FUTURE-FOCUSED

The Acceleration of and Innovation

By Ryan McManus

THE BOARDS of leading global companies grasp the strategic urgency of science, technology, and innovation to their organizations. More and more, organizations have created explicit governance structures not only to oversee operational programs, investments, and risks, but also to monitor the developments, trends, and emerging capabilities that will determine the next generation's winners, thereby ensuring that these companies build toward a sustainable future.

In these pages in 2021, I wrote about the success that Fortune 500 companies with science, technology, and innovation committees saw in their markets, looking at a directional assessment of superior financial performance. Several more boards have created similar committees in the two years since. Here, I present an analysis of the charters and areas of focus across all such Fortune 500 boards and provide a road map that other boards can follow to establish and modify these types of committees to govern what's next.

Priority Topics

The public release of generative artificial intelligence (AI) tools offers the most recent example of many leaders and boards scrambling as yet another technology revolution seemingly appears out of the blue. While there is admittedly much noise about the technology in the current stage of the hype cycle, generative AI has already

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shown its power to revolutionize multiple industries, including media, marketing, engineering, pharmaceuticals, and financial services. Generative AI, however, has been evolving since at least the mid-1960s, with examples of its game-changing power observable well before OpenAI's release of ChatGPT.

Any board or management team that finds itself caught off guard by science, technology, and innovation developments may want to assess what strategic and governance gaps permit these lapses. Boards can insist that their organizations stay ahead of the developments that create nontraditional opportunities and risks. These changes are often predictable, as they are the products of continuous and observable development.

A number of organizations have established governance models to deliver similar goals. In 2021, 56 of the Fortune 500 companies had science, technology, and innovation committees. As of July, 67 companies have one or more committees focused on these areas: 53 have technology committees, 11 have innovation committees, 6 have science committees, 4 have cybersecurity committees, and 1 has a value creation committee. Of those with science committees, all are in pharmaceuticals or health care, and five of them also have a separate technology committee. Four companies have both a technology and a science committee (Procter & Gamble Co., Advanced Micro Devices, Carrier Global Corp., and AES Corp.).

An analysis of all these committee charters provides insight into the priority topics for each. There is both a degree of commonality across these charters and topics named that are unique to just a few:

- Common: technology risk, cybersecurity, internal company approach, key investments, budgets, progress on company initiatives
- Less common: intellectual property (IP), acquisitions, environmental, social, and governance (ESG)
- Rare: competitive position, talent considerations, business continuity, privacy, AI (one occurrence at Centene Corp.)

As an example, Centene has a value creation committee whose purpose is "to assist and advise, in consultation with the senior management of the company, the board in its responsibilities relating to long-term value creation, technology, digitization, and artificial intelligence strategy, and quality and member experience," as well as to "monitor, and consult with and advise the board and senior management of the company regularly on, the impact of external developments and factors on the company's long-term value creation (including margin expansion), growth, and strategic initiatives and plans, including, without limitation, the impact of changes in economic and market conditions, competitive activity, technology, legislative and regulatory considerations, and any other external development that the committee believes is relevant."

Perhaps the most unexpected finding is that two-thirds of these 67 organizations assign their committees specific responsibility to oversee emerging trends, not only existing operations and innovation programs. Alaska Air Group's innovation committee charter, for example, spells out its ambition very clearly: "We have a history of underinvesting in innovation. We will take bold steps forward, not only to catch but leapfrog the competition. Our efforts will focus on innovating our guest and employee experiences by leveraging mobile technology, data analytics, and artificial intelligence to ensure Alaska's brand is synonymous with innovation."

Furthermore, several of the charters empower the committee to expand governance to address a broader consideration of next-generation opportunities and threats, as well as create a context for a regular infusion of expert, external input to complement management's ideas.

Elements of Committee Development

Boards interested in adding a science, technology, or innovation committee can expect to proceed through several stages. They can start by asking the following questions to evaluate organizational readiness and clarity of strategy:

- Which member or members of the management team are responsible for understanding future business opportunities and for developing them?
- Does the organization regularly challenge and refresh its point of view on the risks and opportunities emerging technologies pose to the business, including threats from traditional and nontraditional competitors and emerging business models?
- Does the organization have a growth strategy that is clearly understood and that includes new solution development targets as well as cross-functional incentives?
- What growth and innovation methodology does the organization follow? How clear is it? Does it take into account new approaches that win in the digital economy? How is the company organized for speed?
- What current and emerging risks does the organization need to address?

The following are considerations a board could pursue in whichever order suits its culture.

Alignment and urgency. Topmost to establishing a science, technology, and innovation committee is to create alignment across the board and management team on the urgency, opportunities, and risks. Every leader and director bring their own understanding of these domains and the urgency surrounding them to the discussion, and as such there is normally an opportunity to demystify the science and technology aspects and work with the team to create a shared understanding that in turn is able to drive a cohesive strategy and common vision.

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Setting priorities. Boards should understand management's immediate priorities as well as challenge and incentivize leaders to look ahead. The initial portfolio of topics for the committee to address may include the more common ones described above as well as others presenting particular urgency to the organization. It is recommended that boards include both growth and risk topics in their initial committee charter and associated financial performance over time.

The science, technology, and innovation risk portfolio develops in parallel with the growth opportunities. Cybersecurity, privacy, ethics, ESG, regulatory, IP, talent, competitive, and other risks should, of course, be anticipated with the utmost care. While it is natural for boards to initially focus on risks, directors should take care to balance the "offense" with the "defense," as over-indexing on risk will negatively impact growth programs.

Humana's technology committee, for example, strikes this balance as it oversees "(a) the company's process, awareness, evaluation, and perspective on potentially disruptive technologies and convergences that may represent threats or opportunities for the company's business operations; (b) the company's process and perspective on strategic technology capabilities that enable transformational business capabilities; (c) the company's process, execution roadmaps, requisite capital, progress in delivering technology-enabled transformational capabilities, and their related outcomes; and (d) management's focus on organizational, talent, and cultural enablers required to ensure achievement of those outcomes."

Another powerful way to balance growth and risk is to frame the committee's purview through a competitive strategy lens. Carrier's technology and innovation committee charter, for example, specifies responsibility for "monitoring developments and trends in technology and digital, including those in the field of sustainability and of Carrier's actual and potential competitors, that could have a material impact on Carrier, its customers, and suppliers, and the industries in which they operate," as well as "evaluating Carrier's competitiveness from a technology, digital, and innovation standpoint, including talent, organizational structure, and resources."

Director talent. Just as an audit committee needs financial experts, a science, technology, and innovation committee relies on members with expertise in those domains. There are significant differences between operating an existing business and building an entirely new business or new solutions, much less knowing how to look ahead to next-generation opportunities and risks. Boards may elect to seek out new directors with these different skills.

The committee can also accept the responsibility of providing ongoing training to the entire board to continuously upskill directors. Hewlett Packard Enterprise Co.'s technology committee charter, for example, details its responsibility in supporting the training of the full board on "topics pertaining to technology trends and development, as needed," and to "seek out and work with external technology consultants to advise and educate committee members on areas requiring further expertise, if such expertise is necessary to perform any other committee responsibility."

Integration with strategic planning. Depending on the company's current capabilities across science, technology, and innovation, the committee will have a range of existing programs and budgets to oversee. For those organizations early in their journeys, there may be an initial period of strategy setting, learning, and experimentation that precedes execution and value realization.

The committee should understand its role in serving as a champion for these long-term efforts. It is normal for these investments to require a few years before delivering significant financial impacts, and the board should both endorse a mid- to long-term vision as well as insist that leadership de-risk these efforts through modern and flexible investment approaches.

The committee's efforts and associated organizational delivery will inevitably influence strategic planning as the company's capabilities evolve, and the financial impact becomes clearer. With each report to the board, more information will be available that may be integrated into strategic planning. Business plans need to be agile and able to match the pace of change.

IP strategy. As organizations explore new business models, entirely new IP opportunities are likely to emerge. Companies that previously made physical products may develop data-driven

solutions, while other organizations may develop new sustainability or AI products. The committee should challenge management to define IP portfolio impacts from the start of a new project to avoid launching products without appropriate protection, that violate existing patent protections, or that come with other risks.

Commercialization. The committee should make it a priority to understand how management engages with existing and target markets to define problems and opportunities, potentially even partnering with customers on the codevelopment of solutions.

The committee can also challenge management to define market opportunities beyond the existing customer base as a new range of solutions may broaden commercial opportunities. A clear requirement to address commercialization avoids the long-standing risk of organizations pursuing technology for technology's sake, without customer outcomes or profits in mind. Corteva's sustainability and innovation committee charter, for example, specifies "monitoring the company's effectiveness in capturing value from technology" as a responsibility.

Enterprise alignment. In the early stages, it may be appropriate for the science and technology committee to have a precise focus on early development programs and any risks specified in the committee charter. As the organization evolves its growth and innovation activities, however, the committee may further engage management to define complementary functional planning across the enterprise.

Here are some examples of domain-specific impacts and responsibilities:

- Product, engineering, innovation: new solution development, long-term experiments
- Business development: market testing, client engagement, new sales processes
- Marketing: market target identification, marketing campaigns
- Legal: IP protection, regulation
- Talent: new incentives, training
- Operations: process improvement, cost efficiency, end-to-end connectivity
- Finance: funding for current, mid-term, and long-term programs and experiments

The goal is to ensure that management actively plans for how the entire organization will evolve as new business models develop.

Expansion: sustainability, AI, emerging topics, changing regulation. Directors may also regularly review the committee charter for opportunities to add or prioritize emerging topics and risks. Some organizations, for example, have included AI and ESG in recent versions of their committee charters. As such, these committees create a structure for ongoing strategic evolution with the distinct responsibility to oversee that their organizations continue to look ahead and avoid disruption and displacement.

The Results

Creating a science, technology, or innovation committee at the board level has the potential to take an organization to the next level. Initially, the committee can act as a safeguard, making sure the organization is aware of industry developments and minimizing their risk. But as time passes, leaders will realize it can do so much more, from helping develop an intellectual portfolio, to evangelizing the most crucial technological advances, to capturing a whole new section of the market.

In addition to financial performance opportunities, the governance benefits of such a committee include generating more discussion of strategy and transformation at board meetings, providing increased board visibility into emerging topics, and motivating enterprise-wide engagement on growth opportunities.

When successful, a science, technology, or innovation committee supports management in delivering results that are both immediately measurable and ongoing. This committee can infuse a level of confidence in management when developing bold and experimental strategies while addressing associated risks.

Finally, a committee dedicated to future-focused governance sends a clear signal to stakeholders of the company's ambition to embrace ongoing change and lead in the market. D

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