
Governance in the Age of Technological Innovation



By [Geraldine Ee](#) , INSEAD Knowledge

With new technologies redefining the global business ecosystem, how can boards navigate these changes and reinvent their business models?

Today's boards can no longer afford to solely prioritise shareholders and maintain an inward-focused approach to business. Instead, they need to consider stakeholders and the wider ecosystem that gives rise to complexities, challenges and also opportunities, said [Sonia Tatar](#), executive director of the [INSEAD Corporate Governance Centre](#) (ICGC) at the recent INSEAD Directors Forum.

Themed **[“Governance Complexities in Unprecedented Times”](#)**, the forum organised by the ICGC shone a light on the evolving role of the board in an increasingly disrupted governance landscape. [Philipp Meyer-Doyle](#), Associate Professor of Strategy at INSEAD, urged board directors to rethink stewardship, their governance model and performance in the face of macro-economic pressures, regulatory tensions, de-globalisation, technological innovation and pressures to align with environmental, social and governance (ESG) expectations.

Of these, technological evolution and innovation were key themes alongside topics such as environmental and social leadership. Keynote speaker Arnoud De Meyer, Chairman of Stewardship Asia Centre and board member of INSEAD, said he has seen artificial intelligence (AI) playing an increasingly important role since he first served as a board director in 1988. But way before AI started to radically change business and our way of life, businesses were already undergoing digital transformation. How then can the board best navigate the challenges and opportunities brought about by technological shifts?

Evolution of the board's role

Many businesses and consumers are already benefitting from the prevalence of data and analytics tools, which have enabled automation and lowered the transaction costs of search, co-ordination and contracting. For traditional services such as insurance, it now takes online providers – such as Hippo Insurance Services – only four minutes to process a home insurance application, as opposed to an average of two months, said [Sameer Hasija](#), INSEAD's Dean of Executive Education and the Henry Ford Chaired Professor in Technology and Operations.

The opportunities presented by the increased access to data on revenue generation and earnings are massive, but the board must also understand the risks, said De Meyer. Data breaches experienced by Australian telecommunications giant Optus and private health insurance company Mediabank show that board members may be held individually [responsible for such breaches](#). This means that the board has a clear role in ensuring cyber resilience and providing oversight in cyber risk strategy, risk management and incident planning.

In addition, AI is now more embedded in our everyday lives than ever. If AI were indeed set to [replace 85 million jobs](#) worldwide by 2025, as suggested by the World Economic Forum, organisations and boards need to be prepared and equipped to address the implications. In particular, the board needs to understand the impact of AI on the company's means of production such as capital and human resources and explore alternative business models.

The expanded influence of the board

Beneath the surface, one of the most important implications of technological innovation is the increasing interconnectedness across value chains, industries and geographical boundaries. Consider the wide range of application for Arm’s processors, Dassault Systèmes’ 3D software and Rolls Royce’s power and propulsion systems, and the corresponding diversity of customers and stakeholders. The increased interdependencies between companies and sectors means that the success or failure of a single organisation or industry can have cascading and far-reaching effects.

In the energy sector, for instance, transitioning from fossil fuels to low-carbon energy sources such as hydrogen takes more than a single company – it takes an ecosystem. Indeed, De Meyer said he has seen the emergence of loosely coupled business networks, or “business ecosystems” in which companies work as a community to innovate and share risks through initiatives such as building common intellectual property.

Board directors need to recognise that in these new ecosystems, the boundaries of the board’s governance and influence have moved beyond a single organisation. To provide effective leadership, board members need to actively network to establish themselves as a trusted source of knowledge in the ecosystem. This will allow them to build consensus among a wider group of peers beyond the board’s organisation and ensure that they also take ownership of decisions by the board.

In a more complex landscape, directors should embrace both diversity and dilemmas and, at the same time, develop an overarching identity and goal for the ecosystem.

Embracing innovation in the board

To keep abreast of technological change and innovation, the board needs to ensure that its innovation and risk agendas are up-to-date, and that innovation is incorporated into the organisation’s strategy review. This may involve reviewing key performance indicators, performance measures and incentives.

Within the board, the appropriate composition, culture and interactions can promote innovation. Not all board directors will have the relevant technical expertise, but more diverse boards can build collective literacy and enhance human capital in the boardroom, said De Meyer. Where necessary, committees such as scientific or innovation committees can be created to

drive greater attention to these topics. In these cases, naming matters, said Janet Ang, non-executive Chair of the Institute of Systems Science in the panel discussion. For instance, referring to a committee as “Technology and Risk” instead of narrowly naming it as “IT” gives it more weight and scope.

Fundamentally, boards should not only strive for conformance but also performance, urged Su-Yen Wong, Chair of the Singapore Institute of Directors. A culture of creative abrasion and risk-taking within the board is needed to encourage constructive debates, said De Meyer. This culture of openness should extend to the board’s relationship with the management as its thought partner. Wong agreed, suggesting that a healthy relationship is necessary to align and drive performance.

In fact, directors need to ensure that the CEO it appoints, together with the organisation’s top management, is made up of the right blend of fixers and growers, said De Meyer. However, Hasija added that the type of leaders and innovation is highly dependent on the specific context, not only within the industry but also within each individual company.

Key to radical innovation

The kind of innovation – whether technological or otherwise – that is relevant to a company depends on its phase in the product life cycle and the problem it is trying to solve. Hasija explained that in the launch phase, product innovation tends to be the most important, whereas process innovation tends to take precedence in the growth phase.

As the product reaches maturity, it enters a stage that Hasija referred to as the “phoenix moment”. In this critical phase, sales and profits decline and the product may slide into obsolescence – as Blackberry did – unless the company manages to extend its product life through innovation. For instance, when Lego hit this phase in 2000, it gave the stagnating business a much-needed boost by leveraging the popularity of gaming to create Lego Mindstorms.

In most instances, crises invariably compel people to innovate. Huey Tyng Ooi, non-executive director of AIG Asia Pacific, explained how Grab introduced GrabFood as a new business vertical when its ride-hailing business was disrupted during the Covid-19 pandemic. Similarly, with the decline of film photography, [Fujifilm](#) leveraged its expertise in oxidation technologies for film to successfully pivot to the skincare and cosmetics

industry, explained Helen Wiseman, President of the [INSEAD Directors Network](#).

But while a sense of crisis tends to encourage innovation, the right framing can inject the required urgency. Given that people tend to focus on the downside risks of innovation instead of the upside, Hasija proposed flipping the narrative: If you innovate, you will survive; if you don't, you will cease to exist. In practice, creating this "[phoenix encounter](#)" within the board may entail bringing in an external party to simulate an "attack" scenario that might lead to radical ideation and innovation.

Start with a learning mindset

More than ever, boards need to think about their effectiveness in exercising their fiduciary duties and successfully guiding the business amidst constant shifts and disruptions. Technological innovation can offer new opportunities if board directors are able to redefine the new global business ecosystem and reinvent business models accordingly.

However, in the rapidly evolving technological landscape, boards may not always have the necessary knowledge to keep up with developments. Boards are not expected to be experts in digital, cyber, AI and other emerging technologies. However, they need to understand the context, the shifts and implications to raise the right questions and have management look into scenario planning, said Tatar. By doing so, they are helping to build a resilient organisation that can not only absorb shocks, but also re-invent itself, innovate for the long term and adapt to the evolving environment.

Till Vestring, lead independent director of Keppel Corporation Limited (Singapore), proposed that directors adopt a learning mindset, which involves asking questions and listening, not only within the boardroom but also by speaking to employees, customers and industry experts.

Fundamentally, he emphasised that it is the responsibility of board directors to educate themselves and stay relevant by attending conferences, engaging with experts and meeting new people. Moreover, the board should serve as a role model for the desired culture of the organisation, he said.

The speed of change and complexity is here to stay, said Tatar. Consequently, boards must not only rethink their strategies for the future but also maintain a culture of openness and continuous learning.

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Corporate Governance

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The ICGC harnesses faculty expertise across multiple disciplines to teach and research on the challenges of boards of directors in an international context. The centre also fosters global dialogue on governance issues, with the ultimate goal of developing high-performing boards. Through its educational portfolio and advocacy, the ICGC seeks to build greater trust among the public and stakeholder communities, so that the businesses of today become a strong force for good for the economy, society and the environment.