Knowledge Management Research & Practice (2015) 1–9

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Enterprise information asset management: the roles and responsibilities of executive boards

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Abstract

In the modern organisation the effective management of data, information, content and knowledge is crucial for enhancing competitiveness and growth. There is a profound need for all levels of business management to understand the risks, challenges and business benefit of managing these 'Information Assets'. This paper describes the results of qualitative empirical research to investigate the roles and responsibilities of Executive Boards to ensure effective management and governance of Information Assets. Personal interviews were conducted with Board members in Australia and the United States. The results indicated that Boards often fail to fully appreciate the strategic value of Information Assets and do not understand the organisational risk and untapped business benefit resulting from ineffective Information Asset Management practices. This paper suggests that Executive Boards should be engaged in discussions about Information Management and fulfil strategic-, control- and institutional roles to guide the way Information Assets are managed and deployed.

Knowledge Management Research & Practice advance online publication, 2 March 2015; doi:10.1057/kmrp.2014.39

Keywords: Information Assets; Information Asset Management; Enterprise Information Asset Management; governance; Executive Boards

Introduction

Organisations are responsible for effectively deploying valuable assets and resources to deliver the greatest value to their clients. Twenty-first century organisations realise that most of their capacity to create value does not only reside in traditional tangible and financial resources and assets (Lerro *et al*, 2012). Data, information, content and knowledge, that is, both explicit and tacit knowledge, can significantly enhance organisations' business performance (Willis & Fox, 2005; Bedford & Morelli, 2006; Ladley, 2010; Schiuma, 2012; Choo, 2013). Previous research by the authors confirmed that these 'Information Assets' are becoming increasingly important as organisations experience a complex digital environment and increased competition (Evans & Price, 2012). They are critical for the survival and growth of organisations and their people and therefore have to be actively managed. In short, information and knowledge are the 'modern day gold' (McFadzean *et al*, 2007).

Various terms and definitions can be employed to describe intangible information and knowledge. For the purpose of this paper the term *Information Assets* is used to refer to all explicit, codified data, documents and published content, irrespective of medium (hard copy or soft copy) and format (e.g., Word document, spreadsheet, email, drawing and HTML). The definition also includes tacit knowledge, that is, knowledge in peoples' head.

Received: 9 June 2014
Revised: 25 September 2014
Accepted: 23 December 2014

These intangible assets are inputs to the business. *Information Asset Management* (IAM) ensures that data, information and content are "treated as assets in the true business and accounting sense and avoids increased risk and cost due to data and content misuse, poor handling or exposure to regulatory scrutiny" (Ladley, 2010, p. 4). *Enterprise Information Management (EIM)* refers to a programme that manages Enterprise Information Asset to support the business and improve value (Ladley, 2010).

There are indications of a continued lack of understanding at Board level of the strategic importance of managing Information Assets (McFadzean *et al*, 2007; Price & Evans, 2013). Limited studies have been conducted to determine the role and responsibility of Executive Boards to ensure that these assets are effectively managed. The CGEIT methodology developed by ISACA (NCC, 2005) suggests best practices in the area of strategic management of Information Technology (IT) assets, including information security management. Information security refers to the protection of valuable assets – that is, the information 'recorded on, processed by, stored in, shared by, transmitted or retrieved from an electronic medium' – against loss, misuse, disclosure or damage (NCC, 2005, p. 49). In this methodology the roles of various stakeholders are described, but no mention is made of the role of the Executive Board, except for their risk management responsibility (NCC, 2005, p. 51).

This paper addresses this research gap by describing why IAM is important and how Directors perceive their role in IAM. For example, according to the RACI model (http://racichart.org/) the roles and responsibilities of Board members for IAM might be one or more of the following: *Responsible* (the person who performs the work), *Accountable* (the person ultimately accountable for the work or decision being made), *Consulted* (anyone who must be consulted with before a decision being made and/or the task being completed) and *Informed* (anyone who must be informed when a decision is made or work is completed).

The first part of this paper refers to recent research and literature about information as a vital asset to enhance organisational effectiveness. The role of Executive Boards, especially related to IAM, is also discussed. This leads to the research questions, followed by a description of the research methodology, the research findings and a discussion about the potential contribution of Board members to IAM. The final parts of the paper consist of the conclusions, recommendations, limitations and suggestions for future research.

Literature review

The roles and responsibilities of Boards of Directors

Corporate failure such as in the Enron case – where the use of accounting loopholes and poor financial reporting allowed executives to hide billions of dollars in debt from failed deals and projects – has created a new management discipline known as Corporate Governance, which is today at the top of every Executive Board agenda (Nguyen, 2013). In the 2002 report on Corporate Governance in Budget Funded Agencies (Willis & Fox, 2005) the Australian National Audit Office defines Corporate Governance as follows:

> Corporate Governance generally refers to the processes by which organisations are directed, controlled and held to account. It encompasses authority, accountability, stewardship, leadership, direction and control exercised in the organisation. It is the control of corporations and systems of oversight and the accountability of those in control.

The role of the Board in Corporate Governance includes giving direction, leadership and accountability, as well as overseeing the systems and processes by which the company meets its obligations (Willis & Fox, 2005).

Stiles & Taylor (2001) categorise the areas of responsibility for Boards as a strategic role, control role and institutional role. The *Strategic role* includes setting the parameters of the organisation's activities and screening proposals for strategic and operational goals. Young & Thyil (2008) agree that the Board's strategic role is increasingly important as the increased expectations from a range of stakeholders including employees, regulatory agencies and shareholder activist groups, are forcing Boards to increase their involvement in strategy formulation, strategic decision making and strategic control. The *Control role* ensures alignment of managerial actions with shareholders' interests and includes evaluating budgets and plans, monitoring the environment and benchmarking against competitors. The *Institutional role* involves acquiring critical resources, building relationships with shareholders and mediating between internal and external coalitions. With reference to the RACI model it is critical for Boards to remain informed (I) to enable them to conduct their Strategic, Control and Institutional roles effectively (http://racichart.org/).

Information as an asset

The Resource-based View theory perceives the firm as 'a unique bundle of idiosyncratic resources and capabilities' (Wernerfeld, 1984, p. 172). The primary task of management is to maximise value through the optimal deployment of existing resources and capabilities, while developing the firm's resource base for the future. In this theory, a firm's resources at a given time could be defined as tangible and intangible assets that are tied semi-permanently to the firm. This theory attempts to explain and predict why some firms are able to establish positions of sustainable competitive advantage and produce higher profits by deploying the resources better than others (Wernerfeld, 1984). The Resource-based View of the firm was expanded by Grant (1996) to the Knowledge-based View of the firm to indicate the important role of knowledge as a resource (i.e., asset) that can lead to higher returns over a long time. Information Assets help organisations achieve competitive advantage by enabling delivery of cheaper products or more differentiated products (Porter, 1980; Citroen, 2011).

Information Assets are different from most other resources. The value of information is not easily quantifiable and its value depends on context and use. The potential value of an Information Asset is not a reliable indicator of its actual value; if the value is never crystallised, there is no benefit to the organisation (Eaton & Bawden, 1991, p. 163). The economic value of information often comes from thinking in terms of deprival value, that is, what would the organisation lose and what would be the consequences if it were deprived of the information (Young & Thyil, 2008). The accounting rules do not allow such intangible assets into the balance sheet, even when they are the main source of value in a business. Accounting has therefore not caught up with the knowledge economy.

The resource-based approach challenges the view that information should be treated as an overhead expense, but as a source of business benefit (Strassmann, 1985; Evans & Price, 2012; Laney, 2012; Schiuma, 2012). Although they are hard to account for, these assets have significant potential benefits and 'just because intangibles cannot be counted on the balance sheet does not mean that they do not count and should not be counted' (Higson & Waltho, 2009). This approach to focus on business benefit is particularly suitable for application to the enterprise information resources of organisations where the cost of information is often high and where there is a growing need to justify such costs by positioning information as a strategic and important business asset.

Information Asset Management

Information Assets play a significant role in organisations' performance (Schiuma, 2012) and as such they need to be assessed and managed as an important resource (Lerro *et al*, 2012). A benefit of the resource-based approach is that the concept of information and knowledge as a corporate resource should have a positive influence on the perceptions of managers, that is, it is 'simply shorthand for information is important' (Eaton & Bawden, 1991). The effective and responsible management of Information Assets creates business benefits, enhances organisational effectiveness and supports the organisation in achieving its goals (Oppenheim *et al*, 2001; Bedford & Morelli, 2006; Young & Thyil, 2008).

People on all levels of an organisation should agree to manage and leverage information as an asset (Laney, 2012). Information Management is everyone's job (Young & Thyil, 2008). Most companies use email systems for inter- and intra-office communications. Emails contain important documents such as contracts and electronic records for accounting and audit purposes and if a problem with a transaction occurs, the organisation needs to refer to these records as evidence of the transaction (Shipman, 2002; Bedford & Morelli, 2006). IAM also supports collaboration whereby people from across the organisation who deal with the same partner organisations on different issues can collect information that could be of benefit to others (Bedford & Morelli, 2006). The need to share useful information among different areas of the business necessitates better control of records in line with statutory obligations.

Previous research (Hunter *et al*, 2011; Evans & Price, 2012) identified and categorised the 'barriers to effective IAM' as Awareness, Governance, Leadership and Management, Justification and Tools. The governance barrier refers to the lack of accountability and responsibility, as the structure of an organisation often does not include a role of Data Manager, Information Manager or Knowledge Manager who can influence the strategy of the organisation. The real challenge is for Boards to add IAM to their agenda, and treat it the same way as they treat Human Resources (HRs) or Finance. This finding is in line with a suggestion from Ceeney (2009, p. 339) that 'we need to demystify Information Management and make it mainstream, and we need to do it now'.

The roles and responsibilities of Boards of Directors in IAM

EIM is a vital element of Corporate Governance and a robust information management policy should form part of a company's Corporate Governance and risk management plan (Willis & Fox, 2005) to ensure that information is managed in an agreed, documented, controlled and appropriate way. This includes transparency, accountability, compliance and security (Willis & Fox, 2005). Citroen (2011) found that Boards of Directors do not understand the importance of measuring and managing Information Assets as actively and carefully as traditional assets.

Cutting & Kouzmin (2002) emphasise that Executive Boards should ensure continual learning by asking pertinent questions and maintaining a spirit of enquiry. The Board and the corporation should encourage the development of a greater understanding of their reality and stimulate the creation of new knowledge (Young & Thyil, 2008). Horne (1998) adds that Boards often have experience of finance, marketing, manufacturing, as part of personal careers, but rarely experience of information management. Boards are often not provided with information to make strategic decisions. Very few managers provide information directly to the Board and they only do so in response to direct questions from the Board (Citroen, 2011). The quality of the information used by the Board is also stressed as an important condition for any type of information to be trusted as a supportive base for strategic decision making. Correct strategic decisions can only be taken on correct and complete information.

Organisational culture is a determinant of good governance and a fundamental determinant of the success or failure of information and knowledge management. Extensive research has been conducted to identify cultures that promote information and knowledge sharing and it was found that such sharing flourishes in less formalised, more decentralised *ad hoc* cultures that foster trust and entrepreneurial attitude (Ragab & Arisha, 2013). As the Board is the most senior level of management in the firm, and because culture is usually defined by top management, it is reasonable to argue that it is the Board's responsibility to encourage a learning culture with a focus on the effective management on information.

The following research questions arise from the issues identified by the literature:

(1) What are the perceptions of Board members about the value of information as an asset and the current management practices regarding these assets?
(2) What are the roles and responsibilities of Boards of Directors and how do these extend to the management and governance of Information Assets?

Research methodology

Qualitative research was conducted to investigate the role of the Board of Directors in IAM. A starting point for relevant qualitative research is to gather the opinions and experiences of professionals, managers, executives and consultants (Bruner, 1990; Czarniawska-Joerges, 1995; Scholes, 1981, p. 205; Swap *et al*, 2001; Tulving, 1972). The research described in this paper consisted of a series of problem-centred interviews (Flick, 2006) with 11 participants from organisations in Australia (P1–P6) and the United States (P7–P11) (Table 1). Purposive sampling was used to select participants who are on the Executive Board of at least one organisation. These organisations ranged from Small and Medium Enterprises to large multinational corporations in various industries. The Standard Industrial Classification (SIC) codes (http://siccode.com) are also included in the table. The sample size was not prespecified, but determined on the basis of theoretical saturation, namely the point in data collection when new data no longer bring additional insights to the research questions. The sample is large enough to reach such theoretical saturation. Board member perspectives were sought, not statistical significance.

Table 1 Interview participants

Participant number	*Industry and SIC code*	*Country*
1	Transportation and public utilities – water transportation (4400)	Australia
2	Transportation and public utilities – railroad transportation (4000)	
3	Services – legal services (8100)	
4	Financial and insurance services (6400)	
5	Financial and insurance services (6400)	
6	Services – membership organisations (8600)	
7	Financial and insurance services (6400)	The United States
8	Services – business services (7300)	
9	Financial and insurance services (6400)	
10	Financial and insurance services (6400)	
11	Services – hotels (7000)	

The personal interviews were conducted for 60–90 min. An interview guide was used to focus the discussion on the specific research question and the research participant's experience and to promote a consistent approach across a number of interviews (Miles & Huberman, 1994; Swap *et al*, 2001; Flick, 2006). The questions were open-ended and discovery oriented. At the start of the interview, general questions about the organisation were asked to develop trust between the researcher and participant and to provide a context for the more detailed discussion to follow. Although 'seed questions' were used at the start of the interview, the researchers also used probing questions to provide further material and details of what had been presented. Both planned prompts (predetermined) and floating prompts (impromptu decisions to explore a comment in more detail) enabled the researchers to delve into detail as required. Particular attention was paid to the consideration of confidentiality of sensitive corporate information. Consent was sought, confidentiality agreements were signed, security provisions were undertaken and names of individuals and organisations remain unidentified. Consequently, the participants were willing to enter into open and trusting discussions. Each interview was audio recorded and transcribed verbatim.

Analysing qualitative data involves significant effort (Miles & Huberman, 1994; Flick, 2006). The interview transcripts were separately analysed by each of the researchers and then discussed to iteratively identify common patterns or themes (Strauss & Corbin, 1998; McFadzean *et al*, 2007). Open coding was used to disentangle or segment the data to produce a set of codes. Axial coding was used to refine and differentiate the categories arising from the open coding and to identify the categories that are most relevant to the research questions. As a third step selective coding was used to continue the axial coding at a higher level of abstraction (Flick, 2006).

Findings

The role of the Executive Board

Various roles and responsibilities of Executive Boards were identified by the interview participants, such as establishing the strategy and policies of the organisation (P1) and identifying opportunities and solving problems in consultation with management (P1, P2, P5). A further responsibility of an Executive Board is asset management to ensure that assets such as finances, people and equipment are deployed to the benefit of the organisation and that the cash flow is managed tightly.

Risk management is an important aspect of an Executive Board's role. P4 stated that Boards are risk averse, therefore 'if you throw some fear their way, including reputation risk and getting it wrong, you'll get people sitting up and taking notice; Boards are scared of things going wrong'. Australia is highly regulated and if there is a breach a regulation, 'the flags go up right to the top very, very quickly' (P4).

The Board influences the structure of an organisation, including the appointment, review and performance management of senior managers and the CEO (P2, P3), as well as their dismissal (P1). Good management is crucial for organisational success (P5). The relationship between the Board and the CEO should be collegiate and friendly, but independent (P1), else 'the whole governance structure will struggle' (P2). Management needs to keep Board members properly informed 'with no surprises' and the relationship should be based on confidence in each other, as well as mutual support and respect.

> I would have the expectation that I don't wake up in the morning and read in the Sunday Mail that something's happened. The Board needs to know, for example, if there is a breach of policy, if there's been a defalcation. The information needs to be accurate and timely. If accurate information is not available, the Board needs to be told, as sometimes, knowing that something is not there is the most important information to get. (P1)

> The Board should not make decisions if they are not properly informed by management with the required documentation. A good management report would include the source of the information, how reliable it is and what needs to be double checked. (P2)

The role of the Board is therefore to oversee the business, but it has to be careful not to interfere with management. According to P1 the Board's role in management is 'to keep out of it more than to get into it'. However when management has not fulfilled its responsibilities the Board will have to trespass into management, but it is a balancing act (P2).

The value of information as an asset

In reality the quality of information and how it is stored, maintained and managed is a long way behind that of finances and other assets. P5 stated that for his organisation 'the management of the finances is on tertiary school level, while our information management practices are on primary school level'. Board members also tend to confuse information with IT and most Directors don't think about information as being discrete from the IT systems. 'Knowing what information we have does not come close to knowing how many nuts and bolts we have and that is crazy' (P3).

Information Assets are different from human and physical assets because it is difficult to quantify the value of information. Information is 'an amorphous concept that is like a handful of jelly' to most Directors (P3). Other Board members also mentioned this challenge:

> Information is just a concept. Show me a bucket of information. And if I did show you a bucket of information it would be a bunch of hard drives and well what's that worth? But what's on those hard drives is a potentially measureable value to your organisation. (P1)

> If you misappropriate $1 million and it comes out, people ask 'where is the $1 million'? You lose a truck, they ask 'where's the truck'? Shareholders look at the dollars, the physical assets, the physical liabilities, the generation of wealth, you know what is here. But this is nebulous. (P4)

> If you go and buy a new bulldozer, you know that bulldozer is going to last 15 years, and you know that it cost you $200 000, so you depreciate it over that period of time. It is very easy to understand and you've got a return on that investment that's well quantified. (P1)

The value of Information Assets is at best a guestimate in terms of derived revenue or customer value, 'which is why accountants have a hard time figuring it out' (P1). According to the Board member of a legal association, their CFO 'throws his hands up in the air' when they start talking about managing Information Assets, because he cannot view the assets on his balance sheet. 'So we're saying it has no value, so instinctively the accountants don't care about it and instinctively the Board doesn't care about it' (P3). Although the value of information is unknown, there is a greater risk in not having information. P9 agreed that he cannot put a dollar value on information, but he can understand what it would cost him if he did not have it.

The role of the Executive Board in IAM

Most Board members understand how important information is, especially for decision making. 'One wrong decision, based on wrong information, can ruin the whole company' (P11). The historical preservation of information is therefore fundamental to ensure that information can be found when required. 'If we can't find an email that's important at the right time, we start getting a little bit sweaty under the armpits' (P4). Apart from having information, it is also very important to know who has access to relevant information. 'Sometimes the best information you can have is who knows best and were to get them, in other words information about the experts' (P1). P4 referred to the wisdom contained in the heads of expert employees as 'corporate wisdom'.

The research indicated that, even though they realise that information is valuable, the management of these assets is not a top priority. Most Executive Board members also do not understand best practice regarding IAM:

> Board members sitting around the Board table do not see information management as a priority and nobody says 'hang-on a minute, this is fundamental'. Boards really don't get this and they need to. (P3)

> Is there a better way of doing it? Whatever … It's just not on the agenda. (P4)

> I get it, but I don't know whether I get it enough to actually do something about it. (P5)

> The risk of missing a deadline or not being able to find an email in one minute rather than 10min has never been measured in my organisation. (P4)

Executive Boards often regard information management as an operational activity, rather than a strategic requirement to gain competitive advantage (P1, P2). They do not regard information management as a Board responsibility and prefer to delegate it to the Information and Records Management specialists (P4). For example, the Board member of the industry association referred to an important document that has to be kept on file, but added that the Board only wants to know that this information is saved, recoverable and incorrupt: 'The Board doesn't care whether it is saved on a file, a computer, a wheelbarrow or in a cupboard' (P6).

Boards treat Information Management as they have always treated IT, namely as a cost, rather than a source of business benefit. P3 suggested that focusing on the benefits of effective information management would be a better approach:

> You could potentially reduce the cost per revenue dollar for managing that asset. That would be a conversation worth having. The difference in philosophy around a Board in talking about a revenue generating centre and a cost centre is very different. It is not so much about how we cut costs and how we cut heads, it's about how to grow this business, and that's a very different equation. We've been through cost reductions over and over again. And you can't squeeze the lemon more than you can squeeze it.

P3 added that they need to change the debate at the Board table away from IT focus to ways in which Information Assets should be managed and 'that's a mindset change which is not easy'. In his opinion the Australian Institute of Company Directors (AICD), which is renowned as a world leader in the delivery of Director Education, can play an important role in highlighting the importance of IAM.

Discussion

The role of the Board in ensuring the effective management of Information Assets, as identified during the interviews, is categorised into the three areas as identified by Stills & Taylor (2001), namely, their strategy, control and institutional roles.

The strategic role

Executive Boards are responsible for, and interested in, strategy and crisis management, including the information strategy (Bentley & Clarke, 2011). However, Board members do not see the way in which information is managed as being either strategic or related to crisis management. There is either a conscious abdication of responsibility from the Board level, or an unconscious abdication because they simply do not know what they do not know. It is clear that Boards recognise that information is important, yet they do not view it as a strategic resource that has to be both managed across the entire information lifecycle and deployed. Board members seldom ask to see the IAM strategy to ensure that they are informed about *how* the information is managed, in line with the RACI model. This lack of interest is in stark contrast to the diligent attention paid to the HR or IT strategy. The research showed that Board members do not have an 'information focus' and often regard the management of information as a cost, instead of focusing on enhancing information quality, improving information practices and driving business benefit. The value of information is hard to measure and therefore Executive Boards often ignore it. From a strategic perspective Board members can inject a culture of valuing information as a business asset and as a valuable deployable resource, and implement the business governance that is required to do so.

The control role

As far as the control is concerned, the research indicated that Board members do not regard information management as a Board role but rather as an operational level responsibility. They view information as something that is part of the process of the business and they simply assume that information management will be done somewhere as part of the business of the organisation. They assume that it is being done, mostly as part of the IT function's responsibilities. An important aspect that came out of the Board interviews was that the Board has to walk a very fine line between being sufficiently informed and actively engaged. It is important for them not to be involved in the day to day management of the organisation, yet they have to understand enough of what is going on to be aware of any risks.

Risk is high on a Board's agenda. However, Board members often do not recognise that risk cannot be mitigated without good information. There is risk inherent in not having the right information. If organisations have a plethora of databases and spread sheets on employees' hard drives, resulting in silos of information and duplication, risks are injected into the organisation. There is a chasm between Boards understanding that information is used in their organisations every day, and the realisation that there is inherent risk in the way the information is managed. There are also legislative and regulatory requirements to comply with. One cannot identify risk without having good information; being able to identify risks and mitigate them requires information. If there is a wasp in the room they have to be able to see it.

The institutional role

From the perspective of the institutional role, in some ways the communication should be flowing from the Board to shareholders, rather than the other way around. In a private company or a publically listed company in the private sector, the shareholders should be asking the Board how well that organisation is managing its information. If it is a public entity, such as a government agency, the ministers should be asking the hard questions of those agencies as to how well they are managing their information. The Board would have an institutional responsibility to reassure the investment community, or the owners, that in fact information was being well-managed. That would be part of their institutional role.

The roles and responsibilities of Executive Boards for IAM are summarised in Table 2.

Table 2 The role of the Board in managing Information Assets

Role of the Board (*Stills & Taylor, 2001*)	*Information Asset Management*
Strategic	Oversee the development of an IAM strategy
	View information from a business benefit perspective, not a cost perspective
	Alignment of IAM strategy with the business strategy
	Understand the risk in not having access to important information
	Understand the potential for organisational risk and/or crisis caused by ineffective IAM
	Understand that IAM is not an operational activity only, for which Records managers or IT are responsible, but that the Board has a responsibility to play a role in IAM
Control	Monitor and review the implementation and maintenance of an effective EIM environment
	Oversee the development and implementation of an IAM plan and policy
	Ask hard questions of the executives and the senior leadership team about the way they are/are not managing their information
	Imposing performance requirements and key performance indicators for IAM on the chief executive
	Ensure compliance with legal and regulatory requirements
	Ensure that the organisation act appropriately from a commercial/business perspective
	Comply with workplace legislation
	Ensure ethical conduct
Institutional	Develop an 'Information Culture'
	Align managerial action with stakeholder interest
	Promote collaboration between internal and external interest groups
	Ensure that communication flows from the Board to the shareholders
	Explain to shareholders how well the organisation is managing its information

Conclusions and recommendations

In line with Horne (1998) the research found that information management is an important subject and that good business governance should drive effective information management. Even though the Board members of an organisation are not responsible for the actual management of the enterprise information, the research shows that Board members typically also do not take responsibility for querying the practices of the organisation regarding IAM. They fail to do so, either deliberately because they avoid an issue and do not regard it as their role, or accidentally by simply not knowing enough about managing information as a business asset to be able to ask the difficult questions. They often have neither the tools nor the experience to direct the organisation's strategy for the effective governance and management of Information Assets and to mitigate the risks inherent in its poor management.

Boards need to oversee the creation of an information management strategy and to align the information management strategy with the business strategy, making sure that these two do not work against each other. Such alignment between an organisation's information resources and its business strategy can be a significant source of competitive advantage.

Executive Boards have to ensure that the right resources are being deployed to manage the information as a business asset. To do this they need to understand who owns the information, who is responsible for its accuracy and timeliness, who sets the organisation's Key Performance Indicators (KPIs) around the good management of information and who measures the business benefits of information management initiatives. The chairman of the Board needs to appoint people with a passion for information management to the Board.

The Board needs to keep senior management responsible and be convinced that their responsibilities are being faithfully undertaken. Board members should be asking hard questions of the executives and the senior leadership team about the way they are/are not managing their information, that is, how they value it, how they deploy it, how they drive business benefit out of the information. In particular, imposing performance requirements and key performance indicators on the chief executive will cascade the message to the staff of the organisation that information should be managed as a business asset.

The Board also has a role to ensure that the organisation is operating within and complying with the legal and regulatory framework within which it operates, such as the Corporations Act, environmental legislation and so on. The Board has ultimate responsibility, individually and collectively, to ensure that the organisation is operating within the legal framework and the business framework within which it resides.

Executive Boards need to monitor and review the implementation and maintenance of an effective EIM environment. Before being appointed as the Director of a company, a person should have done the company director's course and informed themselves of the role and responsibilities of being a Board member. Organisations like the AICD therefore have a role to play in educating Board members about the value of information.

This paper argues that Executive Boards should be engaged in discussions about Information Management and shows why Boards need to ensure that their organisation has proper, working, IAM processes and appropriate monitoring in place. The challenge is to incorporate EIM into the strategic thinking of all boards. An Executive Board that properly fulfils its strategic, control and institutional roles and responsibilities, also with regard to the management of Information Assets, will contribute towards achieving business benefit.

Limitations of the research

As with any empirical study, there are limitations to our findings. Only 11 Board members from the two countries participated in this study. The small number of participants in the study limits the validity of the findings. However, the high similarity between responses from Board members suggests there is no reason to believe that the results will not generalise to the larger population of Executive Boards. However, this needs to be empirically investigated.

Future research

Further research opportunities exist to extend this study to other parts of the world. The roles and responsibilities of other role players such as the Chief Information Officer for the effective management of Information Assets should also be investigated. Furthermore, the role and responsibilities of individual employees and the impact of human behaviour on the management of information as an enterprise asset, would promote insight into the development of an information mindset that will contribute to an information culture.

About the Authors

Nina Evans is Associate Head of the School of ITMS at the University of South Australia in Adelaide. She holds tertiary qualifications in Chemical Engineering, Education and Computer Science, as well as a Masters in Information Technology, an MBA and a Ph.D. Her teaching and research interests are in the areas of knowledge management, IT management and corporate social responsibility. She publishes in numerous academic journals and delivered presentations at international conferences and industry workshops.

James Price is the Founder and Managing Director of Experience Matters. The firm is based in Adelaide, Australia and takes a position of global leadership in the business aspects of Information Management. He does research in the field of Information Asset Management and is currently working on a project investigating various aspects of IAM on three continents

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