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VIEWPOINTS

CEO succession and transition planning, and governing artificial intelligence

Hiring and firing a CEO is a core board responsibility and one that most directors are likely to encounter multiple times during their careers. Nevertheless, CEO transitions remain a persistent challenge for boards, with existential repercussions for their companies when executed poorly. Boards also face challenges stemming from new technologies, which bring both opportunities and risks; artificial intelligence (AI) is a significant example, and boards are just beginning to wrestle with how to exercise effective governance.

Members of the Lead Director Network (LDN) met on March 14 in Washington, DC, to discuss the board's role in overseeing CEO succession planning. In a separate session, members discussed the governance of AI with Lee Tiedrich, a partner at Covington & Burling and leader of the firm's AI initiative, and Steve Weber, a professor in the School of Information Science at the University of California, Berkeley.

CEO succession and transition planning

Appointing a CEO is a corporate board's most important role and a high-risk, high-stakes endeavor that is difficult to get right. One LDN member said, *"It's infrequent, but if you think about high stakes, there isn't a higher-stakes decision a board makes than either retiring or terminating a CEO or hiring a new one."* Another member agreed: *"One thing you will find, if you bring the wrong CEO in, you have a good chance of going down the tubes, getting kicked out of the industry, and you're gone."*

At the same time, the job of CEO has only become more challenging in recent decades. For contemporary CEOs, one member said, *"it's no longer adequate just to run the company in a professional, equitable manner."* Another said, *"CEOs still have to do all the things from 20 years ago, but now they have to take more of the broad view, and there are broader leadership and communication aspects. They also face more heat from the trade press, analysts, and major index fund investors."* The rapid pace of change means that CEOs need to be flexible, adaptable, and, as one LDN member said, *"active learners."* The member continued, *"with the world moving at such a pace, CEOs have to have the ability and the natural inclination to learn and embrace change."*

Qualities of an effective CEO

An important part of CEO succession planning is identifying the qualities of a successful CEO. The particular skills, experiences, and character traits that make a great CEO are to some degree specific to an industry, a company, and a company's strategic needs at a given point in its history. At the meeting, LDN members identified characteristics shared by many successful CEOs.

The ability to form and maintain the right team

Effective CEOs recognize that they cannot succeed on their own and must build and retain a leadership team. Lead directors strongly agreed with one member's comment: *"The CEO is not the sole driver of success. It's about a team of people. The CEO needs an eye for talent, the ability to recruit appropriate diversity. And it's not just racial diversity—some are doers, thinkers, dreamers—it's about getting all that talent working together."* One member had a word of caution for evaluating candidates: *"Someone who thinks it is all about them is the biggest red flag you can have."* Another suggested that boards should look for people who ascribe past success to their teams rather than themselves—speaking of "they" rather than "I" or even "we." Speaking too much about their own role or accomplishments indicates that a potential CEO lacks confidence, and *"a CEO without confidence is a really bad situation."*

Leaders must have followers. One member said, *"One thing we look at in recruiting is whether they can bring a team with them—when you look at references and discover that good people have followed this person."* By contrast, *"If you aren't able to inspire, lead, and recognize great talent, and not have it be all about you but about them, you will not be a magnet and the best people won't come to you."*

A collaborative yet decisive leadership style

LDN members agreed that the days of the imperial CEO are over and that today's CEOs need to lead in a more collaborative and inclusive way. As one member observed, leadership has *"moved away from command and control to collegial, shared learning and listening to opinions."* Members highlighted the ability and willingness to listen to a range of perspectives as crucial for making decisions. *"The person needs to be a great listener, not doing a lot of talking. If they are not able to listen, they can't take in all the necessary information,"* said one.

Ultimately, however, the CEO is the final decision-maker and must avoid becoming paralyzed by endless conversation and analysis. *"The CEO has to make a decision at some point, and you can't wait until you have every piece of information because the opportunity will pass. You've got to be listening, but then say, 'We've got to do this,' and then the expectation is that everyone will implement it."* Nonetheless, members said that an inability or unwillingness to listen, take in information, and build consensus was a larger problem than indecision. One member said, *"It's not a conflict between listening and making decisions. If you don't listen, you've got a worse problem—you don't get other good ideas or build comradery."*

Character, integrity, and moral authority

Moral authority emerged as another essential characteristic of an effective CEO. One member said that it is important to find *"someone who can lead the organization with integrity and moral authority, by doing the right things for the right reasons."* These characteristics are difficult to find and difficult even for a great CEO to retain; members noted that the pressures of the role can erode a CEO's character and integrity over time, increasing the need for moral stamina. One member said, *"I used to call it 'CEO-itis.' When great leaders stumble, usually over moral issues, it's usually because they stopped listening to their advisors."*

Balance of strategic vision and operational excellence

Both strategic vision and operational excellence are important qualities in a CEO, and members differed in how much weight to give to each side of that equation. One member said, *"In general, you have to have someone who is an operator, so they have the respect of the team and they have a framework to make a decision because they know how the business works. They need to have run a business and have the experience of making decisions."* Another member, commenting that *"you can't operate your way to greatness,"* emphasized the importance of *"strategic vision and the ability to know where the leverage is."*

Finding the right CEO—and removing the wrong one

The difficulty of the CEO role and the high stakes involved in choosing a CEO make identifying and selecting the right CEO extremely challenging. LDN members acknowledged the difficulties and imperfections of the process. One member admitted, *"I've been involved in a number of CEO searches and it's been maybe a 60:40 success-to-failure ratio. It's certainly not 100% successful."* Nevertheless, members identified several important aspects of CEO succession planning that contribute to a successful transition.

Succession planning is linked to the broader process of talent development

CEO succession planning should be an ongoing part of the board's and senior management's process of talent and leadership development. In fact, one member said, *"I think calling it succession planning gets in the way,"* as doing so puts the emphasis on the two or three people who are immediate candidates for the top job, whereas the board needs to be evaluating talent throughout the organization. *"A board needs to be getting to know the top 50 managers really well—the high potentials. But the notion of a matrix that says, 'Here's who's ready now and who's ready in two years,' is not really useful."* The member continued, *"We need to have a deep bench of management talent from the direct reports to the CEO all the way down."*

While the board, the CEO, and senior management share responsibility for talent development, members agreed that the CEO leads the process, including identifying and developing his or her potential successors. This should be a part of the role throughout a

CEO's tenure, not just when a transition is imminent. One member said simply, *"Internal talent development is the CEO's job."* Another member elaborated, *"If you pick the right CEO in the first place, their sense of responsibility for talent management is integrated into who they are. Their responsibility—not just for succession planning but also for leadership development—starts early in their tenure. You've got to look at how to get people ready. For me, it starts early because it's integrated with talent development."*

LDN members acknowledged that management is almost always better positioned than the board to identify high-potential leaders, understand their capabilities, and address their developmental needs. However, the board has to ensure that the CEO is taking the responsibility for leadership development seriously while also playing a direct role in evaluating potential successors.

Members stressed that the board needs to gain visibility into talent throughout the organization. One member said, *"If you are looking lower down, it gives you an opportunity to identify people and to watch them."* Another member agreed: *"The board needs to have an ongoing view of people at multiple levels."* However, the board needs to pay special attention to preparing potential successors for the CEO role. One member said, *"The board should be asking what the development plan is for the five to six eventual candidates."* Members described several ways to help the board develop a view of potential successors: having them present at board meetings, having them attend dinners and other informal events, and having board members do site visits. One member said, for instance, *"We say, 'Let's hear from them; let's bring them to a strategy retreat.'"*

Internal candidates are usually the better choice

Lead directors at the meeting spoke of CEO succession in the context of talent development because they held that, absent the need for a significant strategic or cultural shift, an internal candidate would typically be the best choice for CEO. Spencer Stuart found that 73% of new S&P 500 CEOs in 2018 were internal hires, and those numbers had been even higher in previous years—90% in 2016 and 84% in 2015.[1] One member said, *"From a board standpoint, to some extent we would feel we had failed—unless there is a compelling reason to go outside—if you don't have internal candidates you have observed over time."*

However, there are circumstances where looking outside presents the best option, such as when a firm faces activist pressure, requires a major change in strategic direction, or is in the midst of a turnaround. One LDN member put it this way: *"You go external if you want a change. Generally, you should have internal candidates ready; they are more likely to be successful than external, unless you want a change."* Another agreed: *"If the company wants to change the culture, you do need a CEO from outside. If not, you really ought to have an internal candidate. There is no reason not to."*

The primary reason LDN members identified for preferring internal candidates is that they know the organization, the culture, and the business better than an outsider would. *"The real*

benefit of doing an internal succession plan is they already know the company, know the other areas. If they've run operations, they've worked with all the corporate functions," said one member.

Another reason is that it is much easier for the board to evaluate internal candidates, as they are able to observe them in their roles over time and interact with them in different settings. For external candidates, the board has to make significant additional effort digging into their background, personality, character, and leadership style. One member asked, *"How do you assess character, get down to the root? What are ways one can go down to the core issues of integrity and honesty that are so important to a company's reputation?"* Another member described the process: *"I talk to people who worked for the candidate, their peers, their customers. It takes a huge amount of time. I ask, How did they interact with people? The soft stuff is important. It is also really important to take someone out for a meal, to see how they talk about family, how they spend their time, to really get to know them as a human being."*

Another member pointed out that in evaluating outside candidates, board members have to do their own due diligence and can't rely on a search firm. *"You have to find references that are not on the list, and you can't get the search firm to make the call. You have to get directors on the phone with real, live people. Every exec has that one transition that doesn't make sense—you have to drill down into those."* Members also noted that boards sometimes evaluate internal candidates more harshly, calling out flaws they might overlook or not even be aware of in external candidates.

Boards often move too slowly to remove an underperforming CEO

LDN members acknowledged that situations where a board finds it necessary to remove a CEO are extremely difficult and the board can struggle to act quickly and decisively. One member said, *"The harder issue is, What are the signs when the board knows they should remove a CEO?"* Even when a board knows that a change is necessary, it can take a long time to make a change. One member said, *"Boards ultimately get to the right spot, but it always takes too long."* Another member agreed: *"My experience is that two to three years can go by from the time a board starts feeling uncomfortable to actually removing the CEO."*

Members discussed the difficulty in achieving consensus and getting a commitment to act from the board. Directors often want to give a CEO more time to turn things around and tend to avoid making a difficult and potentially disruptive move. LDN members suggested several tactics for enabling a board to move forward more quickly. More fulsome CEO feedback sessions where the board is regularly communicating its concerns might ease directors' reluctance to remove a CEO, as directors would feel they had given him or her ample warning and time to improve performance.

Members also suggested that regular use of executive sessions would allow the board to discuss a CEO's performance candidly and take the time necessary to build consensus on the need for a change. The lead director or nonexecutive chair plays a decisive role in leading

those conversations and pushing the board to action. One member recalled an experience with executive sessions but also raised questions: *"The chair reached out individually to directors. They didn't want to confront it, so the overwhelming tilt never came together until in executive session. Do executive sessions allow for that kind of momentum, or does it remain something you hear and just kick it down the road?"*

Governing artificial intelligence

AI is likely to become a key part of many companies' strategic plans and investment decisions. While some boards are already discussing AI, they are still in the early days of developing both the necessary understanding of the technology and the governance frameworks to enable effective oversight of the technology and its strategic risks and opportunities. One LDN member observed that in the United States, *"The governance issues and thinking around strategic implications have not fully come to boards' attention."*

The current state of AI technology

AI encompasses a range of different technologies, many of which are not yet germane to business leaders. As a way to focus the conversation on technologies that are most directly relevant, Professor Weber advised members to think in terms of machine learning rather than AI. He defined machine learning as a computer system that, rather than being programmed by people writing instructions, as with traditional software, uses advanced statistical methods to extract patterns from data and establish its own rules for making decisions. It then applies those rules to new data sets to refine the parameters that allow it to make predictions and draw conclusions. Based on its record of successes and failures, an algorithm adjusts its parameters and improves its performance—in effect, learning from experience.

Machine learning is the branch of AI that has been responsible for most of the recent breakthroughs in the broader field, and the technology has made significant advances in the last few years. Examples include facial recognition and natural language processing—the ability to understand spoken and written texts—where performance has improved dramatically in recent years. In healthcare, technologists at Stanford University developed a machine-learning algorithm that outperforms human radiologists in diagnosing pneumonia based on chest X-rays,[2] while scientists at Nottingham University in the United Kingdom recently developed an algorithm that can predict mortality rates better than predictive models developed by human experts.[3]

Despite such examples of progress, many difficult problems remain to be solved. Autonomous driving is a highly visible application of machine learning where progress has been dramatic, to the point where a suitably equipped car can drive itself roughly 95% of the time. However, as Dr. Weber pointed out, mastering the last 5% or so--the exceptions to patterns that humans are much better at adapting to than are machines—is extremely challenging for the technology. Consequently, fully autonomous vehicles remain many years away.

A major challenge for a board is thus to cut through the hype, and Dr. Weber said that boards needed to *"set up systems to distinguish what is reality."* He continued, *"There are a lot of vendors who want to sell to you out there,"* and many of them use AI as part of their pitch even if their product has little to do with AI.

Regulatory/policy environment

The regulatory and policy landscape surrounding AI is in its early stages of development, with a range of stakeholders vying for influence. Different jurisdictions are approaching the issues in different ways; Ms. Tiedrich noted, *"Different countries have different approaches, but technology doesn't stop at borders."* China is investing heavily in AI, aided in part by a relatively lax approach to data privacy, whereas Europe has taken a more conservative approach that emphasizes the potential harms of the technology. In addition, while principles for the regulation of AI in general may emerge, there are also industry- and application-specific policies and regulations.

Moreover, nongovernmental organizations and civil society groups have begun to engage on the issue, and, as Ms. Tiedrich pointed out, *"the voices of civil society groups and their legitimate concerns are getting louder and may drown out those who are arguing for the benefits of the technology."* She noted that industry groups are advocating a more incremental approach, arguing, *"To come in with a lot of prescriptive regulations at this point will not work. The technology won't go from 0 to 100 in a month, so let's set up some sandboxes and figure out some good solutions."*

One member expressed optimism about the current administration's approach to autonomous driving, noting that the Secretary of Transportation said recently, *"We don't need to have a blueprint. We just need to put a regulatory construct around this so innovation can occur, and public safety is protected, and those investing in this can make a financial analysis of the risk."*

AI's governance challenges

The novelty and complexity of the technology combined with the scope and magnitude of its potential impact pose significant challenges for boards as they grapple with oversight issues. One member framed the board's task: *"As I listen to it, part of the board's responsibility is to look with two lenses: Strategically, what can it do? And, from a risk mitigation standpoint, how do we govern it?"* Another member emphasized one challenge: *"A lot of board members don't know the questions to ask."* Members agreed that boards will need to address this issue as part of their strategic planning. *"I think in the boardroom that, strategically, we need to go back to basics. In the boardrooms I'm in, we talk about AI all the time, and it is first a capital-allocation question. When companies are talking about AI, are they allocating resources to something that is right for AI?"* said one member.

Fairness, accountability, and transparency

Since the outputs of machine-learning algorithms are the result of statistical inferences rather than preprogrammed decision rules, it is sometimes difficult for people to know exactly what these systems are doing at any moment or why they reached the conclusions they did. The challenge is to create algorithms that are "trustworthy"—often defined as "fair, accountable, and transparent," or "FAT." This means that they do what their creators expect them to do, their actions are explainable, and there is some level of accountability for mistakes. It also demands that AI decisions are seen as "fair," which is often an ambiguous concept, even for decisions made by humans. Ms. Tiedrich said, *"If I make a decision, you can ask me how I made the decision; you can question me and get an answer. When machines make the decision, how do you create that same level of accountability and trustworthiness?"*

One important aspect is the problem of bias, which is often a result of bias in the data on which the algorithm is trained. Machine-learning systems can spot subtle patterns in data, but they can also end up amplifying biases in data that human observers might miss. In other words AI systems that enable greater scale also enable scale in biases. Dr. Weber cited an example: *"An algorithm advising judges on sentencing was deeply biased against African-Americans because the initial data in the training set overrepresented African-Americans. And this was because long-standing biases in the criminal-justice system meant they were overrepresented in the data set."* As a result of the potential for bias, when considering implementing any AI solution, Ms. Tiedrich noted, *"It is crucial to bring together legal, privacy, data security, and data scientists to pay attention to how you curate data and where you source it from to eliminate bias."* Machine learning researchers are now putting significant effort into bias detection technologies, but there is not yet a technological solution to this problem that can remove humans from the loop.

The importance of data

Machine learning depends on data; algorithms require large data sets on which to train and develop inferences and conclusions. The dependence on large amounts of data raises a range of issues:

- **Data management.** Organizations need to know what data they have, where it is housed, and how to access it, requiring extensive work in data management and organization. Dr. Weber emphasized, *"Something like ninety-eight percent of the work is about data cleaning. It's not fun, not sexy; it's expensive and takes a long time."*
- **Privacy.** Many organizations want to use machine-learning techniques to gain insights from data about their customers or employees. However, they must ensure that they have the legal right and social license to use that data, which is made more complicated by emerging privacy regulation. Ms. Tiedrich said senior leaders *"need to make sure the company complies with privacy regulation; they have to be conscious about what rights they are retaining in the data."*

- **Data integrity and cybersecurity.** The use of machine learning raises the stakes on cybersecurity. Dr. Weber said, *"Just as we are catching up to the idea of a data breach, the attack surface has shifted to data manipulation."* He pointed out the risk of *"adversarial machine learning,"* in which an adversary, *"whether a nation-state or criminal enterprise, knows how you are training your algorithm and finds it lucrative to, for example, insert noise or carefully configured false data in the training set that will poison your algorithm."* This compounds the problem of natural biases in data or mistakes in algorithms. *"You are not just struggling with nature; you could be struggling with a determined adversary trying to lead evolution down the wrong path."*

Toward AI governance principles

Ms. Tiedrich emphasized *"the importance of putting in a good governance structure at the executive level and ensuring that the board is aware of the state of the structure. There are so many data issues: bias, integrity, and data security. These are all integrated, and you should expect management to give you concrete answers on how they are managing these issues."*

LDN members and their guests identified several governance principles that firms could develop in response to the emergence of AI:

- **Creating a governance framework up front.** It is important to establish an oversight framework—at both the board and executive levels—early in the process of deploying AI. Ms. Tiedrich said, *"What we see as effective is, before a company starts launching an AI-type product, putting in a good governance framework that includes multiple stakeholders, including privacy, data security, and intellectual property."*
- **Matching oversight to impact and risk.** Different uses and implementations of AI require different approaches and levels of oversight. An algorithm recommending movies or music requires quite a different level of oversight than an algorithm evaluating loan applications or diagnosing medical conditions. One member suggested a threefold framework for structuring conversations about AI between boards and senior executives based on its potential impact: *"First, what internal processes use AI and how is enterprise risk management dealing with that? Second, have you embedded or do you plan to embed AI in your products or in ways that impact stakeholders outside the walls of the company? Lastly, how could AI transform, disrupt, or eliminate our business?"*
- **Ongoing monitoring and testing.** Because of the challenges with transparency noted above, *"effective risk management requires continual monitoring, and continual assessment of the outcomes,"* said Ms. Tiedrich. There needs to be both a feedback mechanism for discovering bias, for instance, and policies in place to ensure that if bias is discovered, appropriate remedies can be applied.
- **Finding the appropriate level of oversight.** Oversight of AI has to be built into management and governance structures so that issues that emerge can be addressed at

the appropriate level of seniority. One member said, *"It sounds like one of the ways to govern is that when there is a problem, it's going to senior enough people to apply the right judgment, which product developers and data scientists are not necessarily able to apply."*

Board governance practices

LDN members grappled with the practical aspects of addressing the questions, *"How should boards handle trying to understand what the risk is? How do we make sure we have the governance capabilities that can adequately understand the answers we get from management?"*

Members noted that at the board level, oversight of risks associated with new technologies are often delegated to the audit committee, but they expressed concern that the audit committee might not have the necessary skills to oversee them. As a result, some members suggested *"evolving different board structures"* to deal with the issue—for instance, by creating a technology committee.

Members agreed on the importance of developing the right expertise at the board level but differed somewhat on how to achieve it. Some members noted the value of bringing in directors with technical expertise, who can *"raise the level of discussion"* for the whole board. However, others warned of the danger of overreliance on so-called tech directors, with boards in effect delegating oversight of technology issues to one or two experts on the board. Rather, boards need to be continually educating themselves, bringing in outside experts when necessary, in order to give the entire board the technical acumen to accurately assess the strategic value and risks of AI implementations.

Meeting participants

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About this document

The Lead Director Network (LDN) is sponsored by EY and convened by Tapestry Networks. The LDN is a group of lead independent directors, presiding directors, and nonexecutive chairmen drawn from America's leading corporations who are committed to improving the performance of their companies and to earning the trust of their shareholders through more effective board leadership. The views expressed in this document do not constitute the advice of network members, their companies, EY, or Tapestry Networks.

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Endnotes

[1] Spencer Stuart, *CEO Transitions* (Spencer Stuart, 2018), 5.

[2] Taylor Kubota, "Stanford Algorithm Can Diagnose Pneumonia Better than Radiologists," *Stanford News,* November 15, 2017.

[3] Mike Wehner, "Scientists Created an AI That Can Predict When a Person Will Die," *BGR*, March 29, 2019.