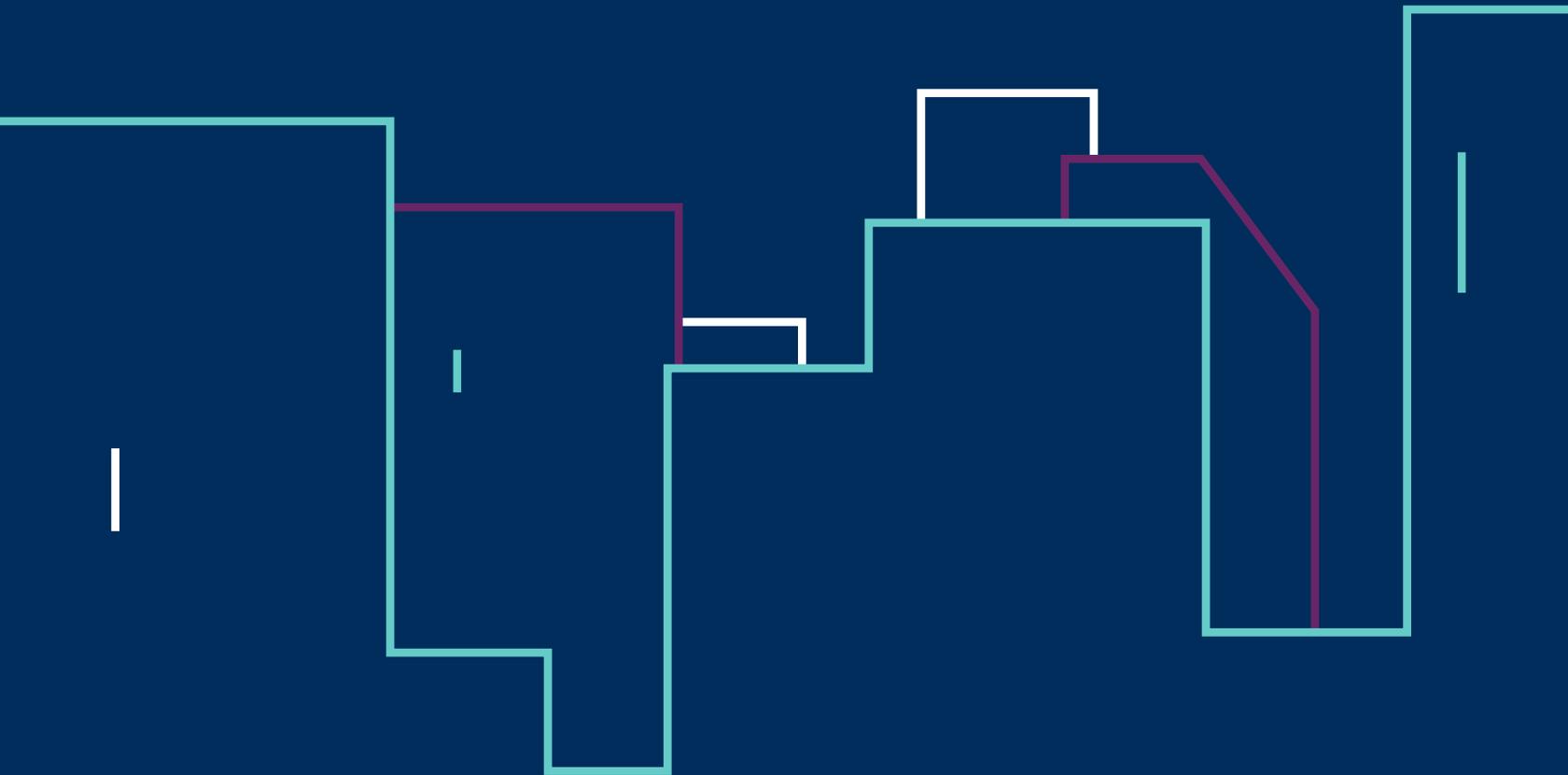

The Rise of the Qualified Technology Executive in the Boardroom



THE NEED FOR EFFECTIVE TECHNOLOGY OVERSIGHT

Technology powers today's global economy. It's hard to imagine a modern business that doesn't rely on technology to serve its customers, transact with partners, and enable employees to work effectively and efficiently.

Progressive companies in all industries have been focusing on how best to leverage technology to enable digital transformation and unleash the power of big data and analytics to enhance business results. Many have added a chief digital officer to their management ranks and digital directors to their boards. At the same time, the risk of technology failure has never been more acute. Technological and cyber security mishaps have been responsible for a number of recent business catastrophes such as halting trading on a major exchange, causing a leading retailer to lose the trust of millions of its customers and exposing confidential communications among the leaders of an entertainment giant.

These examples show that as technology becomes more and more critical to the core operation and strategy of a business, the impact of a technology failure can be at least as serious as a failure in financial systems.

Oversight of a company's technology infrastructure traditionally has been considered a back office management function that can effectively be handled by a chief information officer (CIO) or chief technology officer (CTO) on the senior management team. Yet no one would contest the argument that the board of directors is responsible for overseeing significant risk management, including technology risk.

The increasing importance of technology for business strategy and operations means that boards need to take a more proactive and informed stance on technology governance. However, the boards of some of the world's largest organizations are not equipped to ask the right questions or make well-informed assessments about the risks and implications of technology issues.

Companies are required to have a certain number of qualified financial experts on their audit committees to oversee financial processes. Given the gravity of technology for the continued success of most businesses, it is only a matter of time before qualified technology experts become obligatory. Some more progressive boards already have created technology committees to carry out this role.

QTEs must bring an outside-in point of view to make sure that the board and management team are neither myopic nor too internally focused

DEFINING THE QUALIFIED TECHNOLOGY EXECUTIVE

In simple terms, a qualified technology executive (QTE) is an individual possessing a high degree of current technology-relevant domain experience. She or he oversees and provides guidance on technology matters of crucial importance to the company in the context of the broader business, from the board perspective.

Whether as a standalone QTE who sits on the audit committee or a member of a broader technology committee, a QTE is responsible for vital input on key technology decisions that require board-level attention, asking the right questions and providing appropriate perspective to ensure that the board and management give proper consideration to the issues at hand.

To do this, QTEs must bring an outside-in point of view to make sure that the board and management team are neither myopic nor too internally focused when addressing strategic technology topics. A QTE also should provide board-level mentorship to the leaders of the technology functions (CIO, CTO, chief information security officer) and the chief executive officer.

KEY CHARACTERISTICS OF A QTE

Career

- An impressive career in technology leadership, with C-level responsibility for strategic and/or mission-critical technology-related decisions in a business of appropriate scale and complexity.
- Strong educational and professional technology credentials.
- Ample board exposure either as a board member or as an executive who presents frequently at the board level.

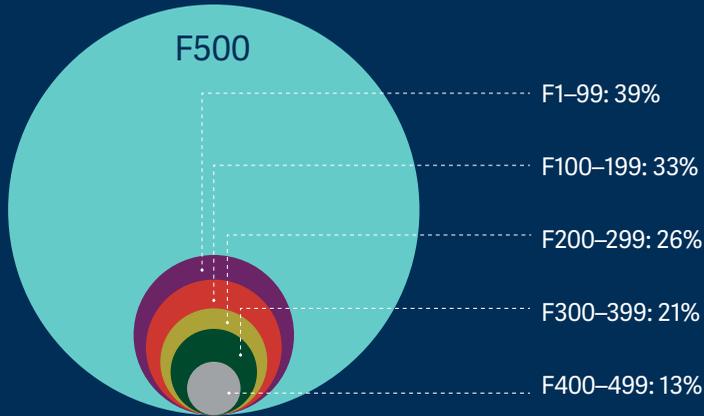
Breadth

- The same big-picture business strategy and operational perspective expected of any board member. Importantly, technology expertise should never be the only reason to invite someone to join a board, which usually can't afford to dedicate precious seats to individuals with narrow expertise.
- Responsible for technology decision making in the context of a broader executive role with an understanding of all the levers of a business.

Currency

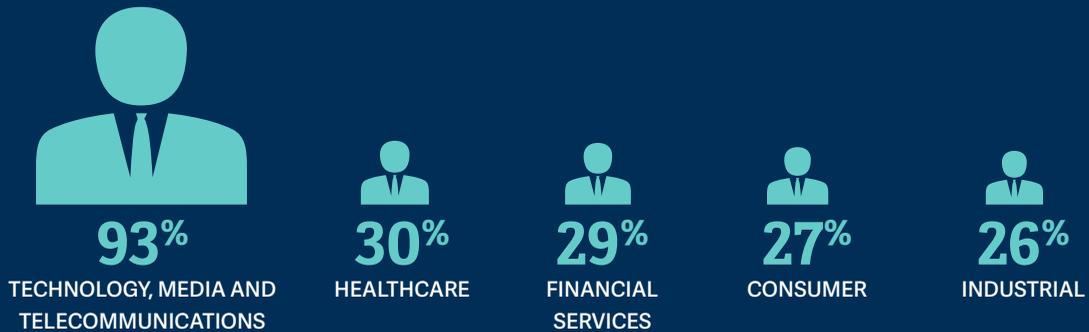
- Involvement in technology since the introduction of the iPhone (2007).
- Currently a participant in or with considerable ongoing exposure to the technology domain areas, issues and trends most relevant to a company's business.

FORTUNE 500 QTE PRESENCE

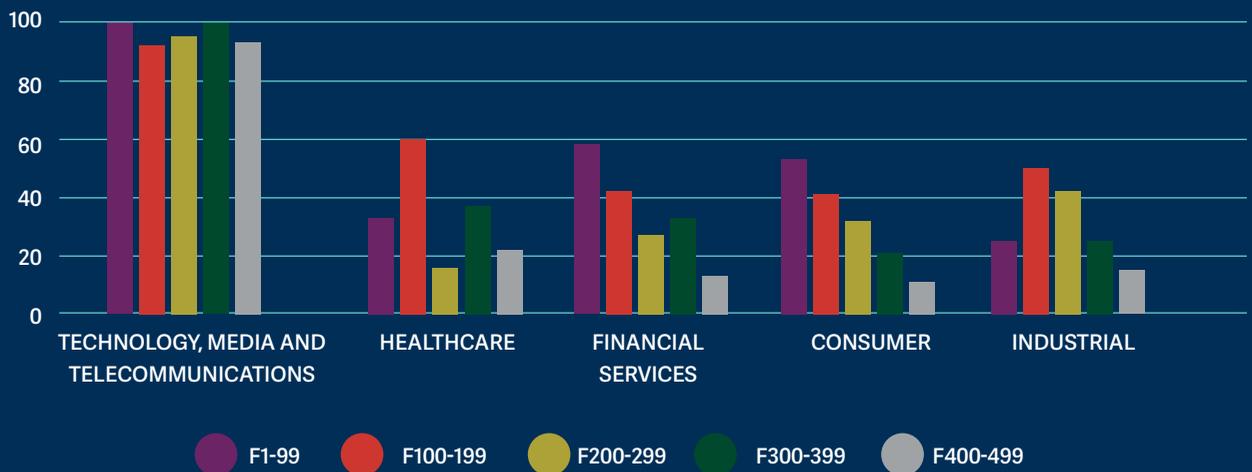


Further analysis shows that the lower a company appears on the Fortune 500 list, the less likely it is to have a QTE on the board, providing evidence of a correlation between company size and QTE presence.

% OF FORTUNE 500 COMPANIES WITH A QTE



QTE PRESENCE BY INDUSTRY ACROSS F500 ORGANIZATIONS



The majority of America's largest companies do not have the level of technical expertise and experience needed to understand and deal with the risks and implications of technology decisions and trends.

BUCKING THE TREND

Although many of the world's leading companies appear to be behind the QTE curve, our research also reveals that there are some outstanding examples of companies that have identified a need for a QTE in the boardroom and have acted accordingly.

For example, financial giant American International Group Inc. (AIG) added Linda Mills to its board and appointed her to its technology committee. Ms. Mills previously was President of the Information Systems and Information Technology sectors for Northrop Grumman and also served as Vice President of Information Systems and Processes at TRW, Inc., having begun her career as a Systems Engineer at AT&T Corporation's Bell Labs. AIG's Chairman Douglas M. Steenland explained the appointment: "Ms. Mills' in-depth experience in information technology and cyber security, and her success in managing a significant line of business at Northrop Grumman, will add further strength to the AIG board."

ALTERNATIVE STRATEGIES

Boards that have carefully considered these questions are starting to take action. Depending on the situation, we see four common approaches to addressing the issue effectively:

- **Adding digital directors**

Digital directors can sit across a spectrum of digital experience but, importantly, also must bring general management weight. Their impact can cover the customer perspective, as well as assisting on the vision and strategy. More broadly, another area in which the right digital director can add value is by challenging the board dynamic. Digital directors can bring fresh thinking to the board, questioning the status quo, while helping to maintain a sense of proportion about the potential of digital.

- **Creating a technology advisory board**

Setting up an advisory board is an effective way to gain insight from individuals with a wide range of relevant technology expertise. However, most advisory boards tend to interact with management rather than with the board. Boards that take this approach should confirm that the advisory board's charter and composition adequately address the full range of technology governance and risk management issues required for the business.

- **Augmenting the audit/risk committee with one or more QTEs**

As technology risk increases, the ability of the audit committee to address technology risk is as critical as its ability to evaluate financial risk. Explicitly adding technology risk to the audit committee agenda and making sure there is at least one QTE on the committee often is a reasonable approach for many companies, especially where technology risk is not acute. The right QTE, with current, relevant technology experience, can be a vital addition to the committee and the overall board table.

Where technology can make the difference between success and failure, forming a committee to focus on technology risk and opportunity makes very good sense

■ Forming a technology committee

In cases where technology risk is acute and/or where technology can make the difference between success and failure, forming a committee to focus on technology risk and opportunity makes very good sense. This usually entails the recruitment of one or more QTEs to augment the perspective and expertise of any QTE who already sits on the board.

NO ONE-SIZE-FITS-ALL SOLUTION

Appointing a QTE clearly is not a one-size-fits-all proposition. Companies in different industries face varying sets of technology opportunities, challenges and risks. For example, financial services companies that depend on transactional information technology systems with massive scale will require a QTE with significant experience in scaled infrastructure. Companies that handle large volumes of confidential customer data will need to place adequate weight on cyber security expertise.

THE ROLE OF THE TECHNOLOGY COMMITTEE

It is important to note that some prominent boards include technology committees that provide oversight of the company's research and development function. These committees typically include one or more members with deep technical domain experience in the core business of the company. However, such technology committees do not (and often are not equipped to) oversee the information technology function. In addition, technology committees are still quite rare; Russell Reynolds Associates' analysis of the Fortune 500 shows that only 33 of these companies have a technology committee.

SHOULD WE ADD A CYBER SECURITY EXPERT OR A QTE?

No company is immune from cyberattacks, and this means that cyber security will be on corporate boardroom and executive agendas for the foreseeable future. In a recent survey of 200 corporate directors conducted jointly by NYSE Governance Services and Veracode, more than 80% of board members responded that cybersecurity now is discussed at most or all board meetings. Underscoring this issue is a bill introduced in the United States Senate in December 2015, The Cybersecurity Disclosure Act of 2015. If enacted, this bill will require the Securities and Exchange Commission to issue new rules

mandating public companies to disclose cyber security experience or expertise held by their board members in the companies' annual reports or proxy statements.

While cyber security certainly warrants careful board attention, it is not the only technology issue that can impact the fate of a company. We recommend that boards assess the full range of technology issues relevant to the company and then consider adding one or more QTEs with expertise across the range rather than zeroing in on narrow expertise in one critical discipline.

ADDRESSING THE QTE NEED

As outlined above, our research shows there still are very few qualified technology executives on the boards of the largest U.S. listed companies. To address this issue, we recommend that boards start by asking the following four key questions about their current composition:

- Does anyone on the existing board have a clear and deep understanding of the nature and magnitude of the major technology risks faced by the company?
- Does the company have an adequate technology strategy, team and investment plan in place to reduce those risks?
- Who on the board can challenge the company's executive leadership team while mentoring C-level technology leaders on mitigating technology risks and maximizing opportunities?
- Who on the board owns the governance for technology investment?

BUT DIDN'T WE JUST ADD A DIGITAL DIRECTOR?

Many companies wisely have started to include digital directors on their boards to make sure that the implications of digital on their businesses are properly considered.

In our experience, digital directors tend to be strong business strategists with a bias toward customer-facing issues rather than on technology. Therefore, these executives frequently do not offer the depth of technology expertise required to provide adequate oversight of the information technology and communications infrastructure.

Russell Reynolds Associates defines a digital director as a non-executive board member who meets at least one of the following criteria:

- Experience in a significant operating role in a digital company—an organization with a primary business function based on a web-based, social, mobile/device, cloud/SaaS or big data platform.
- A primary digital operating role at a traditional company.
- Two or more non-executive board roles at digital companies.

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Russell Reynolds Associates is a global leader in assessment, recruitment and succession planning for boards of directors, chief executive officers and key roles within the C-suite. With more than 370 consultants in 46 offices around the world, we work closely with public, private and nonprofit organizations across all industries and regions. We help our clients build teams of transformational leaders who can meet today's challenges and anticipate the digital, economic, environmental and political trends that are reshaping the global business environment. Find out more at www.russellreynolds.com. Follow us on Twitter: @RRAonLeadership

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