Driving Innovation

The Boardroom Gap
2019 Innovation Study

THE UNIVERSITY OF
SYDNEY
Business School

Australian
Institute of
Company
Directors

About us

The Australian Institute of Company Directors (AICD) is committed to strengthening society through world-class governance. We aim to be the independent and trusted voice of governance, building the capability of a community of leaders for the benefit of society. Our membership of more than 44,000 includes directors and senior leaders from business, government and the not-for-profit (NFP) sectors.

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Foreword

Australia's economy faces significant head-winds and growth can no longer be taken for granted, so now the focus of economic debate is turning to innovation and it is appropriate to consider how Australian directors can show leadership.

This study, prepared in partnership with the University of Sydney Business School, is the first of its kind in Australia, and one of only a handful of reports globally which examine the role of the board in driving organisational innovation.

Our research results make sober reading - painting a picture of Australian boardrooms that struggle to prioritise innovation and are too often focused on traditional risks. In short, a director community that feels overwhelmed by internal and external pressures, and struggling to look up and see what is on the rapidly approaching horizon.

Global innovation studies suggest we are lagging our international counterparts, and not recognising the urgent need to prioritise innovation and to have a broader range of skill-sets around the board table. Without directors driving this conversation, and requiring innovation to be on the board's agenda, we will struggle to fulfil our potential as a nation and maintain our level of prosperity.

Innovation should not be viewed as optional, or just a concern of the black t-shirt millennials of technology companies. It is a central part of corporate strategy and risk management, two core responsibilities of the board.

It is an imperative for all organisations – how do we use technology to better serve our clients and customers? How do we remain ahead of our competitors? And how do we grapple with the ethical challenges that ever more advanced technology presents?

These are constant questions for all organisations, regardless of size or sector.

This study establishes a base-line for our understanding of how the Australian director community views the challenge of innovation, and identifies further areas where more work must be done. It also presents a challenge for the AICD – how can we help directors put innovation onto boardroom agendas across the nation.

We look forward to working with our members, government, academia and the broader business community to help meet this challenge. Our continued prosperity depends on it.

Angus Armour FAICD
Managing Director & CEO, Australian Institute of Company Directors

Kee Wong FAICD
Chair, Technology Governance and Innovation Panel, Australian Institute of Company Directors

"Risk-taking, which is part of innovative thought, is becoming something that's quite dangerous to one's career … The board member who's had a glorious career and is now 55 or 60 has an enormous amount to lose in a listed company board, the listed company senior management has a tolerance for risk which is much less than what it was when I started out 35 years ago, as a director. That's probably because growth has come over the years naturally and without enormous risk. Now, growth is becoming really quite difficult. And it will continue to be extremely difficult unless we do take some risk. The clever board doesn't just increase risk but takes a calculated look at risk… "

David Gonski AC FAICD Life
Chairman of ANZ

Acknowledgements from the lead researcher

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Key statistics

75% of members said **their organisation had an innovation vision** or **innovation featured in their strategic plan**

57% of members said that **innovation has never been** or **was only an occasional board agenda item**

Top three barriers to innovation:

31%
Access to talent

28%
Financial resources

19%
Short-term financial focus

Only **3%** of members had **science and technology expertise**

57% of members **did not know how much their organisation spends on R&D and innovation**

Only **35%** of members said their board had the **right skills and experience** to assess both the **ethical and practical implications of modern technology**

Executive summary

About the study

The Australian Institute of Company Directors (AICD) and University of Sydney Business School have collaborated to undertake a study into the approach of Australian boards to innovation.

The study comprised an AICD member survey, interviews with directors and chairs, and an extensive literature review to compare Australian directors with their international counterparts. Except where noted, the study did not find significant sectoral differences in AICD member survey responses.

What the study found

While Australian directors accept the importance of innovation to their organisation's strategy, too often competing priorities, limited resources, and a lack of awareness of the need for change means the topic does not receive the urgent attention it deserves. Key findings from the study include:

Finding 1: Australian directors recognise the importance of innovation, but more needs to be done to prioritise its delivery

· Australian boards play a key role in fostering, driving, and monitoring innovation – but there remains a significant gap between strategy formulation and strategy implementation.

· Comparatively, directors' responses indicated Australian boards are not prioritising innovation or disruption risks to the extent seen in overseas boardrooms, suggesting Australian boards underestimate looming strategic risks.

· Directors identified key barriers to innovation as: human talent shortages; limited financial resources; and a focus on short-term financial performance. Directors see Australia's regulatory environment as contributing to a risk-averse corporate culture.

Finding 2: Australian boardrooms have low innovation and digital literacy levels

· Australian boards lack critical technical and innovation skills, and need to increase access to specialist advice. More must be done to broaden the director talent pool to include individuals with science and technology backgrounds, as well as bringing in stronger international experience.

· While boards can take steps to address these specialist skills gaps by, for example, establishing a specialist committee or advisory panel, it remains each director's responsibility to understand how technology will impact their organisation.

Finding 3: Board-Executive collaboration leads to better performance

· Boards that collaborate with their executive team to set and oversee an organisation's innovation strategy are much more likely to realise their innovation objectives. This includes ensuring innovation features regularly on board agendas.

Recommendations for boards

The findings of the survey, interviews with directors, and literature review pointed to key practical steps boards can undertake to ensure innovation is prioritised, and its outcomes delivered:

1. **Lift directors' technology and digital literacy.** Innovation requires a clear mindset and focus. It also requires shared experiences amongst board members rather than allocating responsibility to a "tech" person on the board. It is each director's responsibility to make informed decisions on the proposals put forward by the executive, and, where necessary, to lift their level of digital and technological literacy. Directors do not need to be technical experts, but they must be able to understand how key technological developments will impact their business. Innovation should form part of directors' program of continuing education.

2. **Set clear expectations of management regarding calculated risk-taking to drive innovation.** This is fundamental to fostering a culture that allows innovative ideas to surface, be tested, and then implemented promptly. This includes rewarding successes and failures and encouraging continuous learning. True innovation exists by learning from failure. It is the board's role to set clear expectations of the executive regarding what calculated risks they are expected to take. In some organisations, this might require the board re-evaluating the organisation's risk appetite entirely.

3. **Develop a shared language with management, and clear narrative for investors/members on innovation.** Directors and management should clearly distinguish incremental innovation from disruptive innovation. Innovation generates growth but requires acceptance of risk-taking. Directors should support management in balancing continuous improvements to current processes and products, while also investing in products and services that will become available in a five to ten-year horizon. Agreed language and a clear narrative will set expectations for the executive team, broader workforce, members/shareholders, and other stakeholders.

4. **Ensure innovation features regularly on boardroom agendas.** Boards should assess how their innovation strategy is being realised and what are the key obstacles to implementation. Having regular conversations on innovation via periodic agenda items, can help make innovation a more mainstream boardroom topic. Governance arrangements should be reviewed to determine whether formal board committee or advisory panel structures, drawing on outside experts, would help organisations achieve their innovation goals.

5. **Establish a budget and executive incentives for long-term innovation.** If innovation is to become a priority, boards need to assign time and a budget for it. This assists the executive team to prioritise initiatives and offer regular visibility of innovation projects. Similarly, performance and remuneration frameworks need to be re-calibrated such that innovation, including innovation with longer horizons, is encouraged within the organisation.

Context for the study

Developed in partnership with the AICD and the University of Sydney Business School, this study provides a first, in-depth look into innovation in Australian boardrooms across all sectors.

Innovation is a fundamental element of today's economy, and a key contributor to the wealth and well being of all Australians. From driving medical advancements through to creating stronger and more competitive businesses, innovation takes what we do now, and creates something new and hopefully better – delivering a continual series of enhancements to the world in which we live.

For Australian organisations, innovation is being driven by consumer needs, and the disruption innovation itself creates – whether that be through technology, evolving business models, or shifting regulatory or geopolitical changes. For a few, it is the driving force behind everything their organisations do.

At a time when Australia's record period of economic growth appears under threat, it is opportune to examine how the director community is approaching innovation.

Slowing economic growth and stagnating productivity

In the early part of this century, real economic growth in Australia achieved an annual average pace of a little over three per cent in the years before the Global Financial Crisis. Since 2010, annual GDP growth has been slower, running at around 2.7 per cent. More recently, growth has been slower still, dropping to below two per cent in the second quarter of this year.

Part of that slowdown has been attributed to a more challenging global economic environment. And part of it is the product of a domestic household sector that has been struggling with low wage growth, high levels of debt and – until recently – falling house prices. But the growth downturn is also reflected in a lacklustre labour productivity performance, which unless reversed,

bodes poorly for the medium-term outlook. Since 2011-12, annual growth in labour productivity has averaged just 1.2 per cent, or about half a percentage point below the long-term average. And in the past few years, labour productivity has struggled to grow at all.

So how is Australian innovation performing? Sluggish productivity growth suggests there may be grounds for concern, but there are other indicators to consider. Data from the Australian Bureau of Statistics indicates the share of Australian businesses undertaking innovation had risen to almost half of the total by 2018, up from 45 per cent in 2008. At the same time, however, expenditure on Research and Development (R&D) as a share of GDP has fallen in recent years and Australia's R&D intensity is below the OECD average. Recent international benchmarks such as the Global Innovation Index 2019, co-published by the World Intellectual Property Organisation, and the 2019 Bloomberg Innovation index suggests Australia needs to better prioritise innovation if we are to remain competitive.

Research Approach

This research aims to build a deep and nuanced understanding of the conversations about innovation in Australian boardrooms. It looks at how boards consider innovation from a strategic perspective and how they monitor the risks taken by executives.

This report includes quantitative data extrapolated from the survey results, as well as quotes drawn directly from interview transcripts. We have omitted personal and career data to ensure interviewees are not identified in quotes, unless aggrement was provided.

The results were coded for analysis using software (R). The survey data is presented only in aggregate form, with no identifiable information about individual respondents.

Further detail on the research methodology is outlined in Appendix 1.

658 members of the Australian Institute of Company Directors (AICD) responded to the survey. The survey questions focused on the importance, or otherwise, of innovation for boards, the discussion (or absence of discussion) of innovation at the board level, and the potential barriers to innovation.

Member survey

The respondents comprised of males (61 per cent) and females (38 per cent). A majority occupied non-executive board direction positions (51 per cent), and respectively 22 per cent, 11 per cent, and 9 per cent of the respondents were board members acting as chair, executive directors, and managing directors and CEOs. The remaining 7 per cent occupied other roles.

A significant proportion of the surveyed board members were in not-for-profit organisations (45 per cent), followed by private (28 per cent) and publicly listed (13 per cent) companies. Lastly, the public sector represented 11 per cent of the respondents, and other company structures represented 3 per cent of the respondents. Sectoral response rates were similar to other AICD surveys.

Nearly half of the respondents' organisations generated annual revenue during the past financial year of less than $10 million (44 per cent). 29 per cent of organisations had at least $10 million but less than $100 million, a quarter had at least $100 million.

The most represented industry by our respondents was health care and social assistance (19 per cent), followed by not-for-profit (14 per cent), financial and insurance services (9 per cent), education and training (7 per cent), and professional, scientific, and technical services (7 per cent). Other industries also represented by survey respondents were mining (4 per cent), information media and telecommunications (3 per cent), manufacturing (including automotive) (3 per cent), electricity, gas, water, and waste services (3 per cent), agriculture, forestry, and fishing (3 per cent), construction (3 per cent), arts and recreation services (2 per cent), and emerging industries and high tech (2 per cent). The remaining respondents (2 per cent) identified no industry.

1%
NT

14%
QLD

9%
WA

7%
SA

25%
NSW

7%
ACT

28%
VIC

4%
TAS
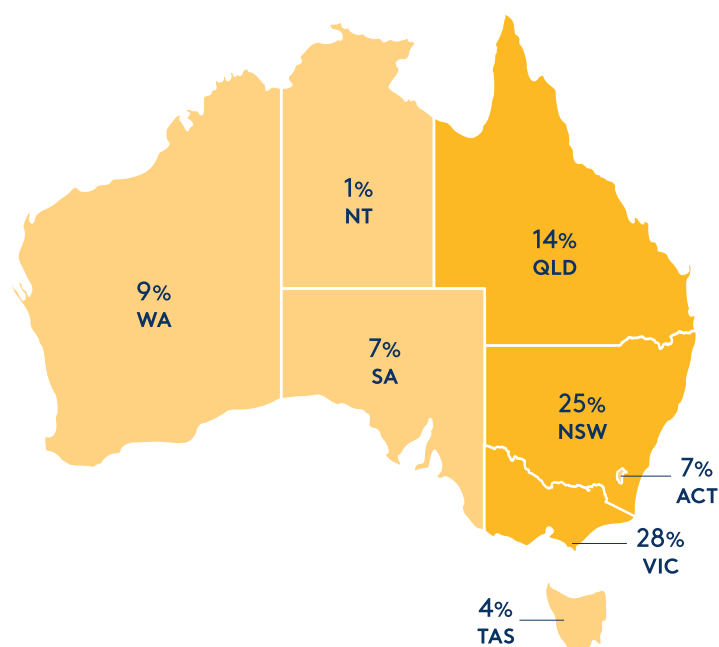
Director interviews

Informed by a review of the academic literature on the role of the board in innovation, the interviews identified insights for further analysis about innovation in Australian boards.

Interviewees were recruited via an email for expressions of interest in the study sent to members of the AICD. On responding to the email, interviewees were sent information about the project and a consent form, following the University of Sydney Ethics approval guidelines.

Interviews of between 45 and 60 minutes duration were undertaken between July and August 2019, either in person or by video conference. Interviews followed a thematic and semi-structured protocol. A total of 20 directors and chairs were interviewed.

Interviews were recorded and transcribed, then coded to extrapolate key themes about if and how innovation is being discussed by Australian boards.

FINDING 1

Australian directors recognise the importance of innovation, but more needs to be done to prioritise its delivery

Respondents to the survey and interviews with directors indicated a strong appetite for innovation. It formed a key part of their strategic planning, and it was broadly believed innovation creates value for their organisations.

While three quarters of respondents said they have integrated innovation into their strategic planning, for more than half of boards there is a lack of adequate follow-through. This suggests that more can be done to ensure boards maintain their innovation momentum beyond setting an initial strategy. This includes ensuring innovation strategies are regularly reported on, that innovation (or lack of innovative action) is captured in risk registers, and that an innovation lens is applied to all board agendas.

If boards are to maintain an equal focus on the past and the future, directors and their executive teams should consider how compliance and performance focused topics are balanced on meeting agendas.

Boards need to balance compliance and performance on their agendas

When examining how innovation features on Australian boardroom agendas, respondents saw innovation as a key part of their planning, with 75 per cent indicating their organisation has an innovation vision or innovation features prominently within their organisation's strategic plan (Exhibit 1).

Exhibit 1: Does the organisation have an innovation vision and/or does innovation feature prominently within the organisation's strategic plan?

Innovation features prominently within the organisation's strategic plan — 52%

The organisation has an innovation vision — 23%

The organisation does not have an innovation vision and innovation does not feature prominently within its strategic plan — 24%

Don't know — 1%

n = 476
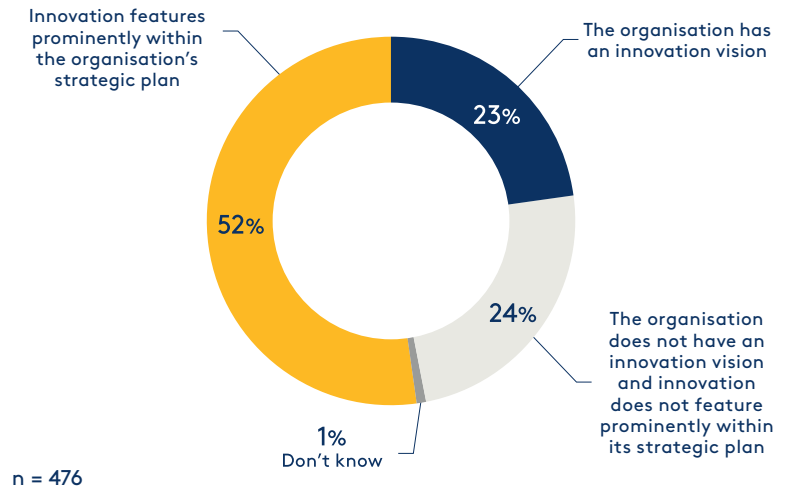
Innovation on the board agenda

Positively, 39 per cent of Australian boardrooms have innovation as an ongoing agenda item (Exhibit 2), 61 per cent of respondents said the quality of innovation agenda items was comparable with other agenda items, and 41 per cent said boards had taken specific steps to broadly elevate innovation to the boardroom for discussion as part of their regular agenda items. 11 per cent said they had set specific processes in place for innovation to be featured as a stand-alone agenda item for discussion at each meeting.

Broadly speaking, the survey found innovation features very regularly in almost half of Australia's boardroom agendas and discussions, and more so when put in the context of strategic planning.

Exhibit 2: In the past three years, how often is innovation (broadly defined) listed as an agenda item for your board to consider?

4%
Don't know

Never been an agenda item

17%

Ongoing agenda item

39%

40%

Occasional agenda item
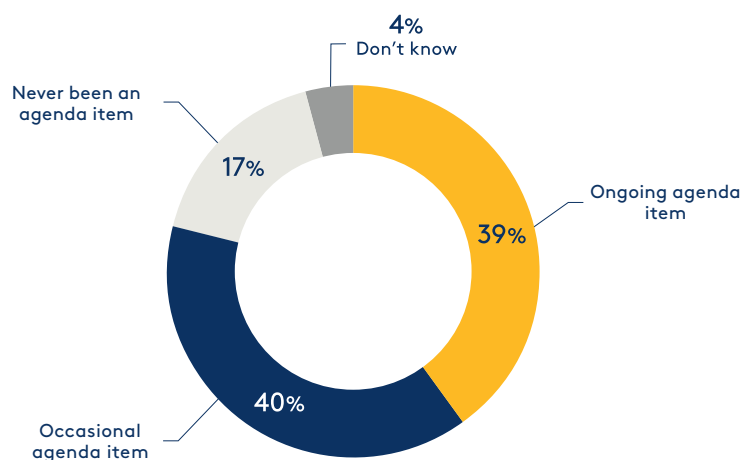
n = 476

However, 40 per cent of respondents said innovation was only an occasional agenda item, 17 per cent said innovation has never been an agenda item, and 23 per cent said the quality of innovation agenda items was not comparable with other agenda items. Compounding this, over a quarter of respondents (27 per cent), said boards had taken no action to elevate innovation to the boardroom for consideration, and another 21 per cent said it was requested irregularly or as needed.

These responses suggest that while there is strong appetite for innovation initially, that momentum seems to be lost over time for almost half of survey respondents.

> **Every board should be familiar with the saying 'innovate or die' and 'if you're not going forward you're actually going backwards'**
>
> **– Member comment[1]**

Risk-averse corporate culture

The fact that half of Australian boards are irregularly looking at innovation suggests other external pressures are shaping board agendas. Factors such as shifting government regulation and policy, and increased scrutiny of director activity were apparent in both the survey and within interviews. One senior director noted they believed *"The pendulum has swung too far in favour of governance at the expense of creating additional value"* when discussing boardroom agendas.

This focus on risk and compliance activities may have been driven by greater regulatory complexity over recent times, as well as the increased incidence of royal commissions (seven in twenty years with a governance perspective) which may have contributed to a more risk-averse corporate culture.

The AICD Director Sentiment Index (DSI) results over recent years support this conclusion. DSI results for the first half of 2019 showed 70 per cent of directors perceive there to be a risk-averse decision-making culture on Australian boards, whereas only 12 per cent of directors disagreed with that statement.[2]

According to the DSI, 30 per cent of directors believe the reason there is a risk-averse decision-making culture on Australian boards is due to an excessive focus on compliance over performance, followed by pressure from shareholders for short-term returns at 21 per cent.

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[1] Member comments are sourced from the open-ended questions 29 & 30 from the survey. The comments are reported anonymously.

[2] See here: https://aicd.companydirectors.com.au/advocacy/research/director-sentiment-index-first-half-2019

The view that there is a risk-averse culture on Australian boards has been a consistent theme over recent DSI indices (69 per cent in 2018/2; 72 per cent in 2018/1; 76 per cent in 2017/2; 70 per cent in 2017/1), suggesting a need for the underlying causes to be addressed in order for innovation to be given greater priority.

Where should innovation sit on the board agenda?

During this innovation study, when asked where on the board agenda innovation should feature, respondents expressed a wide range of views. 36 per cent of the responses said as part of strategy and risk, 29 per cent said innovation should be viewed as the new normal way of governing a business, 19 per cent said just in strategy, 8 per cent said it should be left to a board committee, and 6 per cent said it should be part of risk. Only 1 per cent said the board should not be responsible for innovation.

Innovation committees

The lack of innovation-focused board committees was a key finding of the study. Despite acknowledging the importance of innovation to their organisations, and unlike other critical areas such as audit, risk, people/remuneration, Australian boards seem reluctant to create board committees that can help drive the innovation agenda within organisations.

Creating such committees may help with elevating the discussion within the organisation, and allow for more effective oversight of the executive team's efforts to implement the agreed corporate strategy. It would also create regular reporting discipline on innovation matters, encouraging a continual pipeline of potential initiatives for board consideration.

Similarly, a recent UK study confirmed that Australian companies are not alone in rarely utilising board-level innovation committees, despite regularly referring to innovation in corporate reports (Bolger et al., 2019). Analysis of the FTSE 350 found that not one company had a specific innovation committee and only 2.6 per cent had a science or technology committee.

> ## Sometimes a specialist sub-committee with the right skill sets is better for identifying company needs and researching them for the board to consider
>
> **— Member comment**

Innovation lens crucial

While interviews with directors did not identify a specific place for innovation on board agendas, directors did express a strong belief that an innovation lens was needed across all board agenda items, and where possible, integrated into the organisation's overarching goals to ensure regular assessment.

For example, Taylors Wines has taken specific steps to promote innovation, and subsequently, their overall competitiveness. Innovation is a key tenet of their organisation's mindset and culture, and also a regular point of assessment within their boardroom agendas.

By integrating innovation into the fundamental values of Taylors Wines, innovative behaviours are not just rewarded but drive their organisation's performance – and subsequently become a strong focus of boardroom discussion.

"We have six core company values: respect and recognition, performance and partnership, and innovation and integrity. We like to reward people that are displaying innovation as a value. Every quarter we have recognition awards internally and people that are displaying those company values are highlighted and celebrated. So, while innovation is one of the six, it's probably the one that's cited most within the business when people are doing things differently and they stand out."

Mitchell Taylor FAICD
Managing Director, Taylors Wines

Innovation culture

Boards, as part of their oversight role, should be actively looking at what kind of innovation culture exists within their organisations, and whether it aligns with the organisational strategy and agreed risk appetite. The AICD's recent guide to governing organisational culture highlights some questions directors can ask to ascertain what innovation culture exists, such as percentage of R&D spend and comparison with industry peers, how concentrated decision-making is within the organisation, and whether the organisation has a sufficient diversity of skill set, experience and background in its workforce to remain competitive.

Of course, the greatest contribution that the board can make to building a more innovative organisational culture is by prioritising the issue and holding the executive to account on delivery. The frequency, quality and nature of boardroom discussion of innovation will set the tone throughout the organisation on how innovation is valued.

Boards should actively get involved in setting the culture of innovation. The values of the organisation should be revisited to achieve this

– Member comment

Importance of R&D spending

The importance of ensuring innovation was funded and resourced appropriately from the board level down was prominent in interviews with directors. However, 57 per cent of respondents to the survey did not know what percentage of their organisation's total expenditure was allocated to R&D and innovation activities (Exhibit 3). This suggests over half of directors are not discussing innovation implementation at the boardroom level. It also suggests Australian boards are not as focused on their reinvestment strategy as their global competitors are, who are investing at scale to increase reach and market share.

The survey results should be viewed in context. Australia's total Gross Domestic spending on R&D (GERD) is currently ranked 21st within the OECD. The Innovation and Science Australia 2030 plan "Prosperity through Innovation", found that the contribution of Business Expenditure of R&D (BERD) was 1.01 per cent of GDP. The global trend is for national BERD growth whilst Australia's has fallen. This sees Australia's investment levels below countries such as South Korea, Israel, Sweden, Denmark, Finland, Iceland, Norway and Singapore.

Allocating resources to innovation is key

This highlights the need for organisations to focus on reinvestment, and the importance of directors working with executive teams to not only set innovation strategies, but to ensure necessary resources are allocated to deliver strategic outcomes. Understanding the capacity of the organisation to innovate, or not, should be central in both strategic planning and risk monitoring.

Exhibit 3: Over the past three years, what percentage of the organisation's total domestic expenditure has been dedicated to R&D or other innovation activities?

43%

57%

■ Know   ■ Don't know
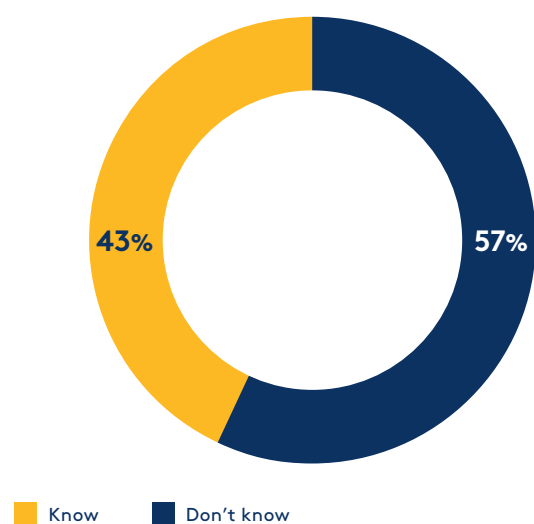
n = 470

Mid-term innovation vision

When asked over what time-frames organisations planned to realise the outcomes of their innovation activities, survey respondents indicated a focus on delivery over the mid-term. Few are focused on the immediate future or had a longer-term vision.

In total, 48 per cent of respondents said their organisations intended to realise their innovation goals in the mid-term (3-5 years), 27 per cent said they would realise their innovation ambitions within one to two years, and 4 per cent of respondents indicated they would realise their innovation goals within one year (Exhibit 4).

Innovation should be adopted as part of a firm's profitable long - term growth, not as a means unto itself

– Member comment

Critically, only 4 per cent had a long-term (6-10 years) plan to realise their innovation. Positively, 17 per cent of respondents said their organisation views innovation as an ongoing activity.

Exhibit 4: Over what timeframes does the organisation plan to realise its organisational strategy or innovation goal?

4% — Less than 1 year
27% — 1 - 2 years
48% — 3 - 5 years
4% — 6 - 10 years
17% — Innovation is an ongoing activity
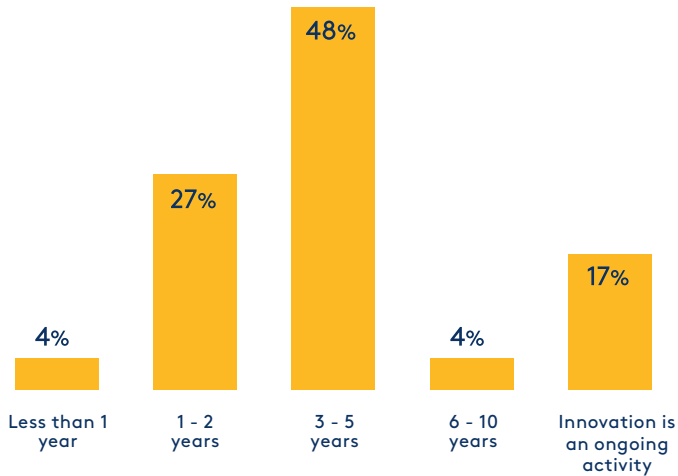
n = 356
*The question was only asked of respondents who said that their organisation had an innovation vision or that innovation featured prominently within their organisational strategy (Q13).

Only 13 per cent of respondents of listed companies said innovation is an ongoing activity. This was lower than for not-for-profit (NFP) and private companies at 16 per cent. Moreover, NFPs (26 per cent) are aiming to deliver their innovation vision within a two-year timeframe, compared to publicly listed (almost 35 per cent) and private companies (39 per cent) (Exhibit 5).[3]

Exhibit 5: In what timeframe is the innovation vision going to be realised (by sector)?

Public Sector — 15% | 59% | 27%
Publicly Listed — 38% | 50% | 13%
Not-for-Profit — 26% | 58% | 16%
Private — 39% | 45% | 16%

■ 2 years or less ■ 3 years or more ■ Innovation is an ongoing activity
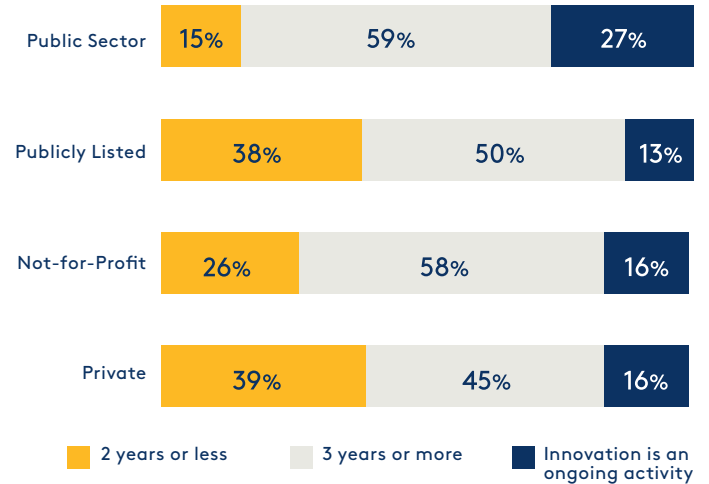
n= 476
* Figures may not add to 100 due to rounding

Innovation should be BAU

Interviews with directors highlighted the importance of creating a pipeline of new ideas through to the board for consideration. Ken Dean FAICD, Chair of Mission Australia, discussed this subject as "innovate, incubate and integrate". This approach aims to embed innovation as a central part of the organisation's business as usual operations.

[3] To validate the robustness of survey results, we ran further tests for respondents of organisations that said they have had one product/ service innovation. This data set comprised 49 directors/organisations of different size organisations: 37 per cent have a timeframe of less than two years, 45 per cent three to five years, 6 per cent more than five years and 12 per cent said that innovation is ongoing. Regardless of the organisation's level of focus, a medium timeframe for the organisation's innovation vision was most prevalent.

"The stages are called innovate, incubate, and integrate. It works by each work group and team having a portfolio of things in each of these categories. For everything that gets to integrate, you need at least three things that you're incubating. And for everything that's in the incubator, you probably need a pipeline of three good ideas that people are coming up with in order to fuel that"

Ken Dean FAICD
Chairman, Mission Australia

Global analysis suggests that innovative activities should be considered in the short, mid and longer-term planning horizons; specifically, iterative developments or goals set for the short-term, expansion plans and value generation in the mid-term, and longer-term transformation of new products and services planned for the longer-term.

Indeed, organisations need to keep innovating their core activities and satisfy current clients, while ramping up emerging initiatives to expand into new markets and geographies. Ultimately, they need to experiment in new domains that, in the long-term, may replace existing core functions.

Innovation is about asking how are we going to be relevant in 10 years' time, so in 10 years' time, you're planning for the next 10 years, not playing catchup

– Michael Masterson
Director, Cure Brain Cancer Foundation

Theoretical frameworks to assist with innovation

Some of the directors that we interviewed discussed frameworks, such as the Three Horizons of Growth (Baghai et al., 2000), as useful in providing clarity on an organisation's portfolio of innovative initiatives and to guide resource allocation. Classifying innovation according to when current initiatives are ripe has been adapted in recent studies looking at resource allocation "golden ratios".

As a rule of thumb, research suggests companies should allocate:

· 70 per cent of their resources to the Core, that is, optimising existing products for existing customers;

· 20 per cent to Adjacent Initiatives, that is, expanding from existing businesses into "new to the company" businesses; and

· 10 per cent to Transformational Initiatives, that is, developing breakthroughs and investing things for markets that don't yet exist (Nagji and Tuff, 2012).

Further, empirical research confirms organisations that are able to manage the trade-off involved in investing both exploitative (e.g. to serve current customers' needs) and explorative innovation (e.g. serve emerging customers and markets) are better placed to achieve superior performance in comparison to organisations that emphasise only one of the two (Junni et al., 2013). Too much emphasis on exploitative activities will impede an organisation's ability to adapt to changing environments and growth will suffer. Too much emphasis on exploratory activities will cause short-term profits to suffer.

In a very entrepreneurial entity undergoing massive growth, initiatives are mapped according to a framework "Adopt, Adapt, Learn and Grow". Amanda Heyworth FAICD, Non-Executive Director, Ingenia Communities Group Ltd recognises that strategy is both emergent and planned (e.g. Mintzberg and Waters, 1985) and an organisation needs to be agile to make the most of it. She says:

"Ingenia Communities made a deliberate strategic decision to move from traditional retirement villages to land lease communities. The way the team went about doing that was exemplary. We did a lot of research and started small. Along the way, we discovered that running tourist parks alongside the land lease communities was a great opportunity. We've got both planned and emergent strategy, and a capability amongst both the management team and the board to pick up and run with the good ideas and to identify and fix anything that is not working. Moreover, we've been capital constrained because we've grown so fast, so we've being shrewd about piloting things, doing things capital-light, getting them working, and then making the case to the investors to scale them. So that's lean start-up thinking in a property company, even though the company probably wouldn't use that language."

Supporting the argument for a stronger long-term focus, a recent global study of over 5,000 directors found boards who prioritise innovation are more likely to have systems in place to create long-term value, compared with organisations that are primarily focused on achieving short-term results (Cheng and Groysberg, 2018).

Barriers to innovation

Respondents highlighted access to talent, capital and time to make informed decisions as challenging the realisation of their organisation's innovation ambitions (Exhibit 6).

Access to talent

When asked about the challenges directors faced in delivering their innovation ambitions, 31 per cent of responses said access to talent was their greatest challenge. When asked to expand on this, directors highlighted the need for specialist skills and talent to lead on innovation activities. They also discussed how it was difficult to engage and motivate staff on innovation - presumably, due to fear of the unknown and perceived threats to job security created by the status quo being challenged.

The board must be proactive, engaged and with a vision that innovation becomes part of the organisation's DNA

– Member comment

Short-termism

Following access to talent, 28 per cent of responses said they lacked the financial resources to invest in long-term innovation projects, and another 19 per cent said a focus on short-term financial performance was hindering their ability to achieve their innovation goals. In interviews with directors, the problem of "short-termism" was also repeatedly raised as lying at the heart of the innovation challenge.

Exhibit 6: What are the barriers challenging the effective implementation of innovation activities within the organisation?

Barrier	Percentage
The human talent to drive innovation activities	31%
The financial resources to invest in long-term innovation projects	28%
A focus on the short-term financial performance	19%
The organisation struggles to make and implement strategic decisions quickly enough to keep with the pace of change impacting our industry	10%
Support from the board	4%
Support from the executive team	4%
Other	4%

n = 471, items = 983   *Respondents could select up to three answers

An incentive to manage for short-term profit will almost always result in underinvestment in innovation and a more incremental approach to research and development. This imperils the long-term financial health of the company and places future earnings at risk.

The situation in Australia is not unique. Looking at executive incentive structures (financial and non-financial) across the largest 350 companies on the London Stock Exchange, a recent study found pay was heavily weighted towards short-term financial performance and heavily weighted against measures that encourage long-term innovation (Bolger et al., 2019). The authors suggest that this mismatch between incentives and organisations' aims of building long-term value may be attributed to the lack of objective measures to assess innovation (as compared with financial metrics which are consistent, audited and comparable over time).

Addressing "short-termism" is a matter partly within the control of directors. In interviews, all directors acknowledged that Australian boards need to take a stronger role in helping their organisations balance the need to deliver short-term results with having a long-term vision.

Incentive and tenure are important factors for boards to consider. The average tenure of a CEO is around five years whereas the tenure of a director is about nine years. If we look at innovation as a long-term endeavour rather than just continuous improvement, there is a limited personal incentive for a very capable CEO to embark on transformation programs unless benefits can be achieved within a short time-frame.

Accordingly, boards may wish to re-examine remuneration structures to ensure that they create the incentives necessary to achieve their innovation goals. Part of this will require, at least in a listed company context, engagement with the investor community. Currently there is limited evidence that investors are demanding companies make innovation a higher priority.

Communication of strategy is key

Directors also need to ensure that the communication strategy of their vision is robust and clearly communicated, both by themselves and management. A suggestion that came from several directors was that boards should create a narrative to highlight the importance of investments for transformational innovation, even if that means reinvesting capital that is currently returned to shareholders as dividends.

This shift in approach may need to be done as part of a broader conversation on building sustainable, long-term value for shareholders, and the need to take greater risks to achieve it.

In interviews, some senior directors suggested that Australia's record period without a recession may have helped breed an expectation that growth is inevitable and capable of being realised with minimal risk.

Struggle to keep pace with technology and change

Although only 10 per cent of responses indicated directors are struggling to make and implement strategic decisions at a pace with which their industry is moving, respondents did express concern about technology and the pace of change. The fact that only 10 per cent of respondents indicated concern with the pace of change, may suggest looming strategic risks are not well-understood or are being under-estimated.

Further, directors commonly said making decisions at the same pace with changing technology and customer needs was challenging. They also expressed concerns about learning how new technologies worked (e.g. blockchain, AI, robotics), how best to plan for their use, and how to assess their potential impact on organisations.

Directors also expressed strong concern about shifting government policy and regulation leaving little time to focus on innovation as part of a long-term value creation strategy. This was particularly relevant to health and social services industry respondents.

Disruption risks feature half as much as traditional risks

When looking at risk registers, disruptive risks featured half as much as traditional risks. Strategic, financial and operational risks featured most prominently in the survey followed by technology, commercial, and workforce risks. Social and environmental risks were least prominent (Exhibit 7).

What are disruptive risks?

Disruptive risks included the ability to scale and respond to disruption of current products and services, reskilling and building the capability of workforces to meet future demand, and the ability to respond to shifting consumer demands.

> The board's role in innovation is paramount. It sets the tone for the appetite and expectations around innovation and disruption. Generally, boards need to be more focused on offensive risks such as a lack of innovation in the organisation
>
> **– Member comment**

Research suggests disruptive risks may be prioritised at a higher rate internationally than on Australian board agendas.

An international study of 614 global board professionals by Deloitte (Rygaard-Hjalsted et al., 2016), found that 35 per cent of respondents included radical innovation (AI, advanced robotics, nanotech, new business models) as a bulleted point in their agenda on a regular basis. Of those companies, 35 per cent have had innovation as an agenda item since 2012, and an overwhelming 68 per cent said this has resulted in executable actions. This stands in contrast to the results of this study which indicated a more ad-hoc approach by Australian boards.

Exhibit 7: What are the top five risks in the organisation's risk register to be managed over the next three to five years?

Risk	Percentage
Strategic risks including a failure to identify the best strategies and objectives for the organisation, as well as failing to execute those strategies.	16%
Financial risks presented by changing markets, credit or liquidity issues, shareholder activism, and/or risks to key business functions.	15%
Operational risks including threats to business continuity, damage to brand, equipment and assets, and/or workplace health and safety.	14%
Regulatory or political risks presented by legal or regulatory compliance or changes, and/or political uncertainty and shifting geopolitical landscapes.	12%
Technology risks including ability to scale and respond to disruption of how your current products and services are accessed and used by consumers and stakeholders.	10%
Security risks presented either through threats to your personnel, physical facilities, or cyber security environments.	7%
Commercial risks including disruption to value chains, threats to data/intellectual property, intensified global competition and/or platform domination/monopolies.	7%
Disruption and innovation risks including emerging business models in your industry, shifting consumer trends and behaviours, and/or lack of innovation activity within the organisation.	7%
Workforce risks including the displacement of workers by technology, upskilling and training, and/or talent attraction and retention.	6%
Social risks presented by adverse impacts a company may have on human society and consequent systemic risk or regulatory responses (e.g. risks associated with modern slavery, aiding human conflict, facilitating crime or corruption, mistreating employees, customers or suppliers, or harming the local community).	3%
Environmental risks including adverse impacts a company may have on the natural environment, or that the natural environment may have on a company's activities (including climate risk).	2%

Legend:
- Strategy and Governance
- Innovation and Technology
- Commerce and Operation

n = 472, items = 1945   *Respondents could select up to five answers.

Innovation generates growth but requires risk-taking

Director interviews emphasised that growth and risk go hand in hand, and innovation is a way to generate future growth. The critical question is whether Australian organisations are taking enough risks to generate future growth and to ensure their continued competitiveness (and in some sectors survival) in the face of major technological innovation.

Risk should be viewed positively

A theme emerging from discussions with directors was the need for risk to be viewed more positively in Australian boardrooms. Increased risk-taking comes with opportunity, and must be accompanied by a greater acceptance of failure. Given boards play a critical role in setting a tolerance level for risk, and in turn influence not just how risk is managed, but the culture in which risks are viewed, directors play a pivotal role in leading that change.

Clearly and consistently communicating to the executive team, investors/members, and other stakeholders as to why greater risk-taking is necessary and desirable is an important role a director can play in changing behaviour.

"Innovation is both an attitude and a process. Innovation is a skill set of openness, of questioning, of willingness to push boundaries and not accept the status quo. You need creativity, but you also need to have metrics and systems working. Innovation, to me, is this constant pursuit of improvement."

David Thodey AO FAICD

When asked to identify the drivers for innovation in their organisations, 13 per cent of respondents identified technological disruption, 10 per cent said evolving business models and increasing local competition, and 13 per cent said regulatory and geopolitical changes.

If Australian boards are to oversee more competitive and innovative organisations, they must discuss the compliance and performance aspects of governance in equal measure. That includes ensuring innovation, and the risk of not innovating, is actively considered when assessing the organisation's strategic goals, and the risk inaction may present.

History is littered with examples of organisations that failed to innovate, and in-turn had their business models disrupted from a previous position of market power – Kodak, Nokia, Blockbuster and Xerox to name a few.

Innovation is an experiment and therefore you have to accept the risks as well as the benefits. Risk-averse boards stifle innovation. Also, innovation takes time, often boards demand 'instant results' which precludes or sabotages innovation

– Member comment

Australian boardrooms have low innovation and digital literacy levels

The need for a wide range of voices in Australia's boardrooms is critical - now more than ever. Understanding developing technologies, evolving business models, and global markets are essential skills boards must either maintain or have ready access to if their organisations are to remain globally competitive.

This survey found Australian boards lack a strong cohort of skilled scientists, technologists, and directors with international experience. Given the rate of technological advancement and increased global competition, these are two areas where Australian boards would benefit from skilled and experienced director viewpoints.

This doesn't necessarily mean having a "tech" person on each board, but does mean boards must address any knowledge gaps they have to ensure decisions are informed by evidence regarding the risks and opportunities their organisations face.

While boards can take steps to address these skills gaps, such as, establishing a specialist committee or advisory panel, or procuring services to feed essential data into decision-making processes, it remains each director's responsibility to understand how technology will impact their organisation.

Boards lack science and technology, and international experience

When asked what additional skills directors brought to their boards, the study found few had backgrounds in science and technology, and international experience. Even though more had experience in innovation, product development or R&D, it still ranked below more traditional roles. Given the complexity of issues science and technology present, a board member with a nuanced understanding of these areas could provide a valuable viewpoint.

Common director skill-sets

The most common skills respondents said they brought to their boards were strategy (16 per cent), general management (15 per cent), industry experience (14 per cent), and business development, sales and marketing (11 per cent). Only 3 per cent of respondents said they brought science and technology expertise to their boards, and only 3 per cent brought international experience. 10 per cent of the respondents said they provided innovation, product development and R&D expertise to their board (Exhibit 8).

Exhibit 8: In addition to your director responsibility, what additional expertise do you bring to the board?

Category	Percentage
Audit & Accounting	5%
Business Development, Sales & Marketing	11%
Communications & External Affairs	2%
Engineering	3%
Finance	6%
General Management	15%
Human Resources & Administration	3%
Industry experience	14%
Innovation, Product Development & R&D	10%
International experience	3%
Legal	2%
Operations	4%
Science and/or Technology	3%
Strategy	16%
Other	4%

n = 476, items = 1305   *Respondents could select up to three answers.

Skills mix critical

This skills mix should be a point of concern. In a comprehensive study (Weill et al., 2019) of over 1,200 publicly traded companies with revenue over US$1 billion, 24 per cent had "digitally savvy" boards (i.e. having an understanding, developed through experience and education, of the impact that emerging technologies will have on businesses' success over the next decade). The study found those businesses with digitally savvy board members significantly outperformed others on key metrics — such as revenue growth, return on assets, and market cap growth. Interestingly, a cohort of at least three digitally savvy directors was needed to have an impact on performance. It also found boards could help boost digital skills through concerted education and up-skilling of current directors.

A lone innovation voice is not enough

Interviews with Australian directors supported the finding that more than one voice on innovation or technology was needed. Several directors highlighted that an effective board does not just have a technology person in the boardroom that "owns" innovation. The person could be isolated – "a lone voice" unable to challenge board group-think or gain the required traction on technology or innovation matters. Instead innovation needed to be a mainstream part of the board's agenda, with all directors expected to contribute.

Boards must be the focus of innovation themselves; specifically, the need for real gender and ethnic diversity to enforce a more questioning culture, without which the status quo suffocates innovation

– Member comment

A global study of over 5,000 global directors found similarities with the findings of this report. In particular when they asked directors what they found most challenging in their role as a director; 33 per cent of respondents reported they struggled with "keeping on top of new technologies". This proportion was higher for older directors (39 per cent) than for younger directors (27 per cent). Fostering demographic diversity may be one way to address this challenge, however, the study found it was the responsibility of all directors to be familiar with technological developments and how they can impact their organisations (Cheng and Groysberg, 2018).

Similarly, a 2019 study of 365 public company directors supported this finding, with 54 per cent of directors identifying the need for tailored board training and education so directors could form a better understanding of emerging trends and potential impacts to business models. (Corporate Board Members and EY (2019)).

Skills matrices need to evolve

When considering board skills matrices, our study found that boards are struggling to achieve a diversity of technical and innovation expertise. When asked which skills they have recently incorporated in their skills matrix to address current and future challenges, technology, disruption and innovation featured significantly lower than more traditional skills. The survey found only 7 per cent of respondents said product development and innovation were listed in their skills matrices, with the same result for digital disruption. Only 6 per cent listed science and technology or cybersecurity expertise as skills being searched for to meet current and future challenges (Exhibit 9).

These results suggest that skills matrices are relatively static and probably not keeping pace with the rate of technological change facing organisations.

Reflecting a growing awareness of the need for more diverse boards, in a 2019 SpencerStuart survey of 113 US nominating/governance committee members, 34 per cent of respondents identified technology experience as a top priority for board recruitment (second highest priority after female directors, 36 per cent). While looking ahead to the next three years, 38 per cent of respondents nominated technology experience (overall second highest priority after female directors, 40 per cent) and 35 per cent digital/social media experience (fourth highest priority overall).[4]

Exhibit 9: Which of the following skills has the board incorporated as part of its board's skills matrix to address current and future challenges?

Skill	Percentage
Strategy and Risk	19%
Corporate governance/regulatory	17%
Industry experience	16%
Culture	12%
Product development and innovation	7%
Digital disruption	7%
International experience	6%
Science and Technology	6%
Cyber security	6%
Sustainability and Climate change	4%
Other	2%

n = 476, items = 2039   *Respondents could select up to three answers.

Directors need to be 'Future of Work' ready

When asked if directors believed their board held the necessary skills to assess the ethical and practical implications of using modern technologies, 21 per cent of respondents said their board did not have the right skills and experience to assess both the ethical and practical implications of using modern technologies. Another 16 per cent said they could assess the ethical implications, and 22 per cent believed they could plan for the practical implications of using modern technologies.
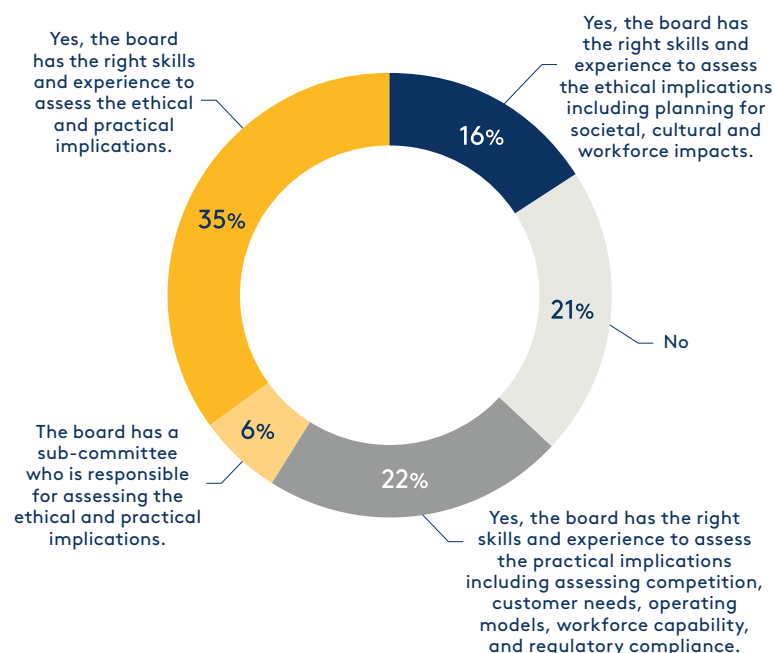
Just over a third (35 per cent) of respondents said their board had the right skills and experience to assess both the ethical and practical implications of using modern technologies (Exhibit 10).

[4] See here: https://www.spencerstuart.com/research-and-insight/nominating-governance-survey-2019?utm_source=LinkedIn&utm_medium=Social

Looking beyond Australia, international data suggests boards globally are struggling to adapt to a rapidly changing operating environment. A 2019 Corporate Board Member and EY study found nearly half of directors "indicated being unconvinced that their boards have the appropriate resources to navigate the disruption caused by emerging technology" (Corporate Board Member and EY, 2019).

Exhibit 10: Does your board have the necessary skill sets and experience to assess the implications that the use of modern technologies present to the organisation, its workforce and society more broadly? (Select one)

Yes, the board has the right skills and experience to assess the ethical and practical implications.
35%

Yes, the board has the right skills and experience to assess the ethical implications including planning for societal, cultural and workforce impacts.
16%

No
21%

The board has a sub-committee who is responsible for assessing the ethical and practical implications.
6%

Yes, the board has the right skills and experience to assess the practical implications including assessing competition, customer needs, operating models, workforce capability, and regulatory compliance.
22%

n=476

Ensuring directors understand the strategic, ethical and practical implications of modern technologies is a core challenge boards will need to grapple with in the context of the future of work, and the rise of the fourth industrial revolution. It is in this context boards will be required to increasingly make decisions that require both emotional and ethical judgements regarding the work of their organisations, their workers, and the workplace more holistically.[5]

For example, Dr Bronte Adams AM GAICD highlighted the critical need for an ethical framework to guide decision making regarding Artificial Intelligence to ensure organisations considered the long-term impacts of its use within organisations.

> It's a real problem, when machine learning vastly outstrips our capacity to learn alongside it, to modify its own algorithms in a way we can't detect, it has the capacity to create extremely adverse circumstances
>
> **– Dr Bronte Adams AM GAICD**
> Director of Innovation and Science Australia

[5] See here: aicd.com.au/advocacy/governance-leadership-centre/external-environment/directors-playbook-the-future-of-work

"We now live in the digital age – the future is here. Therefore, it follows that all directors need to become digitally literate. We must all learn about technology and the implications for business"

Kathleen Bailey-Lord FAICD
ASX100 Company Director

Filling the innovation skills gap

To fill skill gaps, more broadly boards should look to draw on outside expertise. Unicredit, one of Europe's largest banks, has established an innovation advisory board comprised of an eclectic range of individuals to broaden the thinking of the rest of the organisation. The group seeks to lay the foundations for the "bank of tomorrow". They are tasked with identifying how best to revolutionise products and services to cater to customers of today and tomorrow.[6]

When looking at which experts should sit on advisory boards or panels, a Corporate Board Member and Grant Thornton (2019) study of 249 directors in the US found the top three suggestions were, in order, in the fields of: cybersecurity, disruptive innovation, and succession planning. Corporate culture, shareholder engagement and internet of things came next. Similarly, when asked which issues they would like to see more of in future board meetings, at the top of the list was disruptive technologies and innovation, followed by growth strategy and cyber risk.

Technology experts vs up-skilled generalists

The need for specialist technology or innovation roles on boards was a point of contention during our study. While several directors suggested each board member should undertake personal development to enhance their understanding of technology and evolving business models, others highlighted the need for more diverse pool of directors equipped with science and technology skill-sets.

Ultimately, boards will need to determine what is the right composition for their organisation in order to help realise their corporate objectives. For some, drawing on a broader director skill-set may be part of the solution. All directors however will need to think deeply about how they can better understand key technological developments facing their organisation and sector, including through targeted director education and drawing on external expertise where necessary.
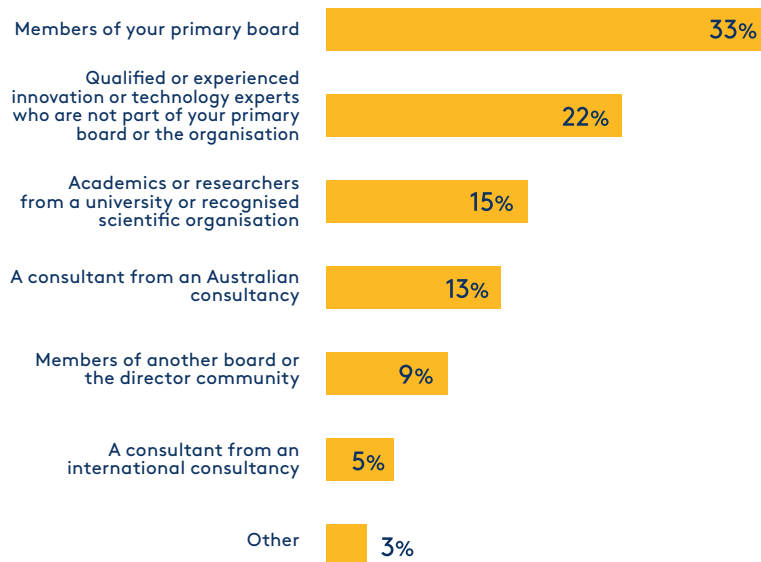
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[6] See here: https://www.unicreditgroup.eu/en/press-media/press-releases/2019/unicredit-creates-transformation---innovation-advisory-board.html

Directors are looking to each other for guidance

When the study examined where boards were seeking advice on innovation and technology matters, it found directors were predominantly looking to each other for guidance, followed by seeking out advice from qualified or experienced experts.

While directors are seeking advice from experts, the fact 33 per cent responded that they would consult with their existing board over seeking advice from experts on specialist subjects, particularly when director digital literacy levels appear low, is an area worth exploring further (Exhibit 11).

Exhibit 11: Who from the following list have you engaged for discussion of innovation or technology related matters?

Members of your primary board	33%
Qualified or experienced innovation or technology experts who are not part of your primary board or the organisation	22%
Academics or researchers from a university or recognised scientific organisation	15%
A consultant from an Australian consultancy	13%
Members of another board or the director community	9%
A consultant from an international consultancy	5%
Other	3%

n = 476, items = 1011

*Respondents were asked to select all the answers that apply.

Collaboration with external parties creates opportunities

A wealth of academic research points to the benefits of engaging with external parties to bring a more nuanced understanding of new technologies and to identify opportunities for integration into strategic and capability planning (Alexiev et al., 2010).

Research also shows that when executives seek out advice from contacts who are likely to offer perspectives on strategic issues that differ from their own, it ultimately enhances an organisation's overall performance (McDonald et al., 2008). Further, research in the manufacturing industry has shown that collaboration with universities and other non-competing partners positively impact the novelty of innovation, especially in early stages of the innovation process, and competitor collaboration has been found to have a positive impact on the commercialisation stage (Stefan and Bengtsson, 2017).

Low engagement levels between business and research sectors in Australia is a part of a longer-term trend that has consistently hindered the nation's standing in international innovation rankings.

Australia ranks 31st out of 126 countries on the Innovation Output sub-index, well below its Innovation Input sub-index ranking of 11th in the Global Innovation Index (GII) cross-country comparison.[7] Australia's relatively low levels of collaboration and weak mobility of knowledge across research and business sectors limits the commercialisation of the world-class research completed by Australian research bodies. This is a known weakness and an area where Australian universities, research bodies and business sectors should focus on improving.

Australian boards could play a pivotal role in addressing this weakness through increased engagement with the research sector to assist organisations to realise their innovation objectives. In particular, partnering with external researchers can help overcome some of the resource and skills constraints that directors believe are currently holding back innovation within their organisations.

FINDING 3

Board-Executive collaboration leads to better performance

Board-Executive collaboration is key to the long-term success of an organisation's innovation ambitions. Those directors who said they believed innovation was a joint activity between the board and its executive reported much higher success rates of innovation activities than those who did not.

This finding emphasises the important role boards play in creating value for their organisations and provides further evidence for boards taking an active role in monitoring and assessing the delivery of their innovation goals.

Of critical importance is the need for boards to make clear to their executive team what their expectations on innovation are, hold them to account on delivery, and support calculated risk-taking.

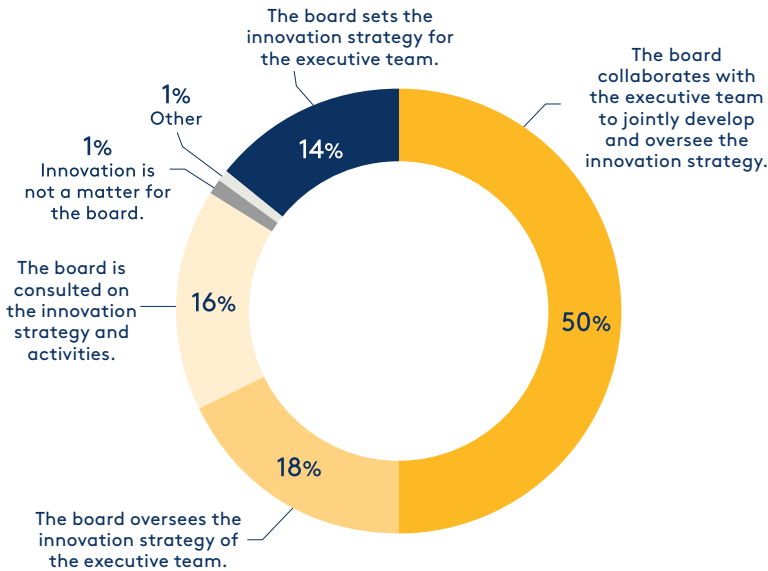### Half of directors believe innovation is a collaborative effort

In the survey, 50 per cent of respondents believed boards should collaborate with the executive team to jointly develop and oversee innovation strategies. Only 18 per cent of respondents believed the board should just oversee the innovation strategy set by the executive team, 14 per cent believed the board should set the innovation strategy in isolation, and 16 per cent believed the board should only be consulted. Only 1 per cent believed innovation is not a matter for the board (Exhibit 12).[8]

This reinforces the earlier findings that a large portion of respondents believe innovation is a core function of director responsibilities. However, there are a divergent range of opinions about the exact role of the board among the director community.

How boards approach those responsibilities will vary depending on the type of organisation, the drivers for change, and the outcomes they hope to achieve. This underscores the importance of boards taking the necessary time to consider what innovation means to their organisation, and what is their role in fostering its growth, and then overseeing its delivery.

[8] The survey used advanced statistical techniques to elicit the actual preferences of the respondents on critical issues. We organised two groups (Exhibit 14a, Exhibit 14b, in Appendix 3). We asked one group to identify what they see as the role of the board in innovation. The majority of responses said that the boards "collaborates" with the executive team in a joint development and oversees the innovation strategy, followed by the belief that the board only "oversees", "is consulted" and "sets" the innovation strategy. To further explore this, we asked another group of respondents to select only one option and compare the sample that could select "all that applies" to the sample that could select only one option. After analysing the two sample separately, we noticed that a greater proportion of respondents prefer the "collaboration" approach to any of the other approaches (from 44 per cent to 59 per cent). The greatest drop is in the role of the board as "being consulted" in terms of innovation strategy. This is clear support for a more active role for the board in participating in innovation (rather than purely being consulted or setting the strategy), which is in line with much of the international research on more active boards in terms of collaborating in strategy setting. More specifically, based on the respondents perception of their role in innovation, half of the boards on Australian companies are value-creating boards. According to a McKinsey Global Survey of over 1,000 board directors, value-creating boards are involved in setting, approving and adjusting the innovation strategy (Kehoe et al., 2016).

Exhibit 12: What do you see as the role of the board in innovation?

The board sets the innovation strategy for the executive team. — **14%**

The board collaborates with the executive team to jointly develop and oversee the innovation strategy. — **50%**

Other — **1%**

Innovation is not a matter for the board. — **1%**

The board is consulted on the innovation strategy and activities. — **16%**

The board oversees the innovation strategy of the executive team. — **18%**

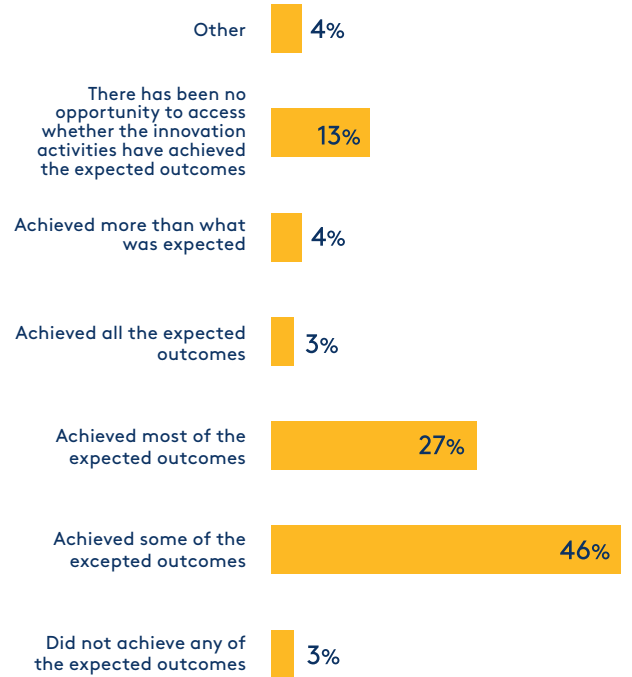n = 476, items = 592   *Respondents could select up to three answers.

Are innovation strategies delivering the outcomes boards expect?

Almost half of directors believed they realised some of their innovation outcomes, with another third saying they achieved most, all or more of the innovation outcomes they set out to achieve. When combined, this means 80 per cent of directors believed that some, if not all of their innovation expectations were met.

Only 3 per cent of directors said they did not achieve any of the expected outcomes, and 13 per cent had not had an opportunity to assess the outcomes of their innovation activity (Exhibit 13).

The responses suggest that innovation has generally yielded very positive results for organisations. Although, the fact that more than a third of respondents stated that realised outcomes had been most, all or more than expected, suggests limited ambition and a relatively conservative approach to risk. This is an area meriting further study.

Exhibit 13: And did your organisation realise the outcomes it was hoping to achieve?

Other — **4%**

There has been no opportunity to access whether the innovation activities have achieved the expected outcomes — **13%**

Achieved more than what was expected — **4%**

Achieved all the expected outcomes — **3%**

Achieved most of the expected outcomes — **27%**

Achieved some of the excepted outcomes — **46%**

Did not achieve any of the expected outcomes — **3%**

n = 473
*Figures may not add up to 100 per cent due to rounding.

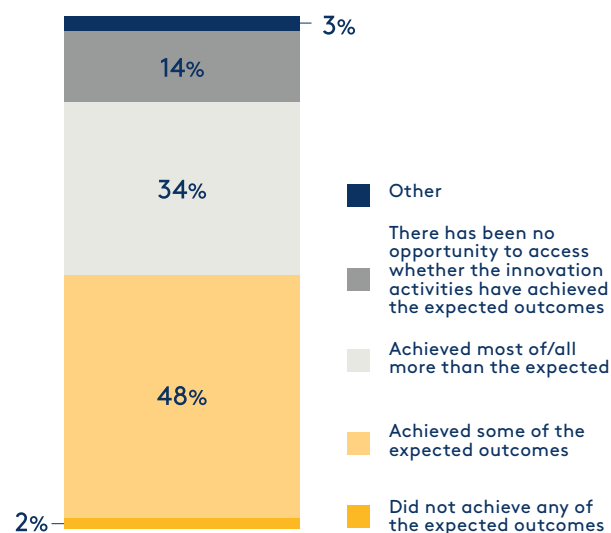## Collaboration with executive team achieves better results

When combined, the two datasets found directors who believe innovation is a collaborative activity between the board and their executive team achieve better results in terms of realising their innovation objectives. A third believed they achieved most of, if not more than, the outcomes they were hoping to achieve, and almost half achieved at least some of their expected outcomes (Exhibit 14).

Further analysis of the survey results supported the finding that boards which dedicate enough time to innovation are likely to achieve better results. Of those boards which allocated enough time to discuss innovation and finalise a decision, 47 per cent said they achieved superior outcomes, compared with 18 per cent for those who did not.

This bolsters the argument that a skilled board which can hold a robust collaborative discussion with their executive team to agree and then oversee innovation activities may yield the best results.

Exhibit 14: The board collaborates with the executive team to jointly develop and oversee the innovation strategy.

And did your organisation realise the outcomes it was hoping to achieve?

- 3%
- 14%
- 34%
- 48%
- 2%

Other

There has been no opportunity to access whether the innovation activities have achieved the expected outcomes

Achieved most of/all more than the expected

Achieved some of the expected outcomes

Did not achieve any of the expected outcomes

The board collaborates with the executive team to jointly develop and oversee the innovation strategy.

n = 291
*Figures may not add up to 100 per cent due to rounding.

Looking more broadly across the two datasets, the impact of collaboration is emphasised. While some success was noted for boards who oversee, are consulted, or set the innovation strategy in isolation, those results are significantly less than those which collaborate with their executive team (Exhibit 15).

Exhibit 15: What do you see as the role of the board in innovation?

Did your organisation realise the outcomes it was hoping to achieve?

	Innovation is not a matter for the board	The board is consulted on the innovation strategy and activities	The board oversees the innovation strategy of the executive team	The board collaborates with the executive team to jointly develop and oversee the innovation strategy	The board sets the innovation strategy for the executive team
Did not achieve any of the expected outcomes	0 per cent	0 per cent	1 per cent	1 per cent	1 per cent
Achieved some of the expected outcomes	1 per cent	10 per cent	9 per cent	29 per cent	7 per cent
Achieved most of/all/ more than the expected outcomes	0 per cent	7 per cent	9 per cent	20 per cent	6 per cent
There has been no opportunity to access whether the innovation activities have achieved the expected outcomes	0 per cent	3 per cent	3 per cent	9 per cent	2 per cent

Other factors that improve collaboration and performance

Importance of robust discussion

A body of research suggests allowing for a robust discussion, such as that seen in collaborative environments, influences the overall success of organisations. The research found that the greater the fact base and the more robust the dialogue, the better the quality of the decision and its ultimate performance (Garbuio et al, 2015). When looking at this same subject in the context of discussing the use of technologies and environmental scanning for megatrends, the Corporate Board Member and EY 2019 study found 57 per cent of directors said briefings from management were important to stay current on megatrends, industry trends, emerging technology and potential innovation inflection points (Corporate Board Member and EY, 2019).

A growing body of research also points towards a strong and vigilant board having a significant impact on innovation (Baysinger et al., 1991; Markman et al., 2001; Zahra, 1996; Zahra et al., 2000) and in a study of 135 Swedish technology-based firms, board strategic involvement has been found to be positively associated with process innovation (Gabrielsson and Politis, 2008).

Increased focus on strategy

International research shows that the 50 per cent of respondents who believe innovation is a collaborative effort may be part of a broader global shift towards boards focusing on, and prioritising how they can create value for their organisations. The research shows that globally boards are actively prioritising value creation agenda items (Huse et al., 2008; Hambrick et al., 2015) and spending more time on strategy.

A McKinsey survey of over 1,000 directors found boards are increasing the number of days allocated to strategy. The study found strategy is being allocated more time than governance, compliance, and risk management combined (Kehoe et al., 2016). The strong focus on strategy by boards is drawn from the belief it creates additional value for their organisations. It found the most ambitious boards put in place a strategic framework to oversee operations and then continually collaborate with management to adjust the strategy based on changing conditions.

Clear language on innovation

In addition to putting the right frameworks in place, interviews with directors revealed it was important to use clear language and structured conversations to ensure all board members and the executive had a common understating of technology or innovation subjects.

This concept is supported by a recent study of innovation leaders, which highlighted the difficulty of proposing an innovative idea to a multidisciplinary audience. The study found each individual will hear the idea through their lens, whether it is a marketing lens, a technology lens, or a finance lens. Only after you have first listened to and addressed the concerns of each expert individually, can you address the broader and multidisciplinary audiences, such as those in the boardroom (Garbuio and Dressel, 2019).

Boards oversee innovation strategies

Directors emphasised the importance of boards working collaboratively with management to agree and then oversee innovation strategies. While "co-creation" was not explicitly stated, the behaviours mentioned often indicated a very hands-on approach to setting the strategy and then its oversight.

But management is responsible for execution

This is not to say that boards are solely responsible, but it does suggest that in addition to ensuring organisations meet their compliance obligations, boards must play a critical role in creating long-term value for their organisations.

Through the survey results and interviews with directors, it was overwhelmingly clear that management still holds the responsibility for executing innovation strategy once set.

Directors expect management to lead and show initiative. Management needs to be prepared to have robust evidence-based discussions on new proposals, then again when the proposal is in its execution phase, and again as part of monitoring once implemented. This expectation was caveated with a warning that a board must ensure the appropriate policies and frameworks had been implemented, so management has a clear understanding of the board's expectations.

"The board ultimately is responsible for the strategy of the organisation. And so if the board's not encouraging innovation and expecting the executives to keep innovation at the forefront, then the board's not fulfilling its responsibilities".

Wendy Stops GAICD
ASX100 Company Director

APPENDIX 1:

Research methodology

This report has benefited from multiple data sources in order to develop an understanding of the experiences and insights of directors on Australian boards. This understanding has been achieved through a survey-based approach as well as interviews with directors.

This approach has been supported by, and built on, previous studies presented in scholarly publications and policy reports, as well as research from industry and consulting firms. While important in illustrating the need for understanding the approach of directors to innovation, the voice and experience of key board members regarding innovation is often neglected. In accessing the insights of board members themselves, this report adds to the current policy and scholarly landscape.

The empirical contribution of this research consists of a survey of directors and in-depth semi-structured interviews with board members of organisations operating in various sectors. An explanatory sequential mixed method approach was chosen (Creswell and Creswell, 2017). First quantitative research was conducted, then initial quantitative data results from the survey were integrated with the qualitative data gathered during the follow-up interviews with selected participants to obtain their specific views.

The first part of the research involved the distribution of a survey to 20,483 members of AICD. The 658 respondents were from broadly all industries and were from companies of varying sizes. Company data about operational industry, annual turnover and ownership structure was collected, providing understanding about any possible correlation between these factors and the role of board innovation. Of the 658 responses, after routine cleaning procedures, we identified 476 useful responses for the remaining part of the analysis.

The survey data was analysed using R. The analysis revealed valuable quantitative data for the research because it provided insight into the relationship between board members' background and expertise and their perspective on the role of innovation on their board.

Board members completed the survey anonymously and the survey was subject to several rounds of review by a panel of experts to ensure the most reliable, accurate and useful information.

As with any study, ours has limitations, which provide opportunities for future research. First, the survey may suffer from self-selection bias, whereas only directors that are interested in the topic of the survey (innovation in our case) respond. However, we had the opportunity to compare the respondents and those identifying themselves as expert in innovation and only a small percentage did so and we did not find any systematic difference in the way they answered the survey questions.

Second, the board members may have rated their efforts highly if their companies were successful, compromising the validity of the final data (the Halo Effect, see Rosenzweig, 2014). Therefore, it is important not to correlate the directors' self-reported evaluations with the performance of the organisation. However, several measures have been put in place in this survey in order to address this risk. We placed the questions related to performance at the end of the survey to distance them from the questions that measure behaviours. We also included multiple performance questions. Moreover, we discussed performance in detail during the interview to test our hypotheses of causality between behaviour and performance.

Interviews lasted from 45 to 60 minutes. The interviews were all recorded and transcribed before coding was undertaken. The analysis of the interviews revealed several themes that were then used to define the findings of this study.

The process of participant recruitment for the interviews was consistent with the University of Sydney Ethics guidelines, whereby participants were contacted through a third party. The AICD sent an email with a link inviting participants. Following completion of an expression of interest to participate in this research project, the researchers contacted the interested parties to arrange an interview. The AICD and the researchers collaborated to target an appropriate mix of directors from different industries, sectors and specialisations representing the breadth of the AICD's membership within this group.

Interviews allow the researcher to capture experiences by relying on the informant's words and interpretation of events and perspectives and observations shaped by their experience. As such, a semi-structured interview enabled the collection of in-depth details on the observations and experiences of key stakeholders. A semi-structured interview provided participants with space to present and elaborate on their views of innovation on Australian boards: that is, to discuss how, if at all, innovation is being discussed on Australian boards, and what they understand about innovation on boards.

The discussion was framed by open-ended questions in order to best explore the experience and perspectives of the interviewees. The semi-structured interview process was used flexibly in each of the interviews where prompts were used to elicit deeper information in some of the interviews while in others, participants drove the discussion themselves.

While very useful in providing deep insights into the role of boards in innovation, the qualitative approach has limitations. The sample size presents limitations to generalising outcomes across sectors and different organisation sizes.

Overall, the strength of this report lies in the insights presented by both the quantitative data extrapolated from the survey results, and from the qualitative data provided by the interviewees, who generously gave their time and who provided compelling insights into issues regarding innovation on Australian boards. Together, the quantitative and qualitative data provide a comprehensive insight into the perspectives of board members regarding the role and importance of innovation on Australian boards.

Find the full data pack at
w: aicd.com.au/drivinginnovation

Survey questions

Section 1. Your profile

Q1: What is your gender? (Select one)

☐ Male

☐ Female

☐ Prefer not to answer

Q2: How many boards are you on? (Select one)

☐ 0

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

☐ More than 5

Q3: Which of the following best represents your current position on your primary board?
(Select all that apply)

☐ Board Member - Chairman

☐ Board Member - Executive Director

☐ Board Member - Managing Director

☐ Board Member - Non Executive Director

☐ Board - Executive

☐ Board Member - Alternate Director

☐ Other – please specify:

Q4: How many people currently sit on your primary board, including yourself? (Select one)

☐ 3

☐ 5

☐ 6

☐ 7

☐ 8

☐ 9

☐ More than 9

Q5: In addition to your director responsibilities, what additional expertise do you bring to your board? (Select up to two)

☐ Audit & Accounting

☐ Arts and Media

☐ Business Development

☐ Communications and External Affairs

☐ Education

☐ Engineering

☐ Finance

☐ General Management

☐ Government

☐ Human Resources & Administration

☐ Innovation

☐ International experience

☐ Legal

☐ Medical and Health

☐ Operations

☐ Product Development

☐ Research & Development

☐ Sales & Marketing

☐ Science and/or Technology

☐ Strategy

☐ Transport

Other – please specify:

Section 2. Organisation profile

Q6: Which of the following best describes the organisation? (Select one)

☐ Publicly listed

☐ Not-for-Profit

☐ Private

☐ Public sector

Other – please specify:

Q7: In which Australian state or territory is the organisation headquartered? (Select one)

☐ Australian Capital Territory

☐ New South Wales

☐ Northern Territory

☐ South Australia

☐ Tasmania

☐ Queensland

☐ Victoria

☐ Western Australia

International – Please specify:

Q8: Which industry most accurately describes the majority of the organisation's business? (Select one)

☐ Aerospace and defence systems

☐ Accommodation and Food Services

☐ Administrative and Support Services

☐ Agriculture, Forestry and Fishing

☐ Arts and Recreation Services

☐ Construction

☐ Education and Training

☐ Electricity, Gas, Water and Waste Services

☐ Emerging industries and high tech

☐ Financial and Insurance Services

☐ Health Care and Social Assistance

☐ Health Care Equipment & Services GIC

☐ Human Resource/Recruitment

☐ Information Media and Telecommunications

☐ Manufacturing (including automotive)

☐ Mining

☐ Not-for-Profit

☐ Other Services

☐ Professional, Scientific and Technical Services

☐ Business & Legal Professional services

☐ Public Administration and Safety

☐ Rental, Hiring and Real Estate Services

☐ Retail Consumer

☐ Retail Trade

☐ Transport, Postal and Warehousing

☐ Transport logistics

☐ Wholesale Trade

Other – please specify:

Q9: What is the organisation's total annual revenue in the past financial year? (in Australian dollars) (Select one)

☐ Less than $10 million

☐ At least $10 million but less than $100 million

☐ At least $100 million but less than $250 million

☐ At least $250 million but less than $500 million

☐ At least $500 million but less than $1 billion

☐ At least $1 billion but less than $5 billio

☐ At least $5 billion to less than $10 billion

☐ $10 billion or more

☐ N/A

Q10: When was the organisation established? (Select one)

☐ Prior to 1980

☐ 1981-1990

☐ 1991-2000

☐ 2001-2010

☐ 2011-2019

Q11: What is your best estimate of how many employees the organisation currently has, including all locations in Australia? (Select one)

☐ Micro (1-5 employees)

☐ Small (6-20 employees)

☐ Medium (21-199 employees)

☐ Large (200 - 999 employees)

☐ Enterprise (1,000+ employees)

Q12: How would you classify the organisation?

☐ Startup

☐ Scale-up

☐ Established

☐ Mature

Section 3: Strategy and Policy

Q13: Does the organisation have an innovation vision and/or does innovation feature prominently within the organisation's strategic plan? (Select one)

☐ The organisation has an innovation vision

☐ Innovation features prominently within the organisation's strategic plan

☐ The organisation does not have an innovation vision and innovation does not feature prominently within its strategic plan

☐ Don't know

Q13a - [The user selects options 1-2 in Q13] Which of the following best describes the types of innovation that exist within the organisation's vision or strategic plan? (Select all that apply)

☐ Product (goods or services) innovation that is new to the organisation, and new to the organisation's market

☐ Product (goods or services) innovation that is new to the organisation but is not new to the organisation's market

☐ Process innovation that is new to the organisation, and new to the organisation's market

☐ Process innovation that is new to the organisation but is not new to the organisation's market

☐ Organisational innovation that is new to the organisation, and new to the organisation's market

☐ Organisational innovation that is new to the organisation but is not new to the organisation's market

☐ Marketing innovation that is new to the organisation, and new to the organisation's market

☐ Marketing innovation that is new to the organisation but is not new to the organisation's market

Q13b - [The user selects options 1-2 in Q13] Over what timeframes does the organisation plan to realise its organisational strategy or innovation vision?

☐   Less than 1 year

☐   1 - 2 years

☐   3 - 5 years

☐   6 - 10 years

☐   Innovation is an ongoing activity

☐   Not applicable

Q14: How would you characterise innovation within the organisation? Select up to 3 attributes. (Rank them in order of importance, where 1= most important and 3=least important)

Innovation is:

☐   an organisational capability that is part of everything the organisation does.

☐   varied throughout business units and/or geographies.

☐   unplanned and approached on an ad-hoc basis.

☐   driven by customers' needs.

☐   driven by disruption caused by evolving business models including increasing global competition.

☐   driven by disruption caused by technology.

☐   driven by regulatory or geopolitical changes to the organisation's industry.

     Other – please specify:

Q15: How would you characterise innovation within the organisation's industry? Select up to 3 attributes. (Rank them in order of importance, where 1=most important and 3=least important)

Innovation in the organisation's industry is:

☐   an organisational capability that is part of everything anyone in the industry does.

☐   varied throughout business units and/or geographies.

☐   is unplanned and approached on an ad-hoc basis.

☐   driven by customers' needs.

☐   driven by disruption caused by evolving business models including increasing global competition.

☐   driven by disruption caused by technology.

☐   driven by regulatory or geopolitical changes.

     Other – please specify:

Q16: Consider the following responsibilities related to innovation: sponsoring, owning and executing innovation. Who in the organisation is responsible for each of these activities? (Select one role for who is most responsible for each innovation activity)

	CEO	Senior executive team	The Board	A separate division with the primary goal of innovating	Chief Innovation Officer	Someone else
Sponsors innovation	☐	☐	☐	☐	☐	☐
Owns innovation	☐	☐	☐	☐	☐	☐
Execution and delivery	☐	☐	☐	☐	☐	☐

If someone else, please specify:

Q17: What do you see as the role of the board in innovation? (Select one/select all that apply)

☐   The board sets the innovation strategy for the executive team.

☐   The board collaborates with the executive team to jointly develop and oversee the innovation strategy.

☐   The board oversees the innovation strategy of the executive team.

☐   The board is consulted on the innovation strategy and activities.

☐   Innovation is not a matter for the board.

     Other – please specify:

Q18: Which of the following skills has the board incorporated as part of its board's skill matrix to address current and future challenges of the organisation? (Select all that apply)

☐ Corporate governance/regulatory

☐ Culture

☐ Strategy and Risk

☐ Digital disruption

☐ Cyber security

☐ Science and Technology

☐ Sustainability and Climate change

☐ Product development and innovation

☐ Industry experience

☐ International experience

Other – please specify:

Q19: Does your board have the necessary skill sets and experience to assess the implications that the use of modern technologies present to the organisation, its workforce and society more broadly? (Select one)

☐ Yes, the board has the right skills and experience to assess the ethical implications including planning for societal, cultural and workforce impacts.

☐ Yes, the board has the right skills and experience to assess the practical implications including assessing competition, customer needs, operating models, workforce capability, and regulatory compliance.

☐ Yes, the board has the right skills and experience to assess the ethical and practical implications

☐ The board has a sub-committee who is responsible for assessing the ethical and practical implications.

☐ No

Section 4: Accountability and Monitoring

Q20: In the past 3 years, how often is innovation (broadly defined) listed as an agenda item for your board to consider? (Select one)

☐ Ongoing agenda item

☐ Occasional agenda item

☐ Never been an agenda item

☐ Don't know

Other – please specify:

Q20a - [If they say Ongoing agenda item, or Occasional agenda item in Q20]: How do innovation-related agenda items compared to other agenda items? (Select one)

☐ The amount and quality of information was comparable with other agenda items

☐ Only the amount of information provided was comparable with other agenda items

☐ Only the quality of information provided was comparable with other agenda items

☐ Neither the amount or quality of information provided was comparable with other agenda items (i.e. for the innovation agenda item, the board has received less information and lower quality information than for other agenda items)

Q20b - [If they say Ongoing agenda item, or Occasional agenda item in Q20]: During the board meeting(s) in which an innovation-related agenda item was included, which of the following most closely represent what happened during the board meeting(s)? (Select one)

☐ The innovation-related agenda items are given sufficient time for discussion and decisions were made

☐ The innovation-related agenda items were given sufficient time for discussion but decisions were not made

☐ The innovation-related agenda items were not given sufficient time for discussion and decisions were still made

☐ The innovation-related agenda items were not given sufficient time for discussion and decisions were not made

Q21 -[If they select any option in Q20]: What mechanisms or processes has your board put in place to elevate innovation to the board level for discussion and recommendation? (Select all that apply)

☐ The board has set innovation as an ongoing stand-alone agenda item to be discussed at each meeting

☐ The board has sought for innovation to be captured as part of regular agenda items such as, current significant issues, risks, strategy or as part of the organisation's key performance indicators

☐ The board has requested innovation be reported on an irregular or as needed basis

☐ The board has not implemented any mechanisms or processes to elevate innovation to the board level

Q22: Who from the following list have you engaged to discuss innovation or technology related matters with? (Select all that apply)

☐ Members of your primary board

☐ Members of another board or the director community

☐ Qualified or experienced innovation or technology experts who are not part of your primary board or the organisation

☐ Academics or researchers from a university or recognised scientific organisation

☐ A consultant from an international consultancy

☐ A consultant from an Australian consultancy

Other – please specify:

Q23: If the organisation has undertaken any of the following innovation activities in the past 3 years, how effective have these activities been in delivering outcomes for the organisation? Select one answer per activities. If the activities are not used, please select "Not Used", if these activities are in place but not actively monitored by the senior executive team, select "Not Monitored".

	Not monitored	1 Not at all effective	2	3 Somewhat effective	4	5 Extremely effective	Not used
Centralised R&D unit or division within the organisation including innovation labs or incubators	☐	☐	☐	☐	☐	☐	☐
Whole of organisation innovation/ transformation strategy	☐	☐	☐	☐	☐	☐	☐
Source R&D or innovation support from external sources or innovation is outsourced to another organisation including innovation labs or incubators	☐	☐	☐	☐	☐	☐	☐
Strategic partnerships (academia or research centre	☐	☐	☐	☐	☐	☐	☐
Strategic value chain partnerships with suppliers or vendors	☐	☐	☐	☐	☐	☐	☐
Mergers and Acquisitions integration (including strategic investments in startups)	☐	☐	☐	☐	☐	☐	☐
Strategic partnership with startups	☐	☐	☐	☐	☐	☐	☐
Exploratory trips to innovation hubs such as Silicon Valley, Israel, Europe, or Singapore	☐	☐	☐	☐	☐	☐	☐
Setup an innovation outpost – in innovation hubs/centres such as Silicon Valley, Israel, Europe, or Singapore	☐	☐	☐	☐	☐	☐	☐

Q24 : Considering all the organisation's innovation activities over the past 3 years, what were the outcomes the organisation was hoping to achieve?

(Select all that apply)

☐ Not applicable [Move user straight to question 23]

☐ Creation of a new customer value proposition

☐ An increase in customer satisfaction

☐ An increase in the number of customers

☐ An increase in revenues

☐ A reduction in costs

☐ A reduction in unnecessary processes and bureaucracy

☐ Ability to test new ideas more effectively

☐ Developed strategic insights or better understanding of your core markets

☐ The outcome of innovation activity isn't measured

    Other – please specify:

Q24a: And did the organisation realise the outcomes it was hoping to achieve? (Select one)

☐ Did not achieve any of the expected outcomes

☐ Achieved some of the excepted outcomes

☐ Achieved most of the expected outcomes

☐ Achieved all the expected outcomes

☐ Achieved more than what was expected

☐ There has been no opportunity to access whether the innovation activities have achieved the expected outcomes

    Other – please specify:

Q25: What are the top five risks in the organisation's risk register to be managed over the next 3 to 5 years? (Rank the top 5 risks from 1 to 5, where 1 is the most critical risk and 5 being the less critical risk)

☐ Strategic risks including a failure to identify the best strategies and objectives for the organisation, as well as failing to execute those strategies.

☐ Operational risks including threats to business continuity, damage to brand, equipment and assets, and/or workplace health and safety.

☐ Financial risks presented by changing markets, credit or liquidity issues, shareholder activism, and/or risks to key business functions.

☐ Commercial risks including disruption to value chains, threats to data/intellectual property, intensified global competition and/or platform domination/monopolies.

☐ Technology risks including ability to scale and respond to disruption of how your current products and services are accessed and used by consumers and stakeholders.

☐ Security risks presented either through threats to your personnel, physical facilities, or cyber security environments.

☐ Regulatory or political risks presented by legal or regulatory compliance or changes, and/or political uncertainty and shifting geopolitical landscape

☐ Environmental risks including adverse impacts a company may have on the natural environment, or that the natural environment may have on a company's activities (including climate risk).

☐ Social risks presented by adverse impacts a company may have on human society and consequent systemic risk or regulatory responses (e.g. risks associated with modern slavery, aiding human conflict, facilitating crime or corruption, mistreating employees, customers or suppliers, or harming the local community).

☐ Disruption and innovation risks including emerging business models in your industry, shifting consumer trends and behaviours, and/or lack of innovation activity within the organisation.

☐ Workforce risks including the displacement of workers by technology, upskilling and training, and/or talent attraction and retention.

    Other – please specify:

Q26: What are the barriers challenging the effective implementation of innovation activities within the organisation? (Rank the following options from 1 to 5, where 1 is the most relevant barrier and 5 is the less relevant barrier)

☐   A focus on the short-term financial performance

☐   The financial resources to invest in long term innovation projects

☐   The human talent to drive innovation activities

☐   Our organisation struggles to make and implement strategic decisions quickly enough to keep with the pace of change impacting our industry

☐   Support from the executive team

☐   Support from the board

     Other – please specify:

Q27: Given the impact innovation and technology are having on society, how do you believe innovation should be prioritised at the board level? (Select one/select all that apply)

☐   The board should be involved in innovation as part of the strategy review

☐   The board should be involved in innovation as part of the risk monitoring

☐   The board should be involved in innovation as part of the strategy review and risk monitoring

☐   The Board should be involved in innovation as a "new normal" way of governing a business

☐   A board subcommittee should be tasked with driving innovation

☐   The board should not be responsible for innovation

     Other – please specify:

Q28: Over the past 3 years, what percentage of the organisation's total domestic expenditure has been dedicated to R&D or other innovation activities?

     Other – please specify:

☐   Don't know

Q29: Can you name three innovation challenges the organisation is facing at the moment?

_____

_____

_____

_____

Q30: Do you have any additional comments regarding how you see the role of the board on innovation?

_____

_____

_____

_____

APPENDIX 3:

Further exhibits

In this Appendix we include the results of the analysis of the questions in which different groups of directors were asked to make decisions about the role of the board in innovation (Question 17 and Question 27).

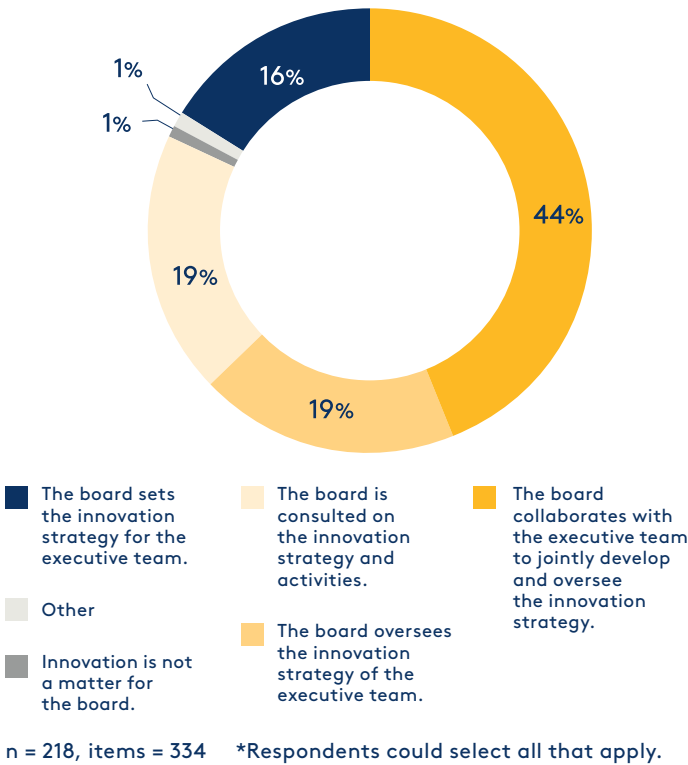**Exhibit 12a: Question 17 – What do you see as the role of the `board in innovation?**

- The board sets the innovation strategy for the executive team.
- Other
- Innovation is not a matter for the board.
- The board is consulted on the innovation strategy and activities.
- The board oversees the innovation strategy of the executive team.
- The board collaborates with the executive team to jointly develop and oversee the innovation strategy.

n = 218, items = 334   *Respondents could select all that apply.

Exhibit 12b: Question 17 – What do you see as the role of the board in innovation?

- The board sets the innovation strategy for the executive team.
- Other
- Innovation is not a matter for the board.
- The board is consulted on the innovation strategy and activities.
- The board oversees the innovation strategy of the executive team.
- The board collaborates with the executive team to jointly develop and oversee the innovation strategy.

n = 258, items = 258   *Respondents could only select one role.
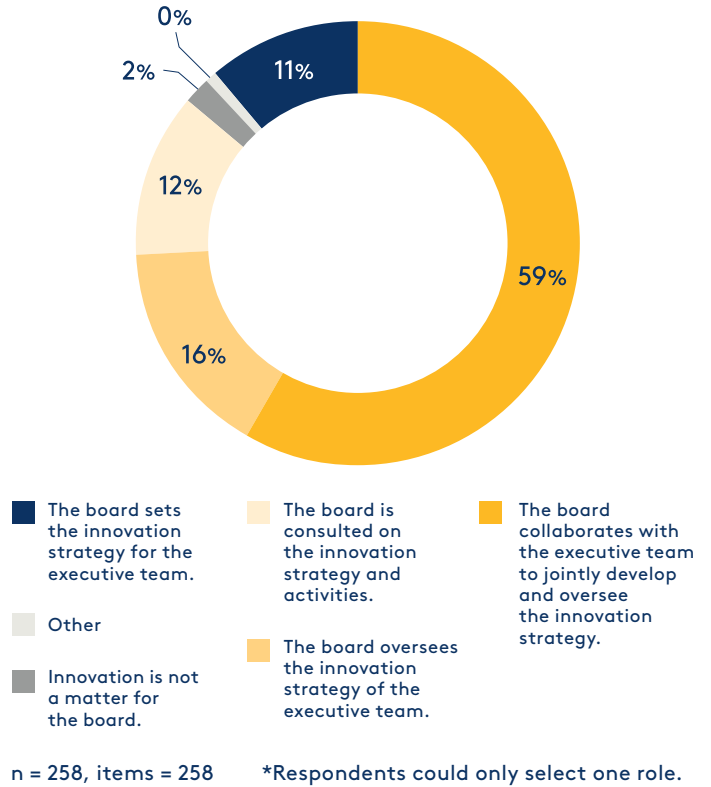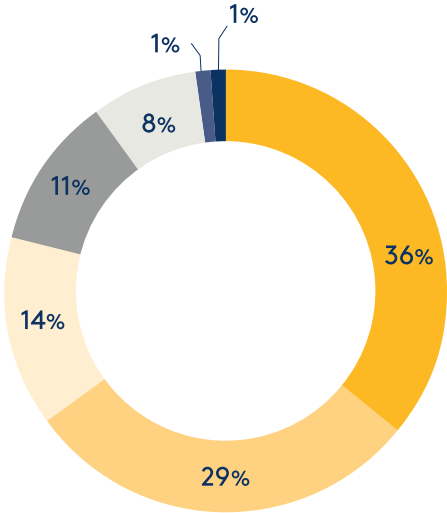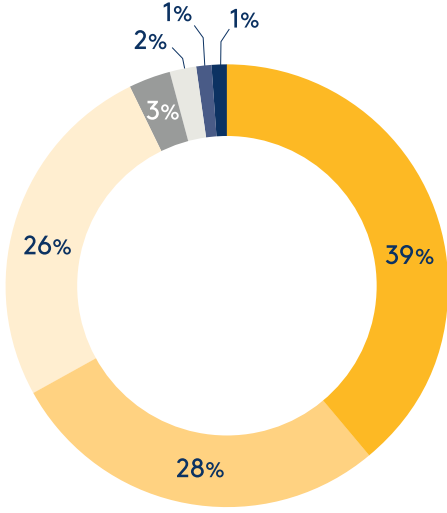
Exhibit 14a: Question 27 – Given the impact innovation and technology are having on society, how do you believe innovation should be prioritised at the board level?

1%
1%
8%
11%
14%
29%
36%

Legend:
- Other
- The board should not be responsible for innovation
- The board should be involved in innovation as part of its risk monitoring.
- A board subcommittee should be tasked with driving innovation
- The board should be involved in innovation as part of its strategy review.
- The Board should be involved in innovation as a "new normal" way of governing a business
- The board should be involved in innovation as part of its strategy review and risk monitoring.

n = 217, items = 437   *Respondents could select all that apply.

Exhibit 14b: Question 27 – Given the impact innovation and technology are having on society, how do you believe innovation should be prioritised at the board level?

1%
1%
2%
3%
26%
28%
39%

Legend:
- Other
- The board should not be responsible for innovation
- The board should be involved in innovation as part of its risk monitoring.
- A board subcommittee should be tasked with driving innovation
- The board should be involved in innovation as part of its strategy review.
- The Board should be involved in innovation as a "new normal" way of governing a business
- The board should be involved in innovation as part of its strategy review and risk monitoring.

n = 253, items = 253   *Respondents could only select one role.

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