

# Responsibility and Accountability for Information Asset Management (IAM) in Organisations

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**Abstract:** The key resources that need to be effectively deployed to meet business objectives are Financial Assets, Human Assets, Physical Assets and Information Assets (IA). Information Assets are a critical business resource for most organisations, yet they are typically poorly managed and the potential, tangible benefits from improving the management of these assets are seldom realised. Business governance refers to the decisions that must be made to ensure effective business management and also to who makes these decisions, i.e. who is responsible and accountable. Very little research has been undertaken on the role and responsibilities of various stakeholders in information asset management. This paper reports on qualitative research via confidential interviews that were conducted with C-level executives and Board members of Australian and South African organisations in both private and public sectors, to identify their perceptions of who is responsible and accountable for the management of Information Assets in their organisations. The research found that the information management decisions that must be made, and by whom, is often not clear in these organisations. Responsibility and accountability is therefore inappropriately imposed.

**Keywords:** Information Assets (IA), governance, Information Asset Management (IAM), responsibility, accountability

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## 1. Introduction

Organisations deploy scarce resources, namely Financial (money / budget), Physical (plant, equipment, IT), Human (people) and Information Assets, in order to achieve their corporate objectives. As long ago as 1989, Chambers said that “command of information decides who survives and who wins in the corporate jungle”. He added that the management of information gives an enterprise a competitive edge and that “information mismanagement always leads to decline” (Chambers, 1989). It has been found that Information Assets are critical to the operation of every organisation (Freeze & Khulkani, 2007; Wilson & Stenson, 2008; Salamuddin et al., 2010; Jhunjhunwala, 2009). They drive, record and enforce organisational strategy and growth. They also help leaders to make informed decisions to improve customer acquisition and retention, employee recruitment and retention and enhance employee motivation and loyalty (Steenkamp & Kashyap, 2010). Organisational knowledge is regarded as a key factor in management practices (Garcia-Parra et al., 2009) and the capacity to create, transfer and employ knowledge contributes to organisational success and sustainable competitive advantage (Drucker, 1994; Spender, 1994; Nonaka & Takeuchi, 1995; Davenport & Prusak, 1998; Teece, 2007).

In the modern knowledge-based economy data, documents, content and knowledge play an even increasingly important role in achieving the goals of the organisation. These assets have been identified as key elements of organisational success and should therefore be exploited as fully as possible. Yet, it isn't. “Information is treated as a second class citizen” (Evans & Price, 2013: xv; ExperienceMatters, 2012).

Ineffective business practices and a lack of understanding of the cost, value and benefit of effectively deploying information in all levels of organisations, generated an inability to effectively manage Information Assets. Whilst there is copious academic and industry material on various aspects of Information Management, literature indicates that very little research has been done on why Information Assets are not managed well and who is responsible and accountable for doing so.

Previous research, conducted in Australia and South Africa (Evans et al., 2011; Hunter et al., 2011), determined that organisations regard Information Assets of value to their operations and data, information and knowledge underpins and enables every business activity. This includes both value chain / productive activity and support activities such as Finance, HR, Legal, IT, Treasury etc. Participants commented that information and knowledge are all they have in their business and that the business would grind to a halt without these assets. Despite this, few organisations manage these assets with the same rigor as they manage their other

scarce resources and not one of these organisations could claim exemplary practice in the deployment of those assets.

These findings were sufficiently compelling to justify further investigation into the reasons why Information Assets are not effectively deployed in organisations and who is responsible for ensuring that the organisation derives the benefits from these assets. The reasons for poor Information Management were categorised as Executive Awareness, Business Governance, Leadership & Management, Justification and Tools (Evans & Price, 2012). The Business Governance, responsibility and accountability related aspects of our findings are reported in this paper.

The format for the remainder of this manuscript is as follows. In the next section, terms are defined for the purpose of this paper. Literature, which relates to the stakeholders in the deployment of Information Assets, is then discussed. The presentation of the research approach and methods provides a context for the project, after which the governance and responsible role-players, as identified by the research participants, are addressed. This is followed by conclusions and suggestions what future investigation might entail.

## **2. Terms and definitions**

Available literature highlights the lack of precision prevalent in the language of this topic. Terms including business or corporate governance, information assets, information governance, IT governance and management are defined here to provide clarity for this discuss.

There is a clear distinction between governance and management. *Governance* refers to what decisions must be made (decision domain) and who makes the decisions (locus of accountability for decision-making) to ensure effective business management. *Management* involves making and implementing these decisions (Khatri, 2010; Evans & Price, 2012).

A clear distinction is also made between business/corporate governance, information governance and Information Technology (IT) governance. A common definition of corporate governance is “the system by which companies are directed and controlled” (Cadbury, 1992; Gregory & Simmelkjaer, 2002). Information governance is defined as “the specification of decision rights and an accountability framework to encourage desirable behaviour in the valuation, creation, storage, use, archival and deletion of information. It includes the processes, roles, standards and metrics that ensure the effective and efficient use of information in enabling an organisation to achieve its goals” (Logan, 2010). Based on the analysis of 60 different articles, IT governance is about “IT decision-making: the preparation for, making- and implementation of decisions regarding goals, processes, people and technology on a tactical and strategic level” (Simonsson & Johnson, 2005).

Various terms and definitions can be employed to describe Information Assets. These assets are intangible and, for the purpose of the project described in this paper, Information Assets include all explicit, codified data, documents and published content, irrespective of medium (e.g. hard copy, soft copy, microfiche and head-space) and format (e.g. Word document, spreadsheet, email, drawing and HTML), as well as tacit knowledge. These intangible assets are inputs to the business. Intangible assets such as relationship capital, brand awareness and goodwill, which are typically outputs of the business, are excluded. Tangible assets such as Financial Assets (money), Physical Assets (buildings, plant and equipment, computer hardware and software) and Human Assets (people) are also excluded from this definition (Evans & Price, 2012).

This paper addresses business / corporate governance (as opposed to information and Information Technology governance) related issues associated with the effective deployment of Information Assets.

## **3. Literature review**

### **3.1 Information assets**

Various authors refer to non-tangible assets as intangibles, information assets, knowledge assets, intangible capital (Fincham & Roslender, 2003b; Lev, 2001; Tomer, 2008), intellectual capital, intellectual assets (Bismuth

& Tojo, 2008; Litschka et al., 2006; Robertson & Lanfranconi, 2001), intangible resources (Bontis et al., 1999) and knowledge resources (Grover & Davenport, 2001). Steenkamp and Kashyap (2010) describe Intangible Assets as those assets that contribute to the organisational strategy, but are not recognised and disclosed in the balance sheet. Knowledge Assets are described as “the only meaningful resource” (Drucker, 1993), the “indisputable value drivers to success” (Jhunjhunwala, 2009: 211), the “most important production factor” (Steenkamp & Kashyap, 2010) and according to Bontis et al. (1999) it is “today’s driver of company life”. Chen and Lin (2004: 116) emphasise that the value created by intangible assets (such as human capital) prevails over that created by tangible assets (such as machines). Rodgers and Housel (2009) suggest that modern day organisations need to more actively identify and measure these key resources and drivers of value in the organisation. The ability to drive value from Information Assets depends on organisations’ governance and management practices. It is, therefore, critically important that these assets are well understood, properly managed and that they play a major role in the strategic management process (Swartz, 2007).

### 3.2 Governance

Modern debate concerning business governance is mainly informed by three publications, namely Sir Adrian Cadbury’s *Financial Aspects of Corporate Governance* (Cadbury, 1992), the OECD’s *Principles of Corporate Governance* (Johnston 2004) and the US Congress’ *Sarbanes-Oxley Act* (Sarbanes and Oxley, 2002). The Cadbury Report and the Principles of Corporate Governance present general principles upon which to base business governance to run an organisation effectively. The Sarbanes-Oxley Act embodies several of the principles proposed by Cadbury and the OECD in US legislation.

In his report titled *Financial Aspects of Corporate Governance*, Cadbury (1992) refers to corporate governance as being a driver of business performance that is achieved at both micro and macro levels. He asserts that a country’s economy and competitive position depend on the drive and efficiency of its companies, and the effectiveness with which their boards discharge their responsibilities. “They must be free to drive their companies forward, but exercise that freedom within a framework of effective accountability” (Cadbury, 1992). Anecdotal evidence suggests that the business benefit to companies of improving their information management practices is significant (Experience Matters, 2012). Governance of Information Assets for the purpose of business performance is therefore important.

However, more recently and in the light of the failures of Enron, WorldCom and others, business governance appears to have shifted its focus from improving business performance towards reducing business risk by preventing corporate misbehaviour. Corporate governance has been defined as “a system of law and sound approaches by which corporations are directed and controlled focusing on the internal and external corporate structures with the intention of monitoring the actions of management and directors and thereby mitigating agency risks which may stem from the misdeeds of corporate officers” (Sifuna, 2012). Whilst important, this focus on corporate misbehaviour necessarily reduces attention on improving business performance and this theme emerged strongly from the research.

When corporate governance is applied to the management of information assets, it is done via the usual lenses of Strategy, Internal Controls and Risk (Information Technology Advisory Committee CICA, 2002). However, it is predominantly applied to the management of IT (Trites, 2003), rather than to the management of information; the organisation’s focus is therefore on its infrastructure rather than its content. Recent articles addressing the role of the CIO still refer mainly to IT (Peppard, 2010) and current job descriptions still refer to the Chief Information Officer (CIO) as a job title for the Head of Information Technology within an organisation. In and of itself, the infrastructure adds no value, it only adds risk if it doesn’t work. It is the content that contributes the business value. By focusing on reducing the cost of IT and the risk of IT failure, organisations potentially impose responsibility and accountability on the wrong people. This theme also emerged strongly from the findings.

Logan (2010) argues that the root of the problem with the management of information is the lack of accountability, as the structure of an organisation often does not include a role of Data-, Information- or Knowledge Manager. Clearly articulating the accountability at all levels of the organisation will support the appropriate management of Information Assets. Greater board involvement in information management could therefore be a factor that affects the success of an organisation’s information asset management initiative

(McFadzean et al., 2007). There is little evidence to suggest that the management of Information Assets ranks high on the Board’s agenda. This topic is also discussed in this paper.

#### 4. Research

The research method was based upon the qualitative Narrative Inquiry technique, in which research participants’ recollections and interpretations of personal experiences were captured during one hour interviews and afterwards documented (Tulving, 1972; Scholes, 1981:205; Bruner, 1990; Czarniawska-Joerges, 1995; Swap et al., 2001). The interviewees’ narratives or stories reflected observations gained from their ‘real’ business experience as they described situations ranging from demonstrable success to manifest failure. The 22 interview participants included Board members and C-level executives, such as Chief Executive Officers (CEO), Chief Financial Officers (CFO), Chief Information Officers (CIO) and Chief Knowledge Officers (CKO) of predominantly large Australian and South African organisations in both private and public sectors (refer to Table 1).

**Table 1:** Research participants

PARTICIPANT NUMBER	TITLE	INDUSTRY
P1	CKO	Utilities (Pipelines)
P2	Managing Partner	Services (Legal)
P3	CKO	State Government
P4	CFO	Utilities (Rail)
P5	Data Management	Banking, Finance and Insurance
P6	CEO	Services (HR)
P7	CFO	Banking, Finance and Insurance
P8	CFO	Services (Automotive)
P9	CEO	Manufacturing (Process)
P10	Board member	Various, mostly banking
P11	CIO	Banking, Finance and Insurance
P12	CIO	Government (Local)
P13	CEO	Services (Information)
P14	CIO	Banking, Finance and Insurance
P15	CFO	Banking, Finance and Insurance
P16	CFO	Resources (Oil and Gas)
P17	CFO	Banking, Finance and Insurance
P18	Board member	Water utility, professional services
P19	Board member	Insurance, rail, professional services
P20	Board member	Legal, association, professional services
P21	Board member	Finance, mining
P22	Board member	Industry Association

An interview protocol was used to provide a consistent approach across a number of interviews (Swap et al., 2001). Planned prompts (predetermined) and floating prompts (an impromptu decision to explore a comment in more detail) enabled the researchers to delve into detail as required. The interviews were audio recorded and the interview transcripts were thoroughly reviewed to identify categories of data and emerging themes. As data gathered from qualitative interviews were compared it either supported the creation of new categories or provided support for existing categories. A large number of issues that support the findings from

the literature review were identified. These issues were subsequently clustered into five different categories, namely Awareness, Governance, Leadership and Management, Justification and Tools. The business governance related issues are discussed in the next section.

## **5. Research findings**

### **5.1 IAM is important, yet neglected**

The researchers took care to achieve sufficient granularity to draw meaningful conclusions. It was interesting to note that not a single executive identified a fundamental difference between an organisation's Information Assets and its other assets, namely that information is managed by every person whereas the other assets are managed by a small group of people. However, one executive did emphasise the lack of governance of Information Assets by declaring that if his organisation managed its Financial Assets with same lack of accountability, discipline and rigor as it manages its Information Assets, the company "would be broke in a week". Similarly, no executives identified that their organisations are unable to determine the cost of managing their information assets.

### **5.2 Lack of governance, accountability and responsibility**

The research findings showed a lack of business governance applied to the management of Information Assets. In one organisation (P18) there is "a total lack of interest in information and a total lack of interest in understanding how much better the organisation could be with good information". There is a general profound lack of interest in determining and allocating ownership and accountability for the management of information. P20 commented: "You can outsource the management of things, but you can't outsource the responsibility for information. Well, you probably can, but you shouldn't". An Australian banking executive (P5) said, "Who is responsible for managing information has not yet been nussed out in this organisation".

Managing information is an enterprise wide activity and information management should be an enterprise function. Yet very few people in an organisation are able to take an enterprise wide approach resulting in a lack of ownership and accountability. To have an effective information management environment, the appropriate governance and management tools need to be implemented. The banking executive said: "At board level and at CEO level do they see information and knowledge as a critical business asset? I think they do but it's the connection between what they believe, and the middle layers of management who put that into effect...If it doesn't get credited, nothing gets done, it's got to be in your scorecard. If it's not in your scorecard, you can talk about it at the top but it never gets connected down to the bottom. So at the coalface it will never get resolved, we'll just keep spinning our wheels."

Often finding an appropriate Information Management owner is difficult. A CKO (P1) said, "There was nobody who would take ownership. We're still in our infancy on how the governance will work. Our big win at the moment is getting the company secretary to get this as part of his portfolio." A CFO (P15) said that "at the end of the day the general manager of risk has the responsibility, so the risk actually has got final say." A CEO said, "We don't have such a thing as our knowledge or our valuable information. What we do have is owned by the various department owners as they choose to own it. We don't have any cross functional or cross organisational information owner. How do I make an excuse for not doing that - it doesn't seem sensible does it?" (P9). A CKO said, "Is there one person who is ultimately responsible for the management of the information and knowledge of the Agency? Is [information management] high on the executives' agenda? I don't think the executive thinks about it" (P1).

Many reasons were advanced for why there is a failure of governance in most organisations. This paper focuses who the interviewees believe are/should be held responsible and accountable, as discussed below and summarised in Table 1.

### **5.2 Senior executives**

A number of the respondents referred to the role of the senior executive in managing Information Assets as the Chief Executive sits at the nexus between the Board above and the divisional heads below and is often the only person who can take an enterprise wide view. The CFO of an automotive association (P8) said, "The Chief Executive ...is the only one who has the true enterprise view of this whole organisation... he sets the strategy

and the vision of the organisation". In reality, P3 indicated that data, information and knowledge are stored everywhere on people's hard drives and in legacy systems. "We've got buckets of information everywhere. We've got Access databases all over the place; we've got people with 20 years' worth of work stuck in an email box or on a disk, with masses of information in their personal drives, just because they've never been told not to put their information there" (P3). The CIO of a South African financial institution (P14) added: "You need rules, and the question is who the heck is going to make the rules?" In many cases management doesn't see Information Management as a problem. Without responsibility and accountability at executive level, KPIs are not imposed throughout the organisation and measurement is not possible. P1 (a CKO) said, "I don't think we've got a strong culture of value, measuring value and I think we think about benefits, but even that's not really - we talk benefits but we don't necessarily measure benefits very well. We measure output."

### **5.3 The board of Directors**

The Board of Directors was also mentioned as an important stakeholder. However, the Board often does not understand the value of the organisation's information or in their opinion they have bigger issues to deal with. The findings from this research supports the literature that organisational board members are focused on strategy and managing risk, yet they do not seem to fully appreciate the value of their Information Assets and do not realise the risk of not managing their Information Assets effectively. P10, a Director of a financial institution said, "From a Director's point of view, there are two main things we get involved with. The first thing is setting the strategy and providing oversight of that strategy. The second thing is when things go wrong, working out what to do. This stuff doesn't fit into the strategy and it usually doesn't fit into the 'things gone wrong' because you don't see it. Unless something goes wrong, information management is outside the framework of what we're there for which is setting in place the strategy and oversight of the strategy of the organisation. Is there a better way of doing it? Maybe, but it's just not on the agenda". Participant 22 agreed that the board is only interested to know that things are done cost effectively and that, if disaster strikes, management has a plan to recover.

In many cases, Board members regard their information as an operational necessity rather than to gain competitive advantage. However, an inherent contradiction exists because the same Director said, "Who is in trouble if [things go wrong]..., if the contract gets lost or the insurance policy can't be found? Ultimately the Board does...It's ultimately the Board". It may be that the communication about information management is ineffective. A CKO said, "The communication about information management didn't get to the board in the last organisation I was in. It just didn't. I'm not sure why, I think they just dealt with bigger picture stuff and more around business development and operations" (P1).

### **5.4 The CIO**

Typically organisations do not understand the difference between Information Management and Information Technology: "They treat information as part of the IT sphere of the organisation. They don't think about information as being discrete from the nuts and bolts of their IT systems" (P20). Therefore, responsibility for Information Management is often assigned to the Chief Information Officer (CIO) who is effectively an IT Manager with neither the interest nor the skills to address Information Management. A CKO said, "The CIO was no use. He wasn't my person. He didn't help me at all. He knew that he understood, but he couldn't fight my battle for me. He wasn't interested because it wasn't an issue to him. Nobody had come to him and said you need to get information in order. For him, his biggest issue was speed and access. It wasn't until they'd fixed up the speed and access problems that it became apparent that there were issues with the information that people were accessing" (P1).

Much of Information Management is behavioural and the person responsible therefore has to be a strong change agent. This is often not an IT Manager's strength. A South African CEO said, "Sponsorship needs to come from ... strategic level because otherwise you've got no success rate - there just won't be any success rate. However, sponsorship usually comes from the IT division,...not from the value chain. A South African CIO said, "Change needs a change champion and needs somebody that's strong enough to pull you through that low part in the change cycle, and that person needs to be a visionary. He needs to understand where you're going, needs to see the longer term objectives. If you haven't got one of those, you'll lose your way when things start to get a bit tough, and that's when most change initiatives just peter out and stop."

### 5.5 IAM is everyone’s business

As everyone manages information the CKO of a State Government Agency (P3) said, “Our information assets are important, but are we going to have a division of people looking after our information? No, none; there is no one really. I mean, there's personal responsibility; we all have our fingers in the information.”

**Table 1:** Summary of findings

Observation	Quotation
Responsibility and accountability is lacking	“We don’t have any cross functional or cross organisational information owner”
IM is an enterprise wide activity, yet few people have an enterprise wide remit	“The CEO is the only one who has the true enterprise view of this whole organisation”
Management isn’t interested	“You need rules [but] who the heck is going to make the rules?”
The Board isn’t interested	“Is there a better way of doing it? Maybe, but it's just not on the Board’s agenda”
The CIO is often given the responsibility for IAM but is not the right person	“The CIO isn't interested because it isn't an issue to him. His biggest issue is speed and access”
Everyone should be responsible for IAM	“We all have our fingers in the information”

## 6. Summary and conclusions

Information asset management is becoming increasingly important as organisations experience increased competition from both their internal and external environments. According to literature Information assets can be used to enhance organisational effectiveness. Managers, owners and employees interpret and use information as an asset to achieve the goals of the organisation and their own goals. Enabling information assets, their attributes and their diverse interest groups to work together is the challenge for the effective organization (Oppenheim et al., 2001). Corporate governance is a vital ingredient to the survival of organisations and information- and records management is a vital element of corporate governance (Willis, 2005). In order to be able to operate satisfactorily in an electronic environment, information assets such as e-mails and e-commerce records need to be classified as company records, and thus be subject to all the rules (including retention and destruction) associated with paper records.

The findings of this research supports the literature that organisations have demonstrated governance and management proficiency in the administration and deployment of their Financial, Human and Physical assets, but that most fail to implement the accountability, frameworks, management structures and measurement required to effectively deploy the other vital input to their production process, namely Information Assets. Every organisation consulted in this research recognised that their information is a vital business input, yet they acknowledge that their information management practices should be improved. The evidence, that a key issue preventing effective information management is a lack of business / corporate governance of one of four critical business assets, namely information and knowledge, is overwhelming. Boards and management do not appear to understand information management, they don’t know how the cost, value or benefit of their information and they don’t see it as a high priority for their organisations. Governance of the organisation with respect to its information and knowledge is neither designed nor implemented and responsibility for the management of information is often given to people who are neither skilled nor interested.

Questions about what information management decisions must be made – and by whom - are not being raised. If they are, responsibility and accountability is often imposed inappropriately. As every executive interviewed acknowledges that their Information Assets are of value, even critical to their organisation’s success, it is important to know why the correct governance questions are not being asked and what the implications are. Information asset management is clearly going to be a major issue on Board agendas for years to come and Board members will have a responsibility to question the management practices related to these information assets, as they do for other assets. Information management is not something “for IT to sort out” and leaving data to the IT department is highly unlikely to deliver an asset that truly supports the demands and opportunities of the business (Young, 2008).

The evidence of significant barriers to the effective management of Information Assets, including a lack of governance, is compelling. The authors have decided to continue with the project and have planned in detail

the following activities. Firstly, a detailed examination of the Board and its role in Information Management is currently being conducted, which will be followed by an in-depth investigation of the existing- and desired role of the CIO in IAM. Thereafter Business Impact Assessments will be done to determine the lost value to organisations from their failure to effectively manage their Information Assets. This will prove the importance of solving the issues following the lack of accountability and responsibility for IAM in organisations.

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