



COMPANIES WITH A DIGITALLY SAVVY TOP MANAGEMENT TEAM PERFORM BETTER

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In May 2019, we published a provocative article describing how only 24 percent of boards of large US-listed companies were digitally savvy, and those companies outperformed the others by at least 34 percent on market cap growth, ROA, and revenue growth.¹ Since then, we and many who saw the findings have wondered about the digital savviness of top management teams.

Our current global MIT CISR study on the digital savviness of companies' top management teams (TMTs) has produced similar results. Among larger companies, only 7 percent had a TMT more than half made up of digitally savvy members, and those companies outperformed the rest on growth and valuation by more than 48 percent. In this briefing, we will summarize our research methodology, explain the results, share observations of executives who have recently become digitally savvy, and suggest actions to increase the digital savviness of your TMT.

DEFINING TMTs AND DIGITAL SAVVY

To get a broad sense of the impact of digital savvy, we defined a TMT as a company's C-level executives plus heads of the company's functions and geographic areas. To focus on executives, we adapted the definition of digital savvy we used for the board study to *an understanding, developed through experience and education, of the impact that emerging technologies will have on businesses' success over the next decade.*

To identify a digitally savvy executive, we compiled 251 keywords and phrases found in bios associated with digital savviness, and separated them into two categories: digital awareness and enterprise expertise. From the S&P Capital IQ Global Market Intelligence Platform, we downloaded 16,841 executive biographies from larger companies—those with more than \$3 billion in revenues; this sample represented 2,021 companies. Using natural language processing we keyword-coded the bios and classified each executive as digitally savvy or not, based on the bio containing at least one term

each representing digital awareness and enterprise expertise. (See the description of our research methodology in About the Research.) We also interviewed and created in-depth profiles of several digitally savvy executives.

COMPARING TMTs ON DIGITAL SAVVINESS

We found that only 7 percent of larger companies had a TMT more than 50 percent made up of digitally savvy members. These companies had 49 percent higher growth, 16 percent higher margin, and 53 percent higher company valuation (share price to sales ratio) than the rest.

The low percentage of digitally savvy members we found on TMTs is surprising and concerning, but also represents a significant opportunity to upskill TMTs. The average TMT in our research had seven members, and only 17 percent of the TMT members we assessed were digitally savvy. Digital savviness varied widely by role (see figure 1). While 23 percent of CEOs were digitally savvy, only 12 percent of CFOs were. Of greater concern was that only 47 percent and 45 percent respectively of CTOs and CIOs were digitally savvy. Too many of these technology roles were back office or systems focused; these executives often don't have the skillset we believe will be required to outperform in the next decade.

COMPARING COMPANIES AND INDUSTRIES ON DIGITAL SAVVINESS

There were also large differences in the digital savviness of companies across industries (see figure 2). The most digitally savvy TMTs were in companies in the Information industries (e.g., media), where 30 percent of TMT members were digitally savvy, compared to 0 percent of TMT members being digitally savvy in companies in Agriculture, Forestry, Fishing, and Hunting.

Surprisingly, on average only 12 percent of TMT members were digitally savvy in Finance and Insurance companies. Based on our conversations with executives, that probably reflects the overwhelming focus on compliance in these sectors. But identifying new digitally enabled business models that will create value in the next decade is important across

¹ Peter Weill, Thomas Apel, Stephanie L. Woerner, and Jennifer S. Banner, "It Pays to Have a Digitally Savvy Board," MIT Sloan Management Review, March 12, 2019, <https://sloanreview.mit.edu/article/it-pays-to-have-a-digitally-savvy-board/>.

all industries and may be even more critical in Finance and Insurance. As Arno Daehnke, the CFO of Standard Bank, Africa's largest bank, explains, "A new-age CFO takes on the traditional roles, but also focuses on the business impact of data and technology disruption. Being digitally savvy means challenging business assumptions ... predicting and influencing the financial impact of business and technology decisions ... and understanding the roadmap and prioritizing investments to become Future Ready."²

INCREASING TMT DIGITAL SAVVY IMPROVES PERFORMANCE

You don't have to achieve a threshold of 50 percent of TMT members with digital savvy to benefit: we have found that as the percentage of TMT members with digital savviness increases, performance increases for net margin, revenue growth, and valuation. In our research, companies with one or fewer digital savvy TMT members grew at 1 percentage point less than industry average, with two or three at 1.2 percentage points higher than industry average, and with four or more at 2.4 percentage points higher.

We were curious about which companies with more digitally savvy TMT members were top quartile performers on margin and growth. In technology, the digitally savvy top performers were Adobe, Alphabet, Facebook, and Microsoft, while digitally savvy non-tech top performers included Charles Schwab, Marathon Oil, Northrop Grumman, and Dunkin' Brands. But the distinction between tech and non-tech companies is diminishing. For example, to improve its customer experience, Dunkin' Brands rebranded in 2018 and invested heavily in technology infrastructure and mobile experience. By FY 2019, 13.6 million customers had enrolled in the DD Perks Loyalty program, and in Q4 2019 generated 5 percent of the company's global sales from mobile order and pay and 13 percent of US sales.³

COMBINING KEY ROLES FOR TOP PERFORMANCE

Of all the roles in a typical TMT, six had the highest statistical link to performance when they were digitally savvy: CEO, CFO, CIO, Marketing, Corporate Communications and Investor Relations, and Compliance and Legal. And having

² In MIT CISR research, a Future Ready company is one that has undergone business transformation using digital capabilities. For more, see P. Weill and S. L. Woerner, "Future Ready? Pick Your Pathway for Digital Business Transformation," MIT Sloan CISR Research Briefing, Vol. XVII, No. 9, https://c isr.mit.edu/publication/2017_0901_DigitalPathways_WeillWoerner.

³ "Q4 & FY 2019 Investor Presentation," Dunkin' Brands, February 6, 2020, <http://investor.dunkinbrands.com/static-files/dbd0f76c-aebc-4820-a159-3cfcaba2934f>.

Figure 1: The Digital Savviness of the Average TMT Members in a Large Company (>\$3B in Revenues)

Title	% Digitally Savvy
Chief Technology Officer	47%
Chief Information Officer	45%
Unit President/Geography Presidents	35%
Chief Operating Officer	24%
President	24%
Chief Executive Officer	23%
Head of Marketing	23%
Head of Corporate Development	23%
Head of Human Resources	21%
Head of Sales	15%
Chief Financial Officer	12%
Head of Corporate Communications	11%
Chief Legal Officer	8%
Chief Compliance Officer	8%
Head of Investor Relations	6%

About the Research

To define a digitally savvy executive, we started with a list of descriptors of digitally savvy companies generated from executive attendees at two MIT CISR events. We added attributes, such as educational background and work experience, that we developed by manually keyword coding the bios of TMTs from nine large technology and manufacturing companies that had been identified in the board study as having a digitally savvy board (N=226 executives). Then, using natural language processing techniques, we identified additional keywords from the executive biographies of CIOs and CTOs in companies with over \$1 billion in revenues (N=1745) from Professionals Data in the S&P Capital IQ Global Market Intelligence Platform. The combined result was 251 keywords and phrases, which we separated into two sets, one representing digital awareness—i.e., a knowledge of how digital can affect a business—and the other enterprise expertise.

Also from the S&P database, we downloaded executive biographies associated with companies that had more than \$3 billion in revenues in 2018 and data from 2018 available in Compustat. This sample, totaling 2,021 companies, represented 86 percent of all publicly traded US firms above \$3 billion in revenue and 55 percent of all publicly traded global firms above \$3 billion in revenue. The average size of the company in the study was \$15.6 billion. We eliminated from the biographies roles such as Senior Key Executives and Other Key Executives, board members, investment bankers, and administrative professionals, leaving 16,841 bios. Again using natural language processing techniques, we coded each executive's biography, and classified the executive as being digitally savvy or not. We considered an executive to be digitally savvy if their bio had at least one term each representing digital awareness and enterprise expertise.

multiple digitally savvy executives across key roles mattered: top quartile-performing companies on industry adjusted net profit margin and revenue growth were 5.3 times as likely to have the digital trifecta: a digitally savvy CEO, CFO, and CIO.

A CEO helps lead the company to new ways of doing business, changing the culture, and reorganizing to take advantage of the new technologies. Most CEOs are not “born” with digital savvy, developing on the job—as did Fernando Gonzalez, CEO of the global cement company CEMEX. Gonzalez led the effort to develop a platform—CEMEX Go, a one-stop shop for construction, the first such platform in the building materials industry—that simplified and streamlined customer interactions including ordering, live tracking of shipments, managing invoices, and analytics. Since its launch about two years ago, CEMEX Go has achieved 96 percent global recurring customer adoption, and now processes more than

45 percent of the company’s total global sales.⁴ This speed to adoption provides testimony to both CEMEX’s ability to innovate and the need for change on building sites.

Gonzalez developed his digital savviness by investing time with experts in strategic business transformation enabled by new technologies, attending focused executive education programs, and reading widely. Explaining the company’s new initiatives, Gonzalez says, “More recently, we opened the CEMEX Go Developer Center, where customers and industry stakeholders can connect through APIs directly with our on-line store and streamline the construction end-to-end cycle.”

COMMITTING TO DIGITAL SAVVY ON YOUR TMT

In conclusion, we propose three action items for all companies that want to be top performers in the digital era.

1. Have a frank conversation about what percentage of your TMT is digitally savvy today. This is a great opportunity for the CEO and the CIO to collaborate to get that number to the sweet spot of at least 50 percent.
2. Strengthen the digital savviness of the key roles of CEO, CFO, CIO, Marketing, Corporate Communications and Investor Relations, and Compliance and Legal. Digitally savvy leaders in these key roles have a measurable flow-on effect to the rest of the company, particularly regarding growth.
3. Make increasing the digital savvy of the TMT—and then of the rest of the company—a senior executive’s responsibility. Two prime candidates to hold this responsibility are the CIO and the head of HR—perhaps jointly.

Gary Scholten, the current CIO and CDO and former head of HR at Principal Financial Group, is responsible for increasing the digital savvy of the TMT at Principal. Scholten has pioneered a number of effective approaches:

- a) Creating a Digital Strategy Committee that drives digital deeper into Principal’s business strategies, champions foundational capabilities, and advocates for funding
- b) Organizing digital immersion trips to help shift mental models
- c) Fully implementing scaled agile processes, coupled with a minimum viable product approach to innovation
- d) Creating a technology strategy that embeds the company’s aspirations

How digitally savvy is your top management team, and what could you personally do to increase the digital savviness of your company as well as its TMT? Your efforts could be key to your company’s future success.

Figure 2: Variance in the Percentage of Digitally Savvy TMT Members in Large Companies (>\$3B in revenues) by Industry

Mean % of TMT that is Digitally Savvy	
Information	30%
Professional, Scientific, and Technical Services	26%
Accommodations and Food Services	20%
Administrative, Support, Waste Management and Remediation	18%
Utilities	18%
Real Estate, Rental, and Leasing	16%
Manufacturing	15%
Mining, Quarrying, Oil and Gas Extraction	14%
Finance and Insurance	12%
Transportation and Warehousing	12%
Retail Trade	12%
Wholesale Trade	12%
Health Care and Social Assistance	10%
Construction	9%
Arts, Entertainment, and Recreation	9%
Agriculture, Forestry, Fishing, and Hunting	0%

Companies grouped into industries based on the 2017 version of the North American Industry Classification Systems, <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?chart=2017>. Not included are Public Administration, Educational Services, Not-for-Profit, Management of Companies and Enterprises, and Other Services.

⁴ “CEMEX Completes Deployment of CEMEX Go with Customers Worldwide,” CEMEX USA website, May 30, 2019, <https://www.cemexusa.com/-/cemex-completes-deployment-of-cemex-go-with-customers-worldwide>.

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