a flexible, services-based architecture, modernizing legacy applications); modernizing infrastructure (for example, cloud migration, infrastructure automation); redesigning the IT operating model (for example, establishing a stronger partnership between the business and IT functions, changing processes such as budgeting and IT demand management, organizing around product-focused teams); redesigning the technology organization to support new digital products or services; scaling data and analytics (for example, deploying artificial-intelligence models, building next-generation data platforms); transforming cybersecurity practices (for example, strengthening defenses against cyberthreats and data-privacy threats, proactively running cyberthreat drills); transforming talent strategy (for example, changing practices to attract, retain, or upskill talent with digital and engineering skills); and transforming vendor management (for example, revamping sourcing strategy, consolidating suppliers, entering new types of strategic partnerships).

A tech-forward transformation

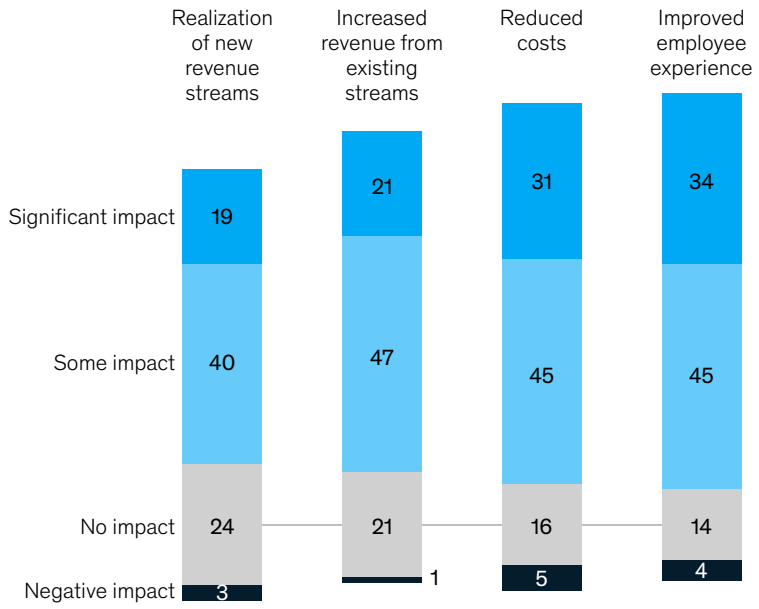
Through detailed conversations with nearly 700 chief information officers at some of the world's largest companies, as well as through our own experience helping businesses execute complex technology transformations, we've synthesized our findings into a "tech forward" model of guidelines and best practices. This model includes the following ten "plays," or domains of activity:

1. *Tech-forward business strategy* (new tech-enabled business models or customer-facing products)
2. *Integrated business and technology management* (no silos, and a product/platform orientation with strategic spend allocation)
3. *Steward of digital user experience* (design thinking, user centricity, and seamless integration with analog technologies)
4. *Agile@scale* software delivery
5. *Next-generation infrastructure services* (cloud; end-to-end automation/no operations, or NoOps; platform as a service)
6. *Engineering excellence* with top talent, both internal and external (do more with less)
7. *Flexible technology partnerships* (capability focused, outcome based)
8. *Flexible, business-backed architecture* rehaul delivered iteratively (open architecture, microservices, application programming interfaces)
9. *Data ubiquity and advanced-analytics enablement*
10. *Defenses that preempt evolving threats* (cyber, data privacy)

Exhibit 1

Most respondents report some or significant impact from their companies' technology transformations.

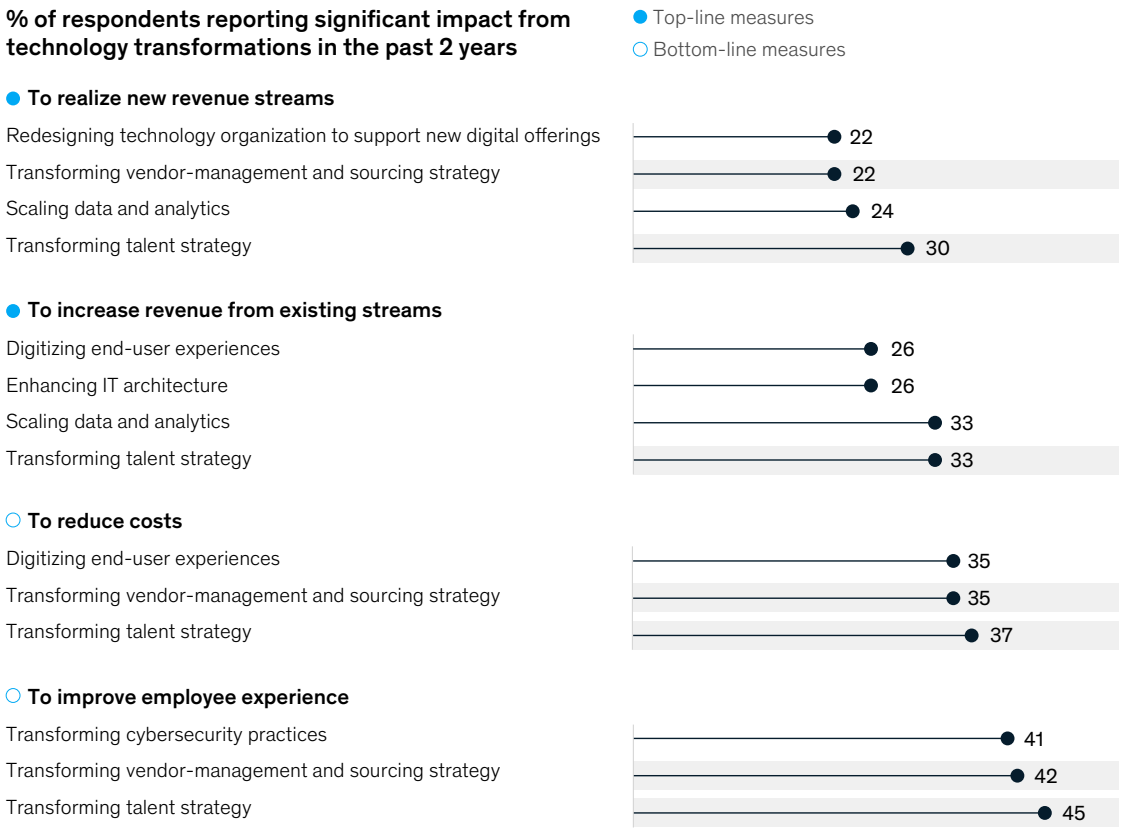
Impact from technology transformations over the past 2 years, % of respondents,[1] n = 487



[1]Figures do not sum to 100%, because respondents who answered "don't know" are not shown.

Exhibit 2

Talent- and sourcing-related transformations tend to result in more value to both the top and bottom line.



Yet even though the people-focused initiatives link most closely with value creation, they are the least likely ones that companies plan to pursue in the future (Exhibit 3). Instead, the largest shares of respondents predict their companies will pursue digitization of the end-user experience, scaling of data and analytics, and enhancements of IT architecture. That is a notable shift from our past three annual surveys, when infrastructure transformations were the most-cited play that companies pursued. Now, respondents are half as likely to say their companies will modernize infrastructure in the next one to two years.

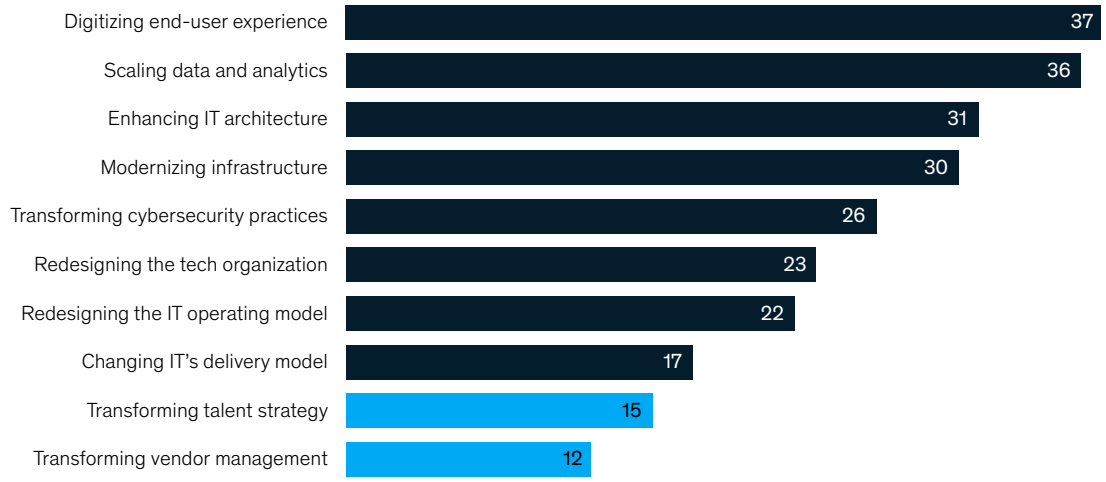
Lesson #3: Talent remains the holy grail of technology transformations—valuable to pursue but difficult to execute

Not only do the transformations focused on talent strategy stand out in their value potential, but they are also much more commonplace at top-performing companies. Top-quartile respondents are more than three times likelier than their bottom-quartile peers (41 percent, compared with 12 percent) to say they've pursued a transformation of their talent strategy in recent years.

Exhibit 3

Despite their high value potential, people-focused initiatives are the least likely to be pursued by companies.

Types of transformations most likely to be pursued over next 2 years,[1] % of respondents



[1]Respondents who answered "other" or "don't know/not applicable" are not shown. We define "technology transformations" as large-scale change efforts that are more comprehensive than short-term improvement programs.

Yet the need to address talent is universal and urgent. Respondents believe that more than 40 percent of their workforce will need to be either replaced or fundamentally retrained to make up for their organizations' skills gaps. But only 15 percent of respondents say their companies plan to pursue a talent-strategy transformation in the next two years, even though the talent challenge remains considerable (Exhibit 4). At companies that have pursued recent transformations, the top challenges to doing so continue to revolve around talent as well as culture: namely, skill gaps and cultural differences, the difficulty of changing cultures and ways of working, and difficulty finding talent to fill new roles—which is as challenging for top performers as it is for everyone else. Talent also appears to impede progress at the companies that *haven't* pursued technology transformations; 42 percent of respondents say they have stuck with the status quo because it's difficult to source the talent they need.

Lesson #4: The talent challenge has clear implications for sourcing

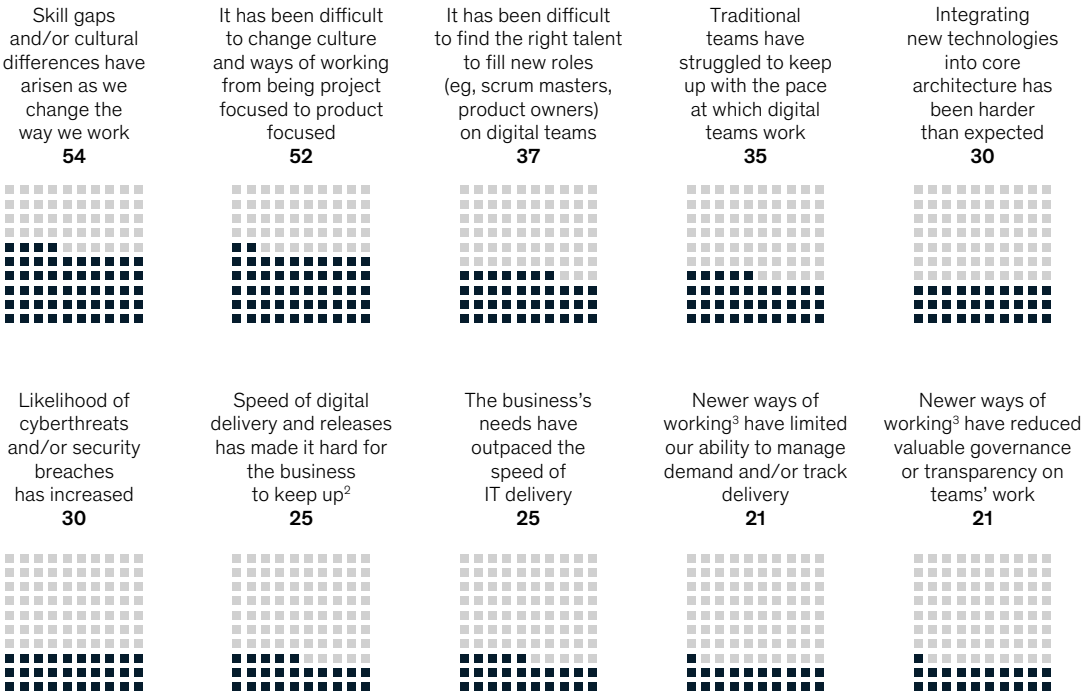
Perhaps because companies have found talent-related changes so difficult to pursue, responses suggest that they have been using new or different approaches to sourcing to fill some of the gaps. We asked technology executives and respondents about recent changes to their technology-sourcing strategies, and they tend to say that reliance on external providers to support both core IT activities *and* digital activities has increased. Among respondents reporting changes to their sourcing strategies, 47 percent say they are relying more on sourcing partners to supplement internal capabilities. Overall, most respondents say their companies have engaged partners in a range of sourcing models, from traditional time-and-materials to managed services and joint ventures.[7]

[7] Other changes to sourcing strategy that the survey asked about: moving work on digital or front-end applications from global providers to niche sourcing partners; changing commercial models (that is, from time-and-materials or contingent workers to managed service providers); and pursuing larger sourcing models (for example, joint ventures or build-operate-transfer models where partners develop assets that they hand over to an organization to operate).

Exhibit 4

Talent-related and cultural issues pose the greatest challenges to technology transformations.

Challenges to changing organizations' technology operating models, % of respondents[1]



[1]Out of 12 challenges that were offered as answer choices. Question was asked only of respondents who said the target state of their organizations' technology operating models are digitally integrated or fully digital; n = 334.
[2]Eg, not enough time to train end users on the new changes, poor adoption of products by end users.
[3]Eg, agile, cross-functional teams.

Lesson #5: No silver bullets—the top performers execute more transformation plays than others

We looked more closely at the results from a subset of respondents whose companies are in the top quartile of performance on core technology activities, or our "top performers." These companies not only have seen more value as a result of their technology transformations but also have focused on multiple initiatives—and more so than their peers. On average, they have run five out of ten transformation initiatives in recent years, versus three initiatives at the bottom-quartile companies.

This result is consistent with our experience that building capabilities in one area often requires the development of others at the same time because these capabilities reinforce one another. For example, companies that work on scaling their agile-development capabilities often invest in hiring new talent—and accelerating their cloud or automation strategies to enable continuous integration/continuous delivery (CI/CD) and DevOps—in parallel.

Lesson #6: The broader use of advanced technologies supports greater value creation

The results suggest that overall, advanced technologies can generate outsize value in tech transformations. Forty-four percent of respondents reporting the use of the Internet of Things (IoT) or edge-computing technologies in recent transformations say they saw significant cost reductions—compared with an average of only 31 percent who saw significantly reduced costs overall. Yet these technologies are relatively uncommon. Only one-quarter of respondents say their companies use IoT in the first place. At the same time, 45 percent of respondents at companies using the cloud to process data at scale report a significant improvement in employee experience from their transformations, versus an average of 34 percent of all respondents.

What's more, the top-performing respondents report using a slightly larger suite of technologies. Out of the six we asked about,[8] nearly one-quarter of top performers say their companies used four to six advanced technologies, compared with 10 percent of all other respondents. Inversely, the top performers are half as likely as others to report using only one advanced technology.

Lesson #7: Bridging the business-technology chasm is critical to outperformance

Beyond their focus on talent, deployment of new technologies, and a broad transformation agenda, the top performers also follow several practices that foster a stronger partnership between technology and the business (Exhibit 5). At top-performing IT organizations, *57 percent of respondents say their senior leaders are very involved in strategic planning, versus 17 percent in the bottom quartile*.

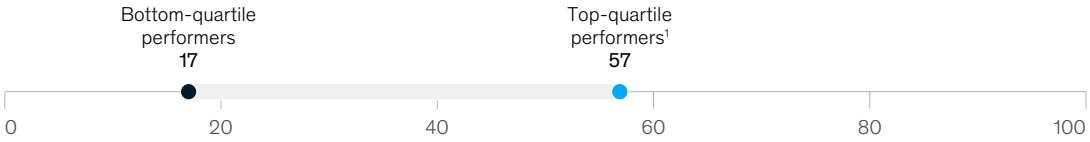
At top-quartile organizations, 57 percent of respondents say their senior tech leaders are very involved in strategic planning—versus 17 percent in the bottom quartile.

[8] The survey asked respondents about the following technologies, and which their organizations had deployed at scale in their technology transformations: automation; advanced analytics (that is, artificial-intelligence and machine-learning-based solutions); large-scale data processing through the cloud; design thinking (that is, user-centered product development); the Internet of Things or edge computing; and advanced mobility (for example, use of 5G mobile networks).

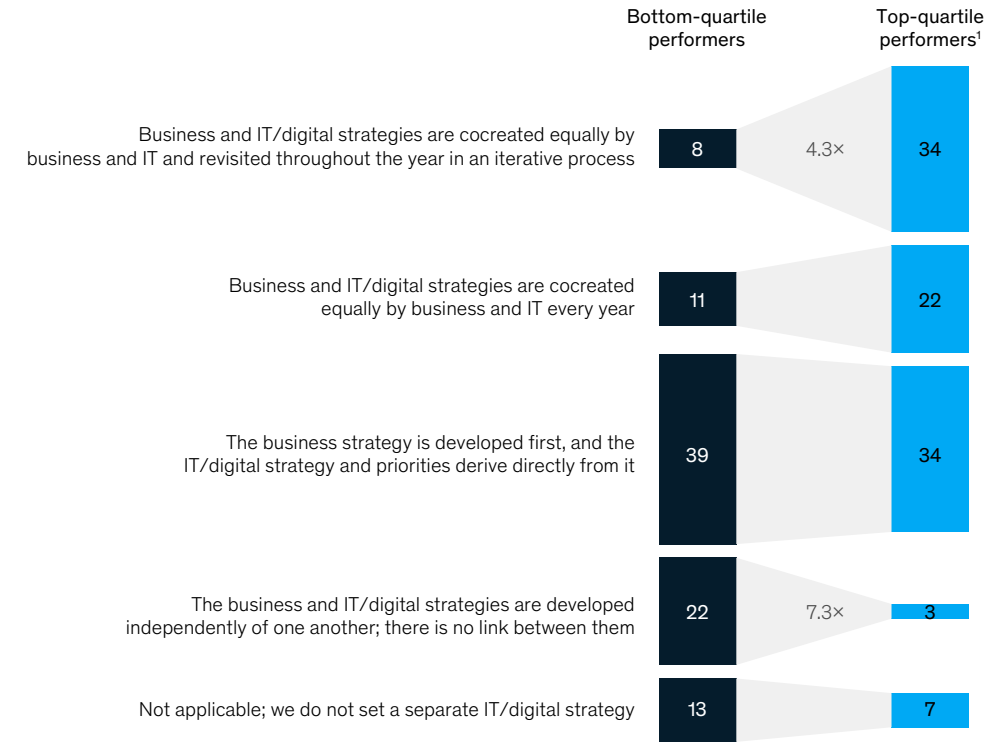
Exhibit 5

Top performers bridge the business and technology gap at significantly higher rates than others.

% of respondents who say their most senior technology leaders are very involved in shaping enterprise-wide business strategy and agenda



Companies' process for setting IT/digital strategy, % of respondents[2]



[1]Respondents who reported an average effectiveness score in top 25% of the sample, based on ratings of 15 key IT activities that were tested in the survey.
[2]Respondents who answered "don't know" or "not applicable; we do not share the IT/digital strategy with the rest of the organization" are not shown. For top-quartile respondents, n = 125; for bottom-quartile respondents, n = 120.

At these organizations, IT and business teams also are much more likely to work together to both develop strategy and deliver technology. Top-quartile respondents are nearly three times as likely as their bottom-quartile peers to say that business and IT cocreate corporate and technology strategies. And they are more than four times likelier than their bottom-quartile peers to have a digitally integrated or fully digital operating model, in which digital and business-oriented teams—or cross-functional teams—all deliver technology across the organization (Exhibit 6).[9]

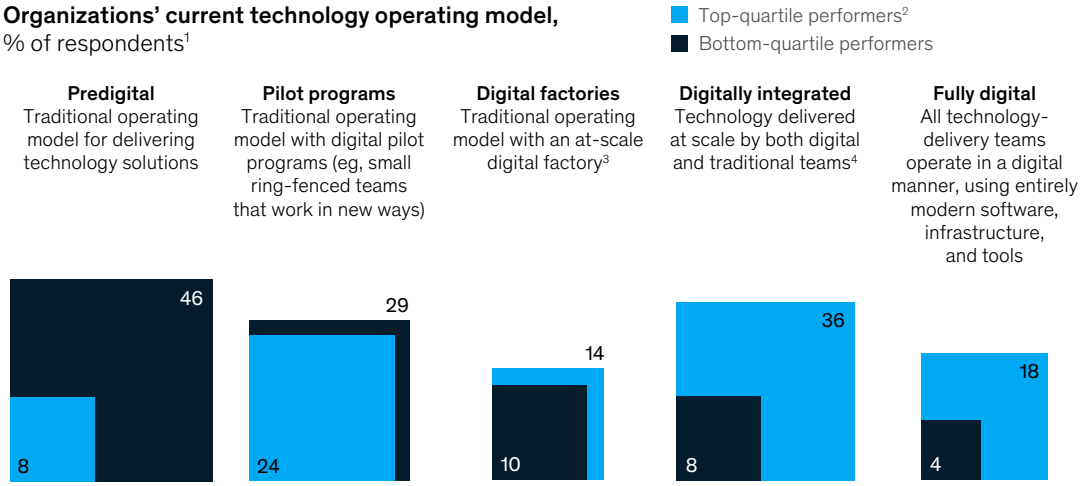
Finally, the top performers are much more focused than others on measurement, even for metrics that aren't technology-specific. According to respondents, top-quartile companies are more likely to track their technology organizations' performance as well as team performance across the company, using more business-oriented metrics such as user satisfaction, time to market, and financial impact.

[9] For more on technology operating models, see Naufal Khan, Gautam Lunawat, and Amit Rahul, "Toward an integrated technology operating model," October 2, 2017, McKinsey.com.

Exhibit 6

Top performers are more likely than others to involve both digital and business-oriented teams in technology delivery.

Organizations' current technology operating model,
% of respondents[1]



[1]Respondents who answered "don't know" are not shown. For top-quartile respondents, n = 125; for bottom-quartile respondents, n = 120.
[2]Respondents who reported an average effectiveness score in top 25% of the sample, based on ratings of 15 key IT activities that were tested in the survey.
[3]A group of delivery teams that is dedicated to building digital products and is largely separate from the traditional technology organization.
[4]Teams are not siloed or incubated and are governed by a single operating model.

The contributors to the development and analysis of this survey include the following members from McKinsey's Chicago office: **Anusha Dhasarathy,** a partner; **Ross Frazier,** an associate partner; **Naufal Khan,** a senior partner; and **Kristen Steagall,** a consultant.

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