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**MIT ILP Innovations in Management Webinar Series** 

**Companies with a Digitally Savvy Top Management Team Perform Beter** 

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- Re-Platforming Your Enterprise
- Data Sharing Across Company Boundaries
- Defining Digital Operating Models
- Ecosystems, Circa 2025
- Scaling and Systematizing New Business Models
- Breaking Down Barriers to Pervasive Al Adoption and Use
- Digitizing Work to Work Digitally
- WHAT vs. HOW: Governance for Aligned Autonomy
- Building Data Monetization Strategies
  That Pay Off
- How Much Does IT Really Cost?
- Value Creation and Value Capture in Digital Models

Digitally savvy Top Management Teams have an understanding, tested by experience, about

## Impact

How digital technologies will affect the way company success in the next decade, and the organizational change required.

## **Technologies**

**Digital Awareness** 

Which digital platforms, AI, big data, IoT, mobile and digital processes – enable new business models, improve customer experience, create more efficient operations, and reduce cyber risks.

## **Enterprise Scale**

When to commit, experiment, and partner, and identifying the early indications of both success and challenges in new initiatives

## Business Model and Project Risk

What part of the technology strategy process to engage with (savvy companies engage early), and what to focus on



## **Keywords used to classify TMT biographies**

### Compiled keywords/phrases

### Separated them into two sets

- Digital awareness
- Enterprise Expertise

Downloaded executive biographies from companies that had >\$2.9B in revenues along with associated financial data (2,201 companies). Focused on TMT bios (16,841 bios).

Used Natural Language Processing techniques to code bios

A savvy executive had at least two keywords/phrases, one for digital awareness and one for enterprise expertise

## **Keywords**



Digital savvy people had at least 2 of the 251 key words or phrases in their biography – one reflecting digital awareness and one reflecting enterprise experience. We started with the key words from the Digital Board Savvy research, and added additional key words by manually coding the executive biographies of 10 companies with digitally savvy boards. We then used natural language processing techniques to help identify additional key words from the executive biographies of technology executives (CIOs and CTOs) that reflected digital savvy, and incorporated those terms into Boards key words set. See Weill, P., Apel, T., Woerner, S. L., & Banner, J. S. (2019). It Pays to Have a Digitally Savvy Board. Retrieved October 10, 2019, from <a href="https://sloanreview.mit.edu/article/it-pays-to-have-a-digitally-savvy-board/">https://sloanreview.mit.edu/article/it-pays-to-have-a-digitally-savvy-board/</a> for more details.

# Digital savviness of the average TMT members in a large company (>=\$2.9B revenues)



| Title                               | % 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 %    |  |

| Title                            | % Savvy |
|----------------------------------|---------|
| 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%      |

### 2021 firms – represents 86% of publicly traded US firms and 55% of publicly traded global firms with more than US\$2.9B revenues

Source: We downloaded executive biographies associated with companies that had more than \$2.9 billion in revenues in 2018 and data from 2018 available in Compustat. 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.

Poll How digitally savvy is your CEO? -Not at all savvy -Knows something about technology but not a lot -About average -Is actively learning on the job -One of the best, in my experience

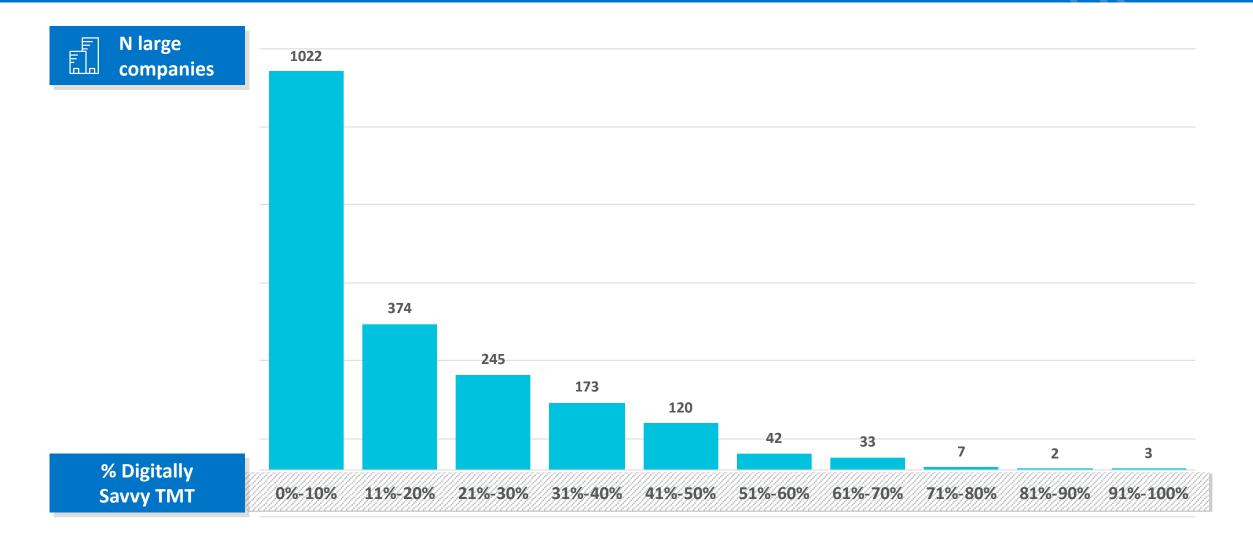
## Six roles that make a difference to performance

Roles with the highest statistical link to firm performance when they were filled by a digitally savvy executive



The Top Management Team includes all C-functions and functional and geographical area heads.

# In large companies, what percentage of the TMT is digitally savvy?



Source: Companies with above-median revenues (>\$2.9B) and TMTs with 3+ people (N=2021 companies).

# The percentage of digitally savvy TMT members in large companies varies by industry

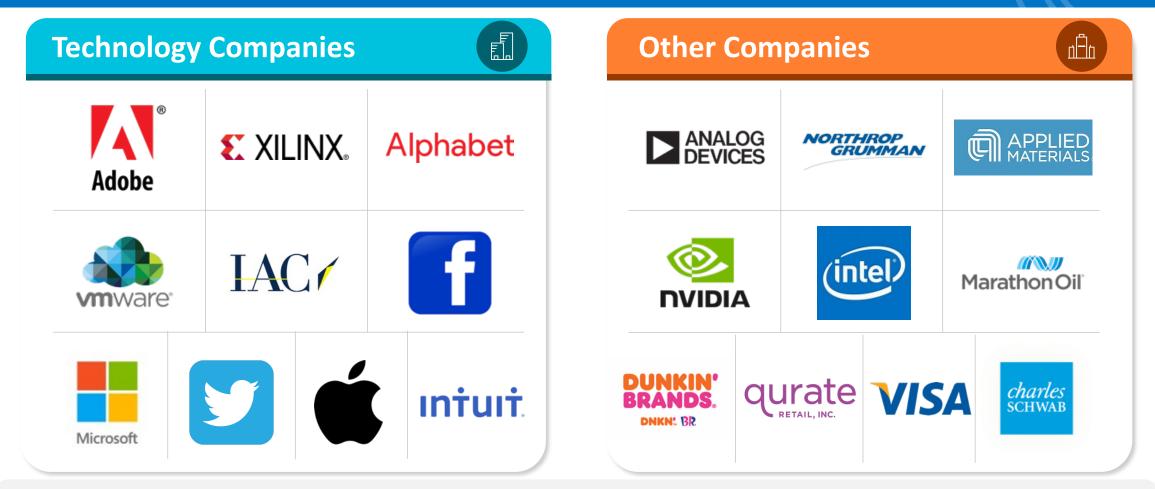


|   | Mean % of TMT that is Savvy |
|---|-----------------------------|
| Information   | 30%                         |
| Professional, Scientific, and Technical Services          | 26%                         |
| Accommodations and Food Services                          | 20%                         |
| Administrative, Support, Waste Management and Remediation | 18%                         |
| Utilities   | 18%                         |
| Real Estate, Rental, and Leasing                          | 16%                         |
| Manufacturing   | 15%                         |
| Mining, Quarrying, O&G 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, Hunting                   | 0%                          |

Source: Companies with above-median revenues (>\$2.9B) and TMTs with 3+ people (N=2021 companies). Companies grouped into industries based on the 2017 version of the North American Industry Classification Systems, Not included are Public Administration, Educational Services, Not-for-Profit, Management of Companies and Enter- prises, and Other Services.

# Top performing large US companies have above-average savvy TMTs





In US top performers

### 29%<sup>1</sup> of the Executives were Savvy with 3.5 Digitally Savvy Executives out of 11.8 TMT Members

Source: Companies with above-median revenues (>\$2.9B) and TMTs with 3+ people (N=2021 companies). A top performing company is in top quartile on both industry adjusted Net Profit Margin and industry adjusted Revenue Growth. The TMT of an average performing large company is 15% digitally savvy. In this sample each executive, on average, has 1.1 roles/jobs. For simplicity, we are assuming that each executive has one job. 1 Calculated by total number of savvy roles/total number of roles in the data set.

7%

of companies with

over \$2.9B in

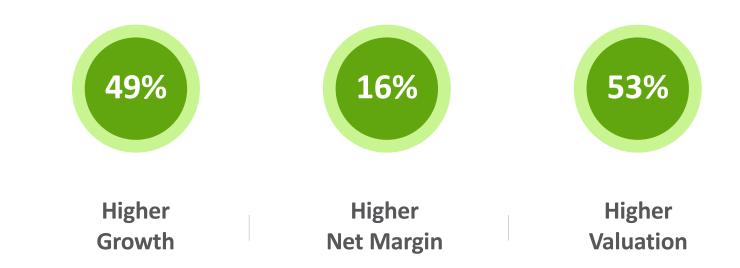
revenues have

50%+ savvy TMT

members.



Compared to companies with fewer than 50% savvy TMT members in the same industry, these companies have:



Source: Companies with above-median revenues (>\$2.9B) and TMTs with 3+ people (N=2021 companies). Growth and Net Margin percentages are calculated using a weighted average by industry. Top (bottom) performing companies have top (bottom) quartile Net Profit Margin and Revenue Growth, compared to industry. Valuation measured by Sales Ratio which is Market Cap divided by Total Revenue, (Shares Outstanding \* Share Price at Annual Report Date)/(Total Revenue). The measure takes out size effects.

Increasing the number of digitally savvy executives on the TMT is associated with better performance

|  | 0-1 Savvy TMT Members<br>(63%, n = 1276) | 2-3 Savvy TMT Members <sup>2</sup><br>(22%, n = 440) | 4+ Savvy TMT Members <sup>2</sup><br>(15%, n=305) |
|--|--|--|---|
| Net Profit Margin,<br>compared to Industry | -0.2 pp                                  | -0.1 pp  | +0.9 pp   |
| Revenue Growth,<br>compared to Industry    | -0.1 pp                                  | +1.2pp   | +2.4 pp   |
| Price by Sales Ratio                       | 1.5                                      | 1.8  | 2.0   |

1 Larger companies are above the median revenue (\$2.9B) in the data set. There was no significant performance results for the difference between performance in savvy and not-savvy companies below the median revenue. All numbers, except grey, are significant at the p<0.05 level.

2 Difference between the three populations are significant by ANOVA for Revenue Growth (p<0.02) but not for Net Profit Margin

Price by Sales Ratio is Market Cap divided by Total Revenue, (Shares Outstanding \* Share Price at Annual Report Date)/(Total Revenue). The measure takes out size effects

## Taking a 360-degree view of the business





## Arno Daehnke, CFO, Standard Bank

"A new-age CFO ... takes on the traditional roles, ... but also focuses on the business impact of data and technology disruption, ...

Every business leader, including the CFO, must be fully aware of how technology can change the market and disrupt business models, ...

Being digitally savvy means challenging business assumptions ... predict and influence the financial impact of business and technology decisions ... understand the roadmap and prioritized investments required to become *Future-Ready*."

## Actions to take at the firm level



### Have a frank conversation about who on your TMT is digitally savvy.

Target 50% digitally savvy TMT members through the education and knowledge transfer from other savvy executives.



Strengthen the digital savviness of the six key roles: CEO, CFO, CIO, CMO, Communications, Compliance and Legal. HR + IT

Make increasing the digital savvy of the TMT, and then the rest of the organization, a senior executive's responsibility.



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