



DIGITALLY SAVVY BOARDS: AI UPDATE

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In 2019 MIT CISR published findings from our research on digitally savvy boards.¹ We found that 24 percent of the boards of all US-listed companies with over \$1 billion in revenues were digitally savvy, and that these companies had outperformed their industry peers by approximately 30 percent across several metrics.

Since 2019, the technology innovation curve has steepened, with large organizations leveraging new digital technologies such as generative and agentic AI, robotics, and xTech technologies. In 2024, we repeated the 2019 analysis and found that having a digitally savvy board based on our original criteria no longer differentiated a company's performance. However, when we updated the criteria with technologies that had emerged or evolved between 2019 and 2024—notably, newer types of AI, as well as machine learning—the results were similar to our original analysis, with 26 percent of company boards being digitally *and* AI savvy, and their companies outperforming their peers. We complemented these findings with an examination of board committees to understand how the boards' focus related to their company's financial performance.² In this briefing we share these results plus insights from twelve interviews of non-executive board directors, and show how companies in our research used board committees to help manage their work.

THE DIGITALLY SAVVY BOARD: 2019 TO 2024

In 2019, using a machine learning technique and 275 keywords and phrases that we had identified as indicators

of digital savviness, we assessed bios of board directors of all companies on US stock exchanges and measured the performance of their companies to identify digitally savvy boards. We found that digitally savvy boards had three or more digitally savvy directors, and that only 24 percent of boards of companies in our research were digitally savvy; those companies had performance approximately 30 percent higher across several metrics, including market cap growth, than companies with a board that was not savvy.

Companies having one or two digitally savvy directors did not have higher financial performance. As one board chair described:

When we had one digitally savvy board member, . . . it didn't change us much. When we had two, they talked mostly to each other But when we had three directors, digital became part of every board conversation.

In 2019, key technology-related board topics included digitally enabled business transformation and business models, cybersecurity, and IT systems reliability and outages. To focus on these issues, company boards increasingly formed technology committees, with 8 percent of companies in the S&P 500 having a separate tech committee (which grew to 12 percent in 2022);³ 9.4 percent of companies in our sample had a separate committee devoted to technology topics. Our interviews found that CIOs and CISOs were the typical corporate executives that presented to boards on digital issues, and board member concerns were often related to defense, with issues such as cybersecurity, data privacy, and outages taking center stage in these presentations.

In 2024 we reran the 2019 analysis using the same keywords on current companies and observed a huge jump in companies with digitally savvy boards to 72 percent, suggesting a strong pivot to digital issues by boards generally. Our 2024

1 MIT CISR defines **digital savvy** as an understanding, developed through experience and education, of the impact that emerging technologies will have on businesses' success over the next decade, and a **digitally savvy board** as a company board having a critical mass of directors who are digitally savvy. MIT CISR published key findings from its digitally savvy board research in P. Weill, S. L. Woerner, T. Apel, and J. S. Banner, "Companies with a Digitally Savvy Board Perform Better," MIT CISR Research Briefing, Vol. XIX, No. 1, January 2019, https://c isr.mit.edu/publication/2019_0101_DigitallySavvyBoards_WeillWoernerApelBanner, and the complete findings in "It Pays to Have a Digitally Savvy Board," *MIT Sloan Management Review*, March 2019, <https://sloanreview.mit.edu/article/it-pays-to-have-a-digitally-savvy-board/>.

2 Thank you to Thomas R. Schoales for help in coding committee topics and Dr. David R. Chase for his work in analyzing committee topics.

3 Jamie Smith, "How committees are evolving to meet changing oversight needs," EY Center for Board Matters, October 17, 2022, https://www.ey.com/en_us/board-matters/how-committees-are-evolving-to-meet-changing-oversight-needs.

interviewees reported that typical topics of conversation included increasing concern with cybersecurity and regulation around cyber reporting, a slowing of digital transformation,⁴ an increase in selling digitally enabled products, and digital partnering to reach new customers or add new services. The types of executives that typically presented to the board on digital issues had broadened to include a variety of technical leaders, and increasingly, heads of business units with digitally enabled business models. Interestingly, we couldn't find any statistically significant correlation between digitally savvy boards and financial performance premiums in this analysis. In 2024, being a digitally savvy board by our 2019 standards had become table stakes, but it was not a differentiator.

THE DIGITALLY AND AI SAVVY BOARD: 2025 AND BEYOND

In 2024, to acknowledge the impact of rapidly emerging and evolving digital technologies, we set a new standard for assessing a board digitally savvy by revising the keywords used to analyze board member bios to focus on newer technologies available to companies—for example, all types of AI.⁵ Using the three-or-more savvy directors principle from 2019 of a digitally savvy board and the new keywords, we found that 26 percent of boards in 2024 were digitally and AI savvy. We again saw big performance premiums, likely indicating that companies were in early stages of getting value from machine learning, newer types of AI, and other cutting-edge technologies. The companies with boards that were digitally and AI savvy had an average return on equity (ROE) of 10.9 percentage points above industry average, compared to the

74 percent of companies with non-savvy boards, which averaged -3.8 percentage points below their industry average. In addition, the savvy board companies had much larger market caps than the companies without savvy boards (\$15.5 billion higher versus \$5.4 billion lower than their industry average), suggesting that the digitally and AI savvy board companies were likely larger and more highly valued based on growth and other expectations.

These results emphasize the importance of keeping up with evolving technologies and getting the balance right on boards. Jean-Pascal Tricoire, Chairman and former CEO of Schneider Electric, explained how that company chooses board members:

We are very methodical in building the board. . . . [W]e are very global, . . . so we have a board [that] is by nature very diverse [W]e built the board across the buckets that we think are essential [Number one], knowledge of our business, energy, and we have two experts of that sector in our board. The number two, of course, is digital—and we have world-class experts of digital in our board. Then sustainability, . . . this is why people also come to us, technology for sustainability. And, of course, finance, because that's one of the natural responsibilities.⁶

BOARD COMMITTEES: COMMITTEE AND COMPANY FOCUS

To better understand how digitally and AI savvy boards operate and to see what they focused on, we did an analysis of board committees. A board committee is a subset of directors (plus the occasional outsider with specific expertise) that focuses on specific topics and advises the board on them. In our board sample, the average number of committees per board was four, with the number of committees per board ranging from one to twelve. There were more than 475 distinct committee names (across 3,711 committees), clearly illustrating that the focus of committees is customized and there are few industry standards. We identified sixteen recurring board committee topics, which included four topics required by regulation: audit; nominating and governance; risk (required in financial services); and compensation. The other topics ran the gamut, including cybersecurity, sustainability, talent, technology and digital products, compliance, and strategy.

4 See S.L. Woerner, I.M. Sebastian, and P. Weill, "Getting Over a Digital Business Transformation Slowdown," MIT CISR Research Briefing, Vol. XXIII, No. 12, December 2023. https://c isr.mit.edu/publication/2023_1201_Re-gainingMomentum_WoernerSebastianWeill.

5 The 2024 Digitally Savvy Board study was based on a machine learning analysis of 2,788 publicly traded US companies with over \$1 billion in revenues in 2024 plus twelve board member interviews; from this sample, we analyzed the bios of 28,779 directors. The 2024 keywords, which included new technologies, were thirty-one base words sourced from MIT CISR research and activities and one author's board experience plus all stems of those words to capture permutations (for example, AI, privacy technology, and technology ethics). This produced the 162 words we used in the analysis. We downloaded director bios and company performance data from the beginning of 2021 through the first quarter of 2024 from the Wharton Research Data Services databases.

For the committee analysis, we used the CIK (Central Index Key) codes for companies in the study to access committee data from the BoardEx database; we were able to get committee data from 906 of the 2,788 companies. In the US, publicly traded companies must have a committee that covers audit issues, CEO compensation and succession, and director nominations and governance. All financial services companies must also have a committee covering risk. We coded each of the committees into topics areas; most committees fit into one topic area, although some fit into two or three.

6 Peter Weill and Jean-Pascal Tricoire, "Conversation between Jean-Pascal Tricoire and Peter Weill," MIT CISR Video, December 2024, <https://c isr.mit.edu/publication/conversation-between-jean-pascal-tricoire-and-peter-weill-video>.

Assuming that board attention on a particular topic signified the topic's importance to the company, we assessed the relationship between a company's board having committees focused on specific topics and the company's financial performance. We found that digitally and AI savvy boards were statistically more likely to have committees that focused on cybersecurity, talent, and technology and digital products.

In 2024, 15 percent of boards in the S&P 500 had a technology committee, up from previous years.⁷ Almost universally, the directors we interviewed were strong advocates of having board technology committees in their companies to ensure greater focus on these issues. One director we interviewed explained:

Our tech and innovation committee optimizes time and helps our company explore new growth. Prior to the inception of the tech and innovation committee, there was very little strategic time for technology issues in the board meeting—maybe 10 percent in the audit committee and 20 percent with the overall board. Now, in the tech and innovation committee, 80 percent of the meeting time is spent on strategic issues, and the overall board spends 40 percent of its time on tech strategy.

THE CHALLENGE: KEEPING UP

The key takeaway from this research is that keeping up with fast-moving digital technology opportunities is a critical activity for any company's board and executive team. Schneider Electric Chairman Tricoire shared what has worked to increase the digital savviness of his company and its board members:

What's important is really to spend time on it. You've got to bring in [to] any part of the company, from the teams to the board, a sufficient quantity of digital people—first thing, digital—so that we change the chemistry of the dialogue.⁸

We have shown how in just five years the bar for the digital savviness of boards of top-performing companies has risen to address cutting-edge technologies like AI. It's clear this pace of change will continue. We asked directors what works best to help the board keep up with technology, and here is their sage advice:

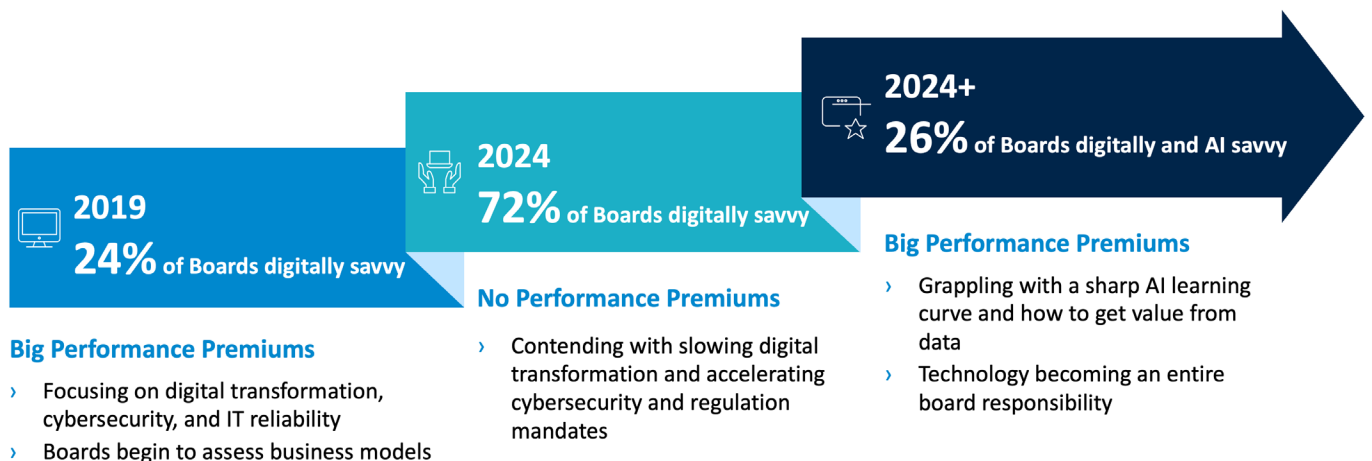
- 1. Educate.** Bring in outside speakers to board meetings, provide technology demonstrations, and develop board education programs. Engage with tech partners such as universities, ventures groups, and start-up accelerators to stay on top of new technologies and trends.
- 2. Make time and prioritize.** When setting up a board agenda, prioritize on why, not how; how takes too much time. Boards have crowded agendas; they already struggle to get to critical questions such as how to navigate cost cutting and unconscious bias.
- 3. Focus.** The tech committee helps board members think about technology's role in business strategies. Setting up a specific committee on technology indicates that it is important.

How are you as a member of a board or top management team helping your board stay ahead of fast-moving technology and how its growth will impact your company's performance in the next five years?

⁷ "Board Practices and Composition: 2024 Edition," Harvard Law School Forum on Corporate Governance, December 12, 2024, <https://corpgov.law.harvard.edu/2024/12/12/board-practices-and-composition-2024-edition/>.

⁸ Weill and Tricoire, "Conversation between Jean-Pascal Tricoire and Peter Weill."

Figure 1: Board Technology Skills over Time: Large US Companies



Source: Based on MIT CISR Board Savvy research 2019-2024 including machine learning analysis of 2500 firms plus 20 board member interviews.

MIT CENTER FOR INFORMATION SYSTEMS RESEARCH (CISR)

MIT CISR helps executives meet the challenge of leading increasingly digital and data-driven organizations. We provide insights on how organizations effectively realize value from approaches such as digital business transformation, data monetization, business ecosystems, and the digital workplace. Founded in 1974 and grounded in MIT's tradition of combining academic knowledge and practical purpose, we work directly with digital leaders, executives, and boards to develop our insights. Our consortium forms a global community that comprises more than seventy five organizations.

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