Advanced 365 Thought Leadership Series

The Board and the CIO

David Smith, Chief Executive
Global Futures and Foresight

Editor:
Nathaniel Suda, Consulting Director
Advanced 365

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Contents

The Board and the CIO

Introduction 1

1) Why technology changes Board requirements and role 3

- Developing Board technology capabilities 3
- Role of the board 3
- Board and tech relationship 3
- Disruptive technologies 3
- Innovation needs 4
- Technologies and the CIO type they can support. 4

2) CIO-Board engagement. 7

- Creating common ground and language 7
- Creating a CIO who acts as a strategic driver. 7
- Different Board approaches to their CIO and IT 9
- By company life stage 11

3) Structural barriers to successful CIOs 14

- Structural barriers to successful CIOs 14
- Organisational 14
- Operational 14
- Board structure 15

4) Choosing your CIO 16

- Recruitment approach 16
- A changing search 16
- Key questions for choosing your CIO 16
- Question to ask the CIO 18
- Questions to ask the Board 18

5) What the Board needs to do now 19

6) Summary 20

Appendix 21

Resources 22

About Advanced 365 & Global Futures & Foresights. 24

Rapidly shifting business opportunities are being increasingly driven by technology and the change in human behaviour and organisation it enables. Since technology is now core to virtually every aspect of a business, every company is a digital business.

However, there remains a difference between those using these tools tactically and those using them to drive business vision and strategy forwards. It is at this point where digital business becomes problematic for many. When it comes to strategic IT, says Susan Shultz, CEO of The Board Institute, '...directors are not informed.'[1] Not only does this blind spot lead to a '...narrow defensive view of IT (that) leaves the company vulnerable to competition.'[2] but can also hinder innovation and the wider corporate changes needed to compete in the new economy.

Choosing which typology of CIO – as entrepreneur, as leader or as manager* will be critical in determining how an organisation reacts to the shifting technological ecosystem, but will also be influenced by the type of organisation and even its life stage. Technology and innovation are now boardroom issues as well as management issues. Creating strategic alignment between CIO typology, the organisation's strategic goals, as well as its ability to meet those goals, will feature prominently in deciding the effectiveness of CIOs. Part of the required change will need to come from CIOs advancing their skillsets, but evolution must be reflected in boards themselves. A shift in board education, competencies and even composition may be necessary if a clear, cohesive and strategic view of technology is to be achieved.

* For a more complete definition, please see Appendix 1 (see page 21)

By turning a blind eye to IT, boards are ignoring one of the most key components of their chartered responsibility

1) Why technology changes board requirements and role

Developing board technology capabilities

'By turning a blind eye to IT, boards are ignoring one of the most key components of their chartered responsibility,' says Bob DeRodes, former CIO at Home Depot and board member at NCR and Veracode[3]. Some boards seem to be cognisant of this blind spot, but the figure remains relatively low. A Spencer Stuart report notes that some 20 percent of boards are actively looking for directors who have technology expertise.[4] McKinsey also notes that some boards are also considering their own technology boot camp training sessions, giving them a chance to become familiar with the core issues. However, the CIO remains as the person who understands the company's business processes better than anyone – a perspective that the board has to reorganise to incorporate. A discussion over which structures enable the board to add value will be central to this.[5]

Role of the Board

Deloitte[6] suggests that many boards of directors still struggle with several fundamental questions, including:

- What is the role of the board in the company's corporate governance program and innovation, and how does that differ from the role of management?
- Where should the board be spending the majority of their time?
- How do organisations position the board as a strategic partner with management, beyond just ensuring compliance?
- Exactly what should they be doing in the critical areas of oversight such as strategy and risk?
- How does the work of the committees (assuming there are any) relate to and differ from the work of the full board?

Since technology related issues permeate many of these issues, the need to consider these types of questions is pressing.

Board and tech relationship

In a 2014 survey of 1,019 board members at public companies by the U.S. based National Association of Corporate Directors (NACD), 35 percent said they are unsatisfied with the quantity of technology information they get, and 27 percent are unsatisfied with its quality. In addition, board members feel especially vulnerable about IT risks, such as security and project failures, with 63 percent acknowledging their knowledge of IT risk could be better.[7]

'Boards need to understand the innovation agenda, which calls for concrete investments made today for tomorrow...but a lot of boards just don't do that,'[8] suggests Rita Gunther McGrath, an associate professor at Columbia Business School. Innovation has to be a board responsibility in addition to being a management team one.

Disruptive technologies

One or two examples aside, technology knowledge deficiencies have never been critical to so many, across so many industries. It would be wrong therefore, to assume that these deficiencies are as benign now as in the past. In his 1995 Harvard Business Review (HBR) article where he coined the term disruptive technologies, Clayton Christensen noted that '...doing everything right can still leave a successful company vulnerable if another company develops an innovation that changes the game with a solution that's simpler, more accessible, or more affordable'.[9] The figure that readily establishes the need to engage with and deploy disruptive technologies is startling: $165 trillion. This is the combined value at stake each year for twelve

disruptive technologies previewed by McKinsey by 2025[10] and represents the lower end of an estimation that reaches $275 trillion at the upper end.[11] These twelve technologies, that are likely to have implications for industries far beyond originating sectors, include:

- Mobile internet
- Automation of knowledge work
- Internet of things
- Cloud technology
- Advanced robotics
- Autonomous and near-autonomous vehicles
- Next-generation genomics
- Energy storage
- 3D printing
- Advanced materials
- Advanced oil and gas exploration and discovery
- Renewable energy

The breadth of these technologies, as well as the depth of opportunities, issues and implications they could represent for business, demands more than a siloed, or even solely senior management response. Indeed their potential to revolutionise business models and entire industries mean that technology - and by extension the CIO- can no longer be seen as 'apart' from the organisation.

Innovation needs

93 percent of senior executives continue to regard their company's long-term success to be dependent on its ability to innovate but, at the same time, less than one out of five (18 percent) believe their own innovation strategy is delivering a competitive advantage.[12]

Accenture also reports that '...only 34 percent believe their company has a well-defined innovation strategy, 46 percent say they have become more risk averse in considering new ideas and 45 percent see their company pursuing a portfolio of smaller, safer opportunities rather than seeking the next breakthrough.'[13] The links between corporate culture, structure and the ability to incorporate technologies that enable the organisation have been well established. In fact, certain technologies have the effect of crafting the CIO typology – and it is this reason, perhaps above all else, why board level IT competence and knowledge needs enhancing.

Technologies and the CIO type they can support

In our paper 'The CIO as Manager, Leader and Entrepreneur,' the idea of differing CIO typologies is analysed. (If reading an electronic copy, click here to access the full paper). Whilst technology strategies and how they interplay with corporate structure and even CIO typologies will vary from business to business, a few general observations can be made.

The CIO as Manager Leader and Entrepreneur paper

The skill-set of the successful CIO has changed profoundly. In the current strategic era, the CIO is at once managing a portfolio of applications, technologies, people and processes. This paper looks at the varying and somewhat paradoxical demands being placed on the CIO under the lens of CIO as manager, as leader and as entrepreneur.

Download the full paper at: http://bit.ly/12SZutr

Cloud computing supports the CIO as manager typology by reducing IT costs, increasing IT agility and automating processes. In short it represents a more efficient and cost effective way to run IT – which has long been the goal of the CIO as manager. It could however, also enable the construction of new cloud based business models and ecosystems, which ensures relevance to the CIO as leader, and especially, the CIO as entrepreneur. In this sense, the basic users of cloud computing is radical in impact from more advanced uses, and demands a different CIO.

In the same sense, mobile technologies and platforms have different stages that each appeal to differing typologies. They offer an immediate benefit to the CIO as leader, but once the initial comparative advantage is exhausted by way of competitor replication, they will become the purview of the CIO as manager. Indeed as wearables, Augmented Reality (AR) and other virtualisation overlays become key, taking the long view on mobile evolution could enable CIO as entrepreneurs to uncover and develop new sources of value throughout the industry chain and within the organisation. In some cases this calls for the flexible infrastructure of tomorrow to be built today, and as a result ROI will accrue time delays. The decision on whether to back the CIO or not through potentially indifferent short-term results will be a critical board responsibility.

ComputerWorld states that '...social business is helping (CIOs as managers) by increasing employee productivity through internal social networks designed to speed processes such as knowledge sharing and expertise location, but it's also opening up a large number of additional business scenarios which can be further differentiated through socially-informed channels.'[14] As this combines with big data and the Internet of Things, the ability of CIO as entrepreneurs to monetise such predictive intelligence and leaders to use it as an instant employee enhancing medium will rise.
Perhaps the key takeaway is that whilst some technologies benefit or even help shape CIO decisions, in practice it is the evolution of such technologies that will be key in how they relate to overall strategy. Ken Piddington joined Global Partners as CIO in 2009, and '...recognising that future growth would be fuelled by acquisitions, he built a playbook to ensure that IT could respond efficiently to support those acquisitions. He also variabilised the cost structure of IT to a much greater extent using cloud technologies and an ecosystem of vendor partners so that he could support the growth of the company seamlessly.' As a result he was a key strategic driver of company growth from $6 billion to $18 billion four years later.[15]

To be effective, boards need to build their understanding and awareness of IT and other technologies

2) CIO-Board engagement

Ernst & Young has found a wide discrepancy with regards to the extent to which CIOs actively engage with the executive management board on key issues. Procedural issues represent subjects of strongest engagement, with 67 percent reporting strong engagement when it comes to discussing IT budgetary issues and infrastructure management. Only 11 percent report little or no engagement on this issue.[16] However, at the other end of the engagement spectrum, only 36 percent report strong engagement over discussing business performance and challenges and only 43 percent report strong participation in strategic decision making.

Clearly there are levels of engagement that can be built upon and many organisations have significant progress to make. In order to make such progress, it is incumbent upon CIOs to learn to speak in language that resonates with the board.

Creating common ground and language

CIO magazine suggests that '...if a CIO is going to sit on the board they need to be able to speak that language and communicate very clearly how technology-enabled change is going to deliver on business objectives and needs. This goes for the team too.'[17] In addition to other soft skills development, this could '...enable technology leadership to become an essential and common path to the board.'

Virginia Gambale, a former CIO at Merrill Lynch and current board member at JetBlue believes that '...CIOs must talk about things like asset allocation, distribution channels, not technology itself.'[18] This involves embracing corporate strategy and the 30,000ft view. Boards, she notes, '...expect the CIO to provide guidance on how technology can improve the firm's growth and market strength, help the company better reach customers and develop innovations that boost market share.' Creating close business relationships with their CFO, head of corporate strategy, and product development executives could enable CIOs to better understand the operating model of the company, and be better placed to contribute tellingly to its evolution.

Creating a CIO who acts as a strategic driver

A McKinsey survey of executives echoes the sentiment of the EY study. It concludes that '...a significant gap exists between the conversations their boards ideally should be having and the ones the boards actually were having.'[19] More than half of the respondents said their boards should discuss forward-looking views of technology's impact on their companies' industries, yet less than 30 percent reported that their boards had these discussions.

Given the importance of technology, many companies are considering a more structured approach to board engagement. McKinsey states that '...this involves new forums, new thinking about board organisation and about interfaces with management, and, when needed, an infusion of talent so that the board includes people with better knowledge of technology.'[20] There are attempts to institutionalise this sort of practice, with South Africa's code of company governance mandating regular interactions between boards and executive management on technology topics. Depending on success, it is possible that such approaches could be adapted elsewhere.

Boards can take a number of measures to engage management on technology issues,[21] which will ultimately help direct the CIO more towards being a strategic driver:

If a CIO is going to sit on the board they need to be able to speak the language

- Sponsor periodic reviews of technology's long-term role in the industry.
- Establish board reviews of the IT portfolio and major projects.
- Leverage technology-savvy board members.
- Strengthen the technology governance structure.

Developing the boards' own technology radar is a key step in developing a platform from which effective CIOs can operate. IDG Research has found that only 7 percent of companies report being very effective in aligning their business and IT goals.[22]

Closing the gap between emerging IT and the ability of companies to exploit it requires two new capabilities according to Harvard Business Review.[23] Creating a Distributed Innovation Group that is responsible for emerging technology, collaboration methods and technology and an Enterprise Integration Group responsible for enterprise architecture, integration and program/process management, HBR posits, would enable greater agility from the board and wider organisational structure. Key to the organisational structure is communication – an issue that also spreads into the development of soft skills: 42 percent say poor communication between IT and business is a roadblock.[24] Clearly CIOs need to provide better information, but boards have a role to play too. More than two-thirds of boards use a portal that can be used to share interesting information in addition to the required reading, says Michele Hooper, co-founder and CEO of The Directors' Council. The other third could readily develop such mechanisms to aid their CIO. CIOs should also spend time with the board informally, such as at dinner the evening before the board meeting.[25] Despite the wider spread of technological responsibility beyond IT, current board members – such as former CEOs and CFOs are probably more oriented around the procurement of IT rather than the technology itself. However, the spread of the technological remit outside of the traditional CIO role also places more scope for the board to spend time engaging the wider ecosystem in order to enhance their technology intelligence. This intelligence should ideally extend beyond oversight to include a knowledge of which disruptive technologies have the potential to reconfigure supply chains and consumer behavior as well as alter internal business processes and systems.

Different board approaches to their CIO and IT

Clearly the IT needs of businesses are far from uniform. Certain business models – such as a manufacturer with an open loop supply chain – generally demand IT as a support function and can function even if IT systems fail. In this scenario IT is a commodity and the CIO as manager the most likely required CIO type.

Turn this open loop supply chain into an integrated one or in the case of an online retailer for example, and IT will be looked to as providing a competitive advantage. Technology is rarely advantageous in itself; rather the extent to which it blends with other capital will determine its impact. In these scenarios, the CIO as leader would presumably be the most common CIO type.

Continuing the spectrum, there are business models where IT doesn't just enable the business but actively drives it; where technology and overall strategy are tightly correlated and IT delivers specifically targeted value propositions for staff, consumers and the business itself. Financial data products and services readily utilise (or should aspire to use) this model.

Logically, the more important that IT is to a business, the more time the board needs to spend thinking about it,[26] as well as encourage the

Developing the boards own technology radar is a key step in developing a platform from which effective CIOs can operate

development of non-technical staff with technological expertise. Models supported by technology would not likely cover IT at the board level, which makes sense from a narrow perspective of IT not being strategic, but leaves blind spots with regards to how exogenous technologies may disrupt supply chains and the wider operating environment moving forward. Fields and industries that have hitherto been relatively unaffected by technology are in many ways the most prone to disruption in the not-too-distant future. It is perhaps in this situation where proactive board engagement in wider technology ecosystems is most critical. In technology enabled businesses, IT may be given its own subcommittee. In IT driven businesses, board member participation and knowledge is critical and in some cases this could extend beyond oversight and into technology reviews for example. Such a move could mirror the way that audit subcommittees perform their function, or in the way the board provides fiscal governance for a company. It is imperative that IT and technology take a prominent place in board meetings in this type of organisation, and it is here where the choice of a strategically minded or entrepreneurial CIO is most critical.

By company life stage

Not only is the level of board engagement further complicated by the life stage of a given organisation, so too is the type of CIO required*.[27]

a) Start-up companies, if they have a CIO at all, are likely to require individuals capable of handling a wide array of issues. Strategic input to help ensure comparative advantage is likely, as ostensibly would be the need to oversee it all. A hybrid mix of all three CIO typologies is likely needed.

b) During the growth phase, a CIO as leader would be ideally suited to enable the business to acquire the necessary capabilities and structure to survive. 'The CIO will need to have a very clear vision of how IT will add value and assist with the growth and transformation,' and this will need to be both achievable and realistic within the operating constraints faced.

c) Once the business is established, there is often a large legacy system that either needs managing, or reworking – depending on risk management practices in the business. New innovation is necessary for growth and CIOs as entrepreneurs are ideally suited to help derive new value from existing or new systems. However, the decision to appoint such a figure above a CIO as manager or leader will entirely depend on corporate culture as well as the technical and soft skill sets available in the core IT team.

d) The expansion stage of a business's life cycle can come in at least two flavours. Incremental growth would favour a CIO as Leader to implement more efficient systems and provide direction across the organisation. More radical growth – whether major change is required or simply desired, would require a stronger entrepreneurial type to weld technological and IT systems to business strategy and drive growth and create value.

e) Mature entities, assuming they are less flexible than in the previous growth phases are often behold to legacy corporate culture and personnel as much as technology. Within these types of organisation, it is crucial to not only replace legacy technologies (or even replace the whole operating paradigm), but also to take advantage of new innovations and seek opportunities to improve the business. Technology can change but without changes to culture, CIOs as entrepreneurs are unlikely to be able to affect much meaningful change.

**It must be noted that these growth phases are for demonstration only and are not necessarily sequential: companies can quickly pass from one phase to another – most often due to technology.*

The table below may help identify the organisations reliance on IT and therefore the focus they require from their CIO.

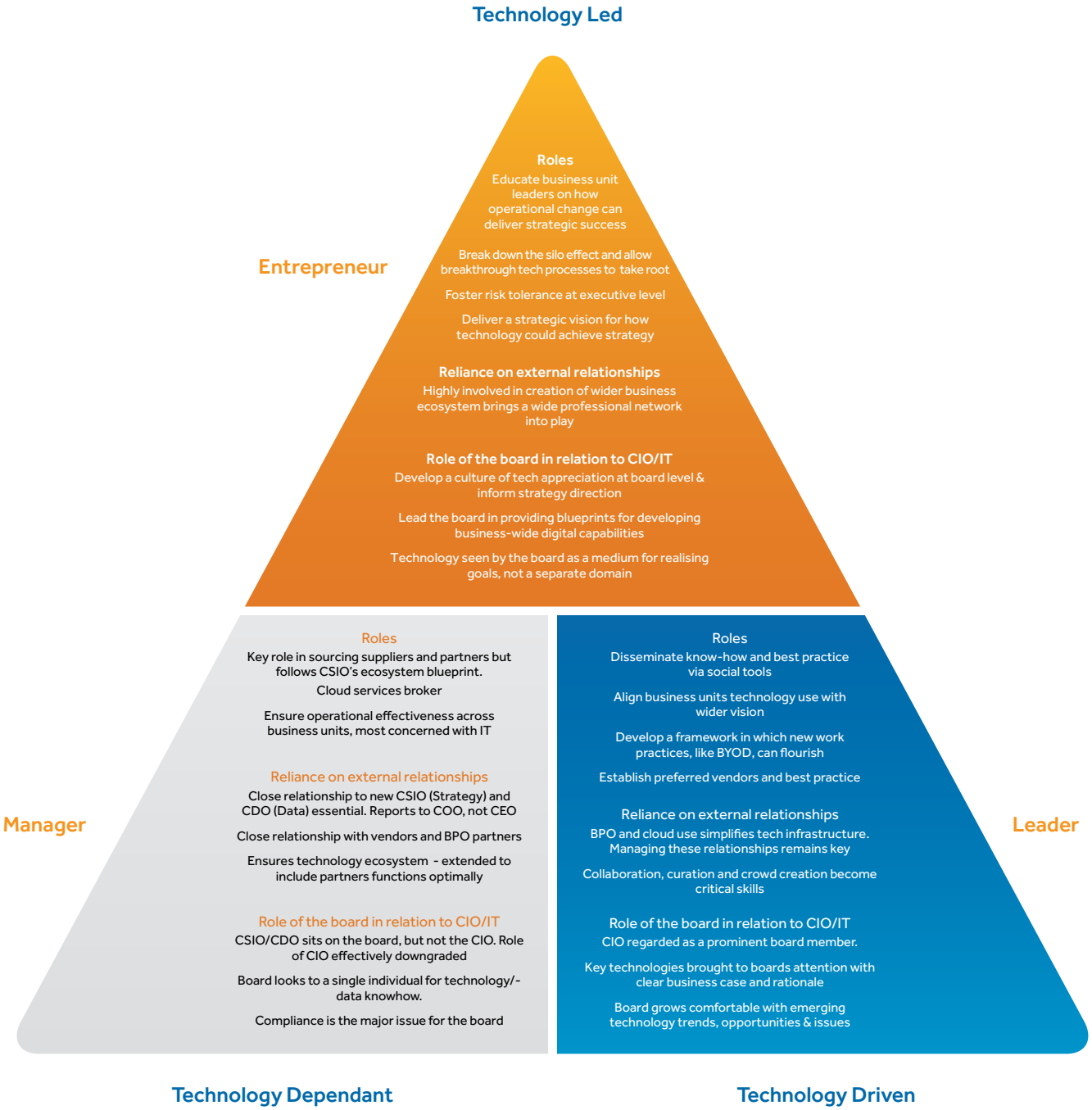

Fig: Aligning the primary role of the CIO with the organisations relationship with ICT

Some boards are also considering their own technology boot camp training sessions

3) Structural barriers to successful CIOs

There are three related structural barriers that conspire to limit the effectiveness of CIOs – especially the leader and entrepreneurial typologies.

Organisational

The relative lack of boardroom-CIO engagement and the hitherto failure of many CIOs to speak in a language recognisable to the board has developed a significant barrier to CIO success. Ernst & Young report that about one in three CIOs see budgetary constraints as a major issue.[28] Although only 5 percent of executives agree, the notion of IT as a cost centre is a significant constraint on any transformational or strategic venture proposed by any CIO.

EY also notes that whilst 36 percent of CIOs strongly agree that while the C-suite demands an entrepreneurial CIO, it restricts the CIO's ability to operate autonomously. Nearly one in four (23 percent) C-suite candidates agree.

Operational

Organisational barriers are strongly correlated with operational issues – and of what could be termed the typical CIO personality. A study by Professor Joe Peppard from the European School of Management and Technology in Berlin, using the Myers Briggs Type Indicator (MBTI) on actual and aspiring CIOs found that 70 percent of CIOs are introverts and have a tendency to get bogged down in detail, which can result in them struggling in a leadership role.[29]
The study found that, of the 16 possible personality types, 70 percent of CIOs fall into one category: ISTJs (Introversion, Sensing, Thinking, Judging) – hardly the mixture most likely to provide transformational leadership.

Professor Peppard notes that '...there is also consistency in the profiles of CIOs in how they perceive the world (dominance of sensing, which means focusing on concrete facts and experiences that occur in the present, gathered through the five senses) and how they make decisions (dominance for thinking, which means making conclusions based on logical analysis with a focus on impartiality and objectivity). Moreover, along the dimension of where they get their energy, 85 percent have a preference for introversion.'[30] Clearly this has huge implications for organisations wishing to use technology to drive change in the boardroom, across the organisation and in the bottom line.

There are very few traditional CIO career paths that can prepare the prospective CIO for the unprecedented level of conflicting stakeholder expectations. Focuses on control, cost and quality are rapidly giving way, albeit not in their entirety, to a demand for dynamic and diverse technologies to help drive growth and value over the coming decades. The rapidly shifting skill-set requirement means the CIO of tomorrow may not even be in the traditional IT realm. It is therefore vital that boards show an appreciation that technology is no longer the purview of a single department, and that prospective CIOs are emerging from ever-diverse backgrounds.

Soft skills will be in the ascendancy and boards must be cognisant of this. Forbes believes that '...going forward, enterprises must create a new IT organisation that takes more risks, accommodates developments like mobile technology, pushes back on immediate business requirements and enables new ways of doing business. The future must intrude more on the present.'[31] Again, the requisite mental shifts are not consigned to the CIO; if the board does not fully understand what is at stake, the danger of disharmony between executive management and the board will increase.

Board structure

Doreen Wright, former CIO at Campbell Soup and Nabisco, and current board member at Dean Foods and Crocs states that boardrooms are largely populated by executives in their mid-sixties. During their tenure as executives, many developed the perspective of IT as a cost centre and thus '... board members still have this very dated and inaccurate view of the CIO being too technical, not having good communication skills, and not being able to talk in business terms.'[32] Furthermore, she estimates that whilst some 50 percent of board appointments are handled through search firms, the other 50 percent occur through personal referrals.

Didier Cossin, director of the IMD Global Board Center believes that '...board education is failing to address (issues)...such as which structures enable boards to add real value, as opposed to mere regulatory compliance. And, most importantly, what makes an individual a good board member.' Mr Cossin also notes that '...board education is crucial because today's chief executives are overstretched and confronted with an incredible rise in complexity from society, governments, alternative business models, global changes, new risks and opportunities and shifts in economic conditions.'

Both operational and board structures suggest a need to re-examine recruitment methodologies – for both prospective board members and CIOs. Overcoming the relevant barriers is not only desirable, but necessary as shown in these three examples:

- PwC concludes that *'...just how strategic a CIO should be—if at all—varies according to your company's needs and expectations, and your skills and interests. A successful CIO must be able to assess and navigate those expectations, compare them with personal strengths and interests, and decide how best to match the needs and capabilities.'*[33] *The board meanwhile must set its expectations clearly.*
- Chris Curran in a CIO.com article states that *'...A CIO of one type can, in fact, be successful in the other phases if he or she recognises the potential skill (and interest!) mismatch and gets the right lieutenants in the right roles ... Unfortunately, there's often an expectation that the CIO can do it all, and that belief can cause some of the mismatch problems.'*[34]
- Empirical research from Taiwan concludes that'*...a match between business strategy and CIOs of certain repertoires of competencies, experiences and personalities could lead to better organisational performance. The business performance in 'matched' organisations is significantly better than that in 'mismatched' ones.'*[35]

4) Choosing your CIO

Recruitment approach

'Visualising where you want to be in five years, one year, and even next quarter, will be critical to see how a new CIO fits into that matrix,' suggests Inc.[36] Since the role of CIO will depend on a company's strategic vision goals, capital available, age and even past legacy decisions it will be necessary to delineate which areas the CIO should oversee– whether it's just the IT department or also aspects of the research and development department.

There is also a critical need to see if a prospective hire works well within the corporate culture. For that, Inc notes, you could start by tapping into the best qualities your existing employees share[37] and assessing fit. Although still not an exact science, increasing data volumes – not least from social sources – are enabling a constant improvement in accuracy.

Shon Burton, founder of software company HiringSolved notes that social footprints '...offer us a much more rich profile of candidates than we had before.' Scott Hebner, VP of social business at IBM believes that as well as with recruitment, social will enable better retention: '...in 2014, we'll begin to see organisations tapping social and behavioural data to better understand what is important to employees, what motivates them, why they stay with an organisation, and much more.'[38] This is of great importance, since a third of CIOs are reckoned by Harvey Nash to be actively looking for a new job.[39]

It is critical that such technologies are utilised to both retain and source the best talent. The array of challenges emanating from big data alone suggest a need for '...highly specialised skills currently lacking and impossible to recruit completely within any one organisation.'[40]

A changing search

The period to 2020 is set to become the first truly digital decade, in which Gartner says '...digital technology will move to the forefront of finding new sources of value in how individuals interact with each other, how consumers interact with providers, and how enterprises interact with partner and supplier technologies.'[41] Boards need to adjust their search for their ideal CIO, mindful of what this digital trend means for CIO requirements.

These include shifts in:

- **Business understanding :** from breadth to depth
- **Primary focus:** from operations to monetisation
- **Scope of accountability:** from IT organisation to ecosystem
- **Planning approach:** from routine to dynamic
- **Measure of success:** from efficient ways of working to effective outcomes

Key questions for choosing your CIO

The board needs to take a step back and focus on core innovation questions.[42]

This will form the basis of a strategy to which you can match the right CIO type. For example:

- **Why do you have to innovate in your company?**
- **Where do you need innovation as a priority?**
- **How much innovation should you go for?**

Prospective CIOs are emerging from ever diversive backgrounds

Question to ask the CIO

To help assess which CIO type might best fit with the means available, the following questions should be asked:[43]

- Can you directly correlate business value with your IT spend?
- Do you know how your IT spend compares with the competition?
- Is IT a cost-effective business partner?
- Can you rely on IT promises?
- Is security managed and aligned with business risk?
- Is there a clear path for de-commissioning old technology?
- Do you know which technology is essential for your business going forward?
- Do you have the right talent in the organisation to support the type of CIO you are targeting?

Questions to ask the Board

Several questions the board also needs to answer which could be better answered with CIO input.:[44]

- How can you innovate more effectively?
- With whom should you innovate?
- Who is going to be responsible for what in innovation?

5) What the Board needs to do now

New strategies and structures are squarely in the board's domain, and since technology is impacting these facets to a significant extent, the need for board technology education is pressing. Boards need to ensure that their organisations exploit and maximise the benefits of technology as well as mitigate the potential impact technologies could have on core business activities and processes. To be effective, boards need to build their understanding and awareness of IT and other technologies. Although boards vary in their preparedness for the digital economy, a number of actions are likely needed: some structural and some of a more operational nature.

Operational changes: Individually these changes may not suffice in impact, but together can build a stronger technology narrative among board members.

- Boards need to develop an early warning system capable of picking up on trends and emerging signals. The wider ecosystem – extending unto business vendors – but also including personal networks is a good place to start.
- Use technology boot camps and workshops for members to help initiate a broad grounding.
- Sponsor whitepapers and periodic technology reviews that revolve around future-oriented questions of 'what if?'
- Plan and actively accommodate for face time with technology leaders, the CIO and employees.

Structurally there are a number of important issues that need to be resolved to help place technology strategy accordingly:

- Consider the establishment of a Technology Advisory Board and determine its status with the board. Harvard Business Review notes that '...the directors of Procter & Gamble, for instance, have established an Innovation and Technology committee; the board of specialty-chemical maker Clariant has done the same; and Pfizer has created a Science and Technology committee.' [45]
- Conduct periodic board reviews of internal technology projects to determine strategy alignment and benefits. Running these against best-case examples may help develop a degree of critical thinking.
- A role for relevant Risk Committees in the management and mitigation of technology risk needs to be defined, articulated and implemented.
- In the longer term, boards should be placed to administer IT education to employees.

6) Summary

The board has many considerations to ponder when appointing the next CIO or deciding how to raise the strategic influence and capability of the current one. Since an individual alone is unlikely to be able to shoulder the burden of expectation that technology based opportunities offer, the board must work on creating the right environment for its prospective CIO.

The boardroom itself is an appropriate place to start implementing a wide range of procedures and policies to help engender more appreciation and understanding of technology opportunities and limits. Beyond that, the board must carefully analyse the state of its corporate culture, the levels of talent within the organisation – especially within IT – and whether or not the personality of the company will fit well with that of its prospective CIO. Of course, more fundamental questions surrounding the board's role in technology and what exactly innovation is aiming to achieve could be partly informed by a knowledgeable and effective CIO. In order for the CIO to be able to assist and help develop the strategic technology capability of the board, the board and others in executive management need to help create the conditions within the organisation and infuse them in its corporate culture to enable the more strategic minded CIOs to influence the increasingly important technology issues that confront business. Not all CIOs will be able to capitalise on being given such a platform, but for those that do the rewards are considerable.

Appendix 1

Managers first ask, "How?"

Which refers to actions that will deliver the strategies. They also ask "When?" "Where?" or "Who?" Managers are interested in process-related questions around projects, timetables and outputs.

Leaders first ask, "What?"

Which refers to strategies that will deliver the vision. They might ask "What products?" or "What technologies and for whom?" Leaders are less interested in how things will be done than in what things will be done.

Entrepreneurs first ask, "Why?"

Which refers to setting the vision. They will ask, "Why are we doing this in the first place?" because they are looking for new ideas. Entrepreneurs are inquisitive and reflective.

CIO as:

- Manager – delivers today. Works with the Leader and Entrepreneur to drive out value from the organisation. Manages the business for commercial success.
- Leader – plans for tomorrow. Works with the Entrepreneur to design a new position. Leads people into tomorrow by engaging them in change throughout the organisation.
- Entrepreneur – dreams about the future. Seeks out change. Shares ideas with others and innovates against those changes to gain commercial advantage.

Resources

1. Source: CIO Magazine, 2012
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About Advanced 365

Advanced 365 is a leading UK based provider of CIO Advisory, Business Innovation Solutions and Managed Services. Over 250 organisations rely on our expertise and service excellence to improve their operational efficiencies, control costs, and capitalise on digital business opportunities.

Advanced 365 Business Innovation has over 25 years' experience as a leading provider of pioneering software solutions, with tens of thousands of organisations using our products and services. We enable our customers to increase business value and maintain competitive advantage by maximising the potential of existing data and applications, combining core systems with latest technologies.

Within our CIO Advisory Practice, we work with CIOs, CFOs and other senior managers to address immediate and long term opportunities and issues such as:

- Business and Financial Alignment.
- Operational Transformation.
- Technical Strategy.

Advanced 365's relationship with David Smith is one of many relationships we have with prominent industry leaders to ensure we can provide the very best ideas, innovation and thought leadership in the industry to our clients.

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Global Futures and Foresight (GFF) is a strategic futures research organisation. The aim of GFF is to develop views of the future to help their clients embrace change with more certainty thereby releasing the full power of their creativity and innovation. GFF helps its clients to reduce their risk of being blindsided by change and to be better enabled to adapt to the fast changing world.

GFF clients number some of the largest and most prestigious firms from around the world including: NATO, HSBC, Lloyds/TSB, RBS, Lloyds, More Th>n, e-sure, Kraft, Mars, Steria, CSC, Unisys, Cisco, Microsoft, Siemens, Equinix, Deloitte, Ernst & Young, PwC, CBRE, Royal Mail, Bausch & Lomb, Linpac, Kraft, Heinz, SAS airlines, Philips and many other businesses and academic institutions.

For more information:

Advanced 365 Limited, registered in England, company number 2124540.
Registered office: 230 City Road London EC1V 2TT
t: +44 (0)20 7880 8888 **e:** info@advanced365.com **w:** www.advanced365.com

www.advanced365.com

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