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Five questions boards should ask about IT in a digital world

CIOs, business executives, and board directors need a shared language to discuss IT performance in a fast-changing environment. Here's a framework for those conversations.

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Historically, boards have had a hard time assessing and discussing information-technology spending and capabilities. They associate IT with endless reviews of mammoth, years-long transformation projects or complex explanations by the CIO of ever-changing technologies and system requirements. And they try to decode the CIO's reports using their first language, which is centered on traditional cost-related metrics, such as head counts and bottom lines.

In this era, companies are exploring digital business models, processes, and automation technologies, as well as seeking to hire and retain people with different skill sets—data analysts instead of data programmers, for instance. The IT organization can no longer be considered just a service provider; how it manages the integration of emerging technologies can help determine the success of a company's digital strategy. Therefore, simply

relying on cost-related measures will not provide a full picture of IT performance. And the CIO's boardroom presentations will continue to get lost in translation.

Boards need to master a second language—one focused on digital themes, such as speed to market, agile product development, platform-based delivery models, and the benefits and challenges of analyzing various forms of corporate data. With a higher degree of digital fluency, boards can help C-suite leaders make better decisions about how to expand a company's most successful technology initiatives and when to pull the plug on lagging ones. In our experience, board directors are more likely to gain such fluency if they routinely ask these five critical questions relating to the IT organization's performance:

- How well does technology enable the core business?

Takeaways

As companies begin to digitize products and processes, boards need to assess the value and performance of IT differently. They cannot rely solely on traditional, cost-related metrics. Instead, they will need to embrace and understand digital themes such as speed to market and agile development.

To that end, board directors should routinely ask themselves five critical questions about IT. The first three are focused on the role of IT in product development and process optimization. The last two are focused on assessing the health and well-being of the IT organization. Under each area of inquiry, board directors can standardize on key performance indicators and update them as the market and technologies change.

Making these questions a formal part of boardroom discussions about IT can help directors understand exactly how much value IT is creating and how a company's IT capabilities stack up against competitors'.

- What value is the business getting from its most important IT projects?

- How long does it take the IT organization to develop and deploy new features and functionality?

- How efficient is IT at rolling out technologies and achieving desired outcomes?

- How strong is our supply of next-generation IT talent?

By systematically considering each question, boards can generate practical, detailed conversations about both IT projects and processes. This approach can help directors understand exactly how much value IT is creating for a company and how its IT capabilities stack up against those of competitors. Costs associated with IT performance will remain an important topic in the boardroom—hence the need to monitor returns on critical projects—but should not dominate the conversation, as they do currently. Making these questions a formal part of IT discussions can also help CIOs determine exactly which data relating to IT projects and processes will be most useful to the board (see sidebar, "Reporting metrics to the board").

In this article, we explore the five questions and illustrate the benefits boards may gain by asking

Reporting metrics to the board

CIOs and technology professionals should furnish boards of directors with concise reports that detail considerations in each area of inquiry we've identified rather than offering giant collections of unstructured data. The data tracked within each of these dimensions may change in response to market and technology shifts. The report becomes a living, breathing tool that grounds directors and technology professionals in a common understanding of IT performance.

The report itself can take many forms. Less mature organizations may use simple Excel spreadsheets to track relevant metrics under each of the five areas of inquiry. Larger, older organizations may use more sophisticated tools. Both a technology firm and a logistics company, for instance, rely on automated computing programs that pull data from disparate reporting systems and generate detailed accounts of relevant metrics under each of the five areas of inquiry.

Companies initially may not have all the data required to assess the kinds of performance associated with the five questions; some, for instance, may not have the right type of survey data to estimate levels of employee satisfaction. Additionally, companies may need to manage the technical obstacles of gathering data from disparate departments and systems. The very exercise of using the five-question framework, however, will point out those gaps in processes and information—and could prompt companies to put mechanisms in place to fill in the holes.

them. But first, let's consider some of the challenges board directors, CIOs, and other executives face in today's digital environment.

Making decisions about digital

According to a McKinsey survey, senior business and IT executives plan to increase their investments in new technologies from about 32 percent of overall IT spending today to about 40 percent in 2019.[1] In many instances, spending has been earmarked for critical digital initiatives—for example, building online channels or mobile applications and services. At board meetings, CIOs and IT organizations share detailed data about technology costs, operations, requirements, and outcomes. But board directors and business executives seem less sure than ever about how to identify the right areas for investment.[2] They face new realities about corporate technology usage and IT performance, among them:

- *Higher stakes.* Technology is no longer just another business utility, one of many common inputs into operations. It is shaping strategies and business models as companies seek to meet their customers' demand for tech-enabled products and services.

- *Greater complexity.* The typical corporate IT landscape no longer comprises collections of "island" systems and applications. It is a complicated network of interlinked applications, interfaces, and databases—and many of them must be able to "speak" with external systems.

- *More risk.* As companies begin to digitize more products and processes, breaches of security are becoming more common—think of the data losses that have occurred, in just the past few years, at large retailers, financial institutions, utilities, and healthcare companies. Cybersecurity has thus become a frequent point of discussion in the boardroom. But in a 2015 survey of more than 1,000 board members, only 11 percent of the respondents said they had a high level of knowledge about the topic.[3]

Addressing the five IT questions

In the wake of these changes, board directors need to gain a broader, more comprehensive understanding of IT strategy and performance (exhibit). The five questions we've identified can provide some clarity by helping to steer boardroom conversations toward not just the costs but also the capabilities and value that IT engenders.

1. How well does technology enable the core business?

Compared with even five years ago, companies are investing more in digital initiatives to gain critical process and production efficiencies, to launch new products, and to enter different markets. These initiatives span multiple business units and functional areas. One of corporate IT's most important objectives, then, is to facilitate end-to-end business processes. These might be activities undertaken by administrative-support functions, such as finance or human resources, or they might be core business processes, such as facilitating the steps in a bank's mortgage-application process. In this environment, boards must accurately gauge the IT organization's ability to implement technologies that allow core business activities to happen, as well as its ability to act as a true partner with the business rather than just a service provider.[4]
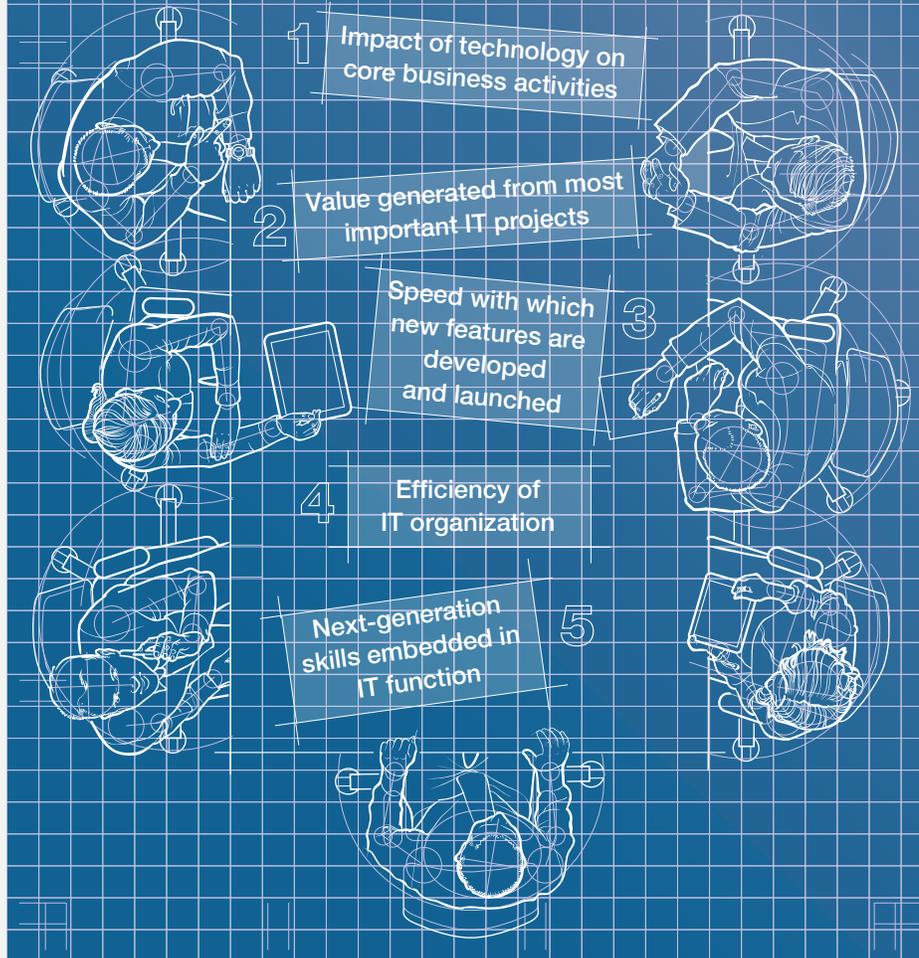
Boards can use a number of metrics to evaluate IT performance in this area—for instance, the percentage of business processes that have been automated, the cycle times for critical end-to-end business processes, and customer- and business-satisfaction scores for various production groups. Board directors and executives at a large US bank, for example, reviewed the progress of a project to digitize the customer-registration process. After some discussion, they homed in on three performance metrics: the time needed to register new customers (in minutes) and to activate new-customer accounts (in days), and the percentage of automation within the process (compared with the old one).

With these key performance indicators (KPIs) in hand, senior leaders approved the launch of digital

Drafting the board's IT agenda

Directors can get a clear picture of IT performance and become more fluent in digital if they assess their IT organizations using the following criteria:

1 Impact of technology on core business activities

2 Value generated from most important IT projects

3 Speed with which new features are developed and launched

4 Efficiency of IT organization

5 Next-generation skills embedded in IT function

Source: McKinsey analysis

initiatives that would decrease the time required to register customers and to activate their accounts, while increasing end-user satisfaction. The board and the technology teams recognized that IT's priorities and resource needs would shift as more customers registered and required support for advanced transactions. They decided to revisit the metrics and priorities associated with the registration process after the project had reached certain milestones.

2. What value is the business getting from its most important IT projects?

As we mentioned earlier, cost is already a major part of the dialogue in all boardrooms, but assurances of value should be part of the conversation as well. The leadership mostly understands that to go digital or otherwise modernize IT systems, it will need to invest millions, sometimes billions, of dollars in IT over the next five to ten years. It also knows that the

capacity and funding required to get IT projects off the ground are typically in short supply.

Thus, it is crucial for boards to track the most important projects actively and learn whether they are delivering the outcomes promised—according to our analysis, the act of measuring a project's benefits can reduce the risk of failure by more than ten percentage points. Board directors must have regular access to information such as the percentage of projects that are completed on time and on budget and that provide functionality within designated time frames, as well as the tangible business and IT benefits that an IT solution generated.

The board and other stakeholders have a number of ways to gain access to this information. The leadership team at one global travel company made such outcomes more transparent by implementing a portfolio-management tool that compels all project managers to report project status (cost, schedule, and scope) in a standard way. With this information, IT leaders, executives, and the board could more easily track costs and returns for the company's portfolio of important projects. They were able to allocate and reallocate resources as needed, increasing the organization's operational agility.

3. How long does it take the IT organization to develop and deploy new features and functionality?
Companies operating in a digital world can no longer afford to delay product launches or upgrades—not when online companies can deploy new features and functionality on their websites several times a day. Amazon, for instance, can release code every ten seconds or so, update 10,000 servers at a time, and roll back website changes with a single system command.[5]

Many IT organizations are now shifting toward two speeds of operation. Product-development teams and IT operations staff are charged with rapidly launching innovative customer-facing applications or upgrades while also maintaining slower (but still reliable) back-end transactions-oriented systems.[6] Boards,

CIOs, and other IT leaders must come to a common understanding of the infrastructure, resources, and capabilities required to operate at two speeds.

One metric they might use is the percentage of groups, within the IT organization, that can develop and deploy "business consumable" functionality within four to eight weeks in a secure, repeatable way. The senior leadership at a large European bank, for example, was considering how to release new product features and functionality into the market more quickly. As part of the boardroom discussions, the directors, the CIO, and the CEO sought to understand the company's technology capabilities by assessing the average time a project took to go from initial funding to first production release. With this and other time-based information in hand, senior leaders recognized gaps in the processes for project approval and software development and saw significant lag time in issuing new releases. They determined that they needed to reallocate IT resources in a way that would ensure the IT organization's agility by funding the appropriate technologies, processes, and people to establish a two-speed operating model.

4. How efficient is IT at rolling out technologies and achieving desired outcomes?
Infrastructure operations, application development and maintenance, and security—these three areas account for about 90 percent of staffing and spending in typical IT organizations. So it is critical for boards, executives, and IT leaders to agree on not just what IT is achieving (the focus of the first three questions) but also how efficiently and securely it achieves these outcomes. By regularly monitoring metrics relating to execution, boards can ensure that their companies get optimal returns on IT projects, that teams go to market quickly with new products or upgrades, and that overall costs remain low while the technologies used promote long-term reliability.

Stakeholders can learn a lot by reviewing metrics on productivity, product quality, and average costs. Already, IT organizations are collecting many of these

data—for example, incident data, average defects in code, or the cost of code per function point. CIOs and other technology professionals can use existing tools to collect and present these metrics in the boardroom. At one travel company, for instance, the board got a clear reading on productivity in the IT organization and product quality by tracking maintenance metrics—for instance, incidents and enhancements reported per software application, help-desk staffer, or call-center employee. Managers on the CIO's team, using information already available, compiled targeted reports for directors to review.

5. How strong is our supply of next-generation IT talent?

A recent McKinsey survey of more than 700 CIOs and other C-suite executives revealed that talent management in IT is among their top three issues.[7] The IT organization, increasingly, is being asked to participate in projects and initiatives that require technology workers to extend themselves beyond their traditional roles—playing a central role in data analytics or mobile-app development, for instance—while simultaneously maintaining legacy systems. The change in expectations is creating more opportunities but also more risks and stresses among IT teams. It is therefore critical for boards and CIOs to have a common understanding of what skills and capabilities the IT organization might need, now and in the future.

They can measure their talent-development efforts along three dimensions: how often a company is rotating professionals in and out of different roles within the IT group and the business units, the degree to which the IT organization is hiring outside people, and how effective it has been in developing people in-house to fill pivotal roles.

Getting agreement on these topics may require directors, CIOs, and other stakeholders to consider metrics such as employee-satisfaction scores or the percentage of project roles that could not be adequately staffed over a 12-month period because of a lack of internal skills. The board at one large international retail bank undertook

such a review and found that less than 5 percent of its IT leadership team had any business-unit experience. It promptly sought to increase that number to 20 percent. The CIO and the rest of the senior leadership agreed to establish cross-unit training and development teams, redefined certain roles and responsibilities to increase business–IT collaboration, and instituted regular checks with employees to ensure that the IT organization was making progress against its goals for improvement.

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Because of the speed at which IT innovations occur, boards and CIOs may need to introduce new metrics and drop less relevant ones within each of the five areas of inquiry. Regardless, the questions impose discipline on the relationship between the board and the CIO. They prompt directors and technology executives to have productive discussions about the function's strategic direction and the technology initiatives that matter most, to ensure that the overall management structure required to realize those projects is in place, and to monitor and discuss the results in a way that everyone understands. ■

[1] "Partnering to shape the future—IT's new imperative," May 2016, McKinsey.com.
[2] "Adapting your board to the digital age," forthcoming on McKinsey.com.
[3] The survey was conducted by the National Association of Corporate Directors. *CIO Journal*, "Cybersecurity: Boards must ask sharper, smarter questions," blog entry by Kim S. Nash, July 2015, blogs.wsj.com.
[4] "Partnering."
[5] Satty Bhens, Ling Lau, and Shahar Markovitch, "Finding the speed to innovate," April 2015, McKinsey.com.
[6] Oliver Bossert, Martin Harrysson, and Roger Roberts, "Organizing for digital acceleration: Making a two-speed IT operating model work," October 2015, McKinsey.com.
[7] "Partnering."

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