The Strategic Significance of Intellectual Capital Information in Annual Reporting*

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Submission for the European Accounting Association’s 28th Annual Congress, Gothenburg, 18-20 May, 2005

*Notes: The authors would like to thank the NSW Department of Lands for participating in the research project and for their financial support and commitment, the Australian Government Consultative Committee on Knowledge Capital for their ongoing support, the Centre for Management of Knowledge Capital at Macquarie Graduate School of Management, the Macquarie University external collaborative grant research scheme, Melissa Jamcoitchian and Fiona Crawford for their research and editorial assistance and the anonymous reviewers of this paper for their constructive comments.

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Abstract:

Intellectual capital (IC) is increasingly perceived to be a core value driver of organisational performance in today’s knowledge economy. However, existing accounting standards do not require organisations to value and disclose intellectual capital. This paper provides an empirical examination of the disclosure of IC information in an Australian public sector organisation’s annual reports, contrasting the case study organisation’s internal IC management issues and practices with its external IC reporting practices.

The empirical analysis demonstrates inconsistency between the organisation’s internal IC management issues and practices and its external IC reporting practices. It shows that strategically important information about the organisation’s management challenges, knowledge resources, knowledge management activities and IC indicators was not disclosed to external stakeholders in the organisation’s annual reports. The case study findings exemplify to public policy makers the significance of extending existing reporting policies to incorporate disclosure requirements for organisations to make visible and disclose information on IC in annual reports.

Keywords: Intellectual Capital, Annual Reporting, Knowledge Management, Public Sector
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1. Introduction

Intellectual capital (IC) is becoming a much featured item on the agendas of business executives, public policy makers, accountants and researchers. Question in foci pertain to ‘what constitutes intellectual capital?’, ‘how to establish guidelines for reporting intellectual capital?’, ‘how to value and measure such ‘invisible’ organisational resources?’ and ‘how to strategically manage such resources?’. The growing interest in IC is driven by a wider range of macro-environmental factors including rapidly changing technologies, increasingly sophisticated customers, a surge in service-based industries, changing patterns of interpersonal activities, the rise of the network society, being digital, virtual and interconnected and the emergence of knowledge as a key determinant of economic growth (Petty and Guthrie, 2000; Ordonez de Pablos, 2002; Fincham and Roslender, 2003). The shift towards a knowledge intensive economy is transforming the dynamics of the business environment and calls for new strategies for organisational value creation. At a firm level, it is changing the composition of organisational resources, making knowledge resources such as customer relationships, inter-firm alliances, innovation, employee know-how and competencies take precedence over traditional physical resources in the pursuit of competitive advantage (Marr, Schiuma and Neely, 2004).

However, despite the acknowledgement of the growing importance of IC and related knowledge resources to organisational value creation, existing financial accounting reports, and annual reports in general, provide only limited information on these ‘invisible’ resources. This has led to a growing criticism of traditional accounting reports for not reflecting the ‘true’ value of organisations (Guthrie, 2001; Mouritsen, Bukh and Marr, 2004; Fincham and Roslender, 2003). The result is a lack of disclosure of information on strategically significant organisational resources and activities, influenced by the fact that public policies on reporting do not require organisations to disclose information about their knowledge resources and related knowledge management (KM) activities in annual reports. In the UK, Holland (2003, p. 43) found that private information not reported in annual reports contributes between 25 and 50 per cent of the relevant information used by Fund Managers in company valuations. Fincham and Roslender (2003) argue that accounting reports provide only historical information, which is inadequate to assess organisations’ value creating abilities and capacity. Contrary to the historical emphasis of existing accounting reports, organisations must embrace a future orientation to value creation as “past and present performances, however impressive, by no means guarantee continued success” (Fincham and Roslender, 2003:9). The emphasis is thus on providing information on the capacity that companies have to deliver sustainable competitive advantage, highlighting the role and relevance of current and future activities rather than the historical emphasis of traditional accounting reports. In Australia, Guthrie and Petty’s (2000, p. 241) study of intellectual capital (IC) reporting at nineteen organisations found that Australian organisations “do not compare favourably in their ability to measure and report their intellectual capital in annual reports”. In the US, Lev and Daum (2004, p. 112) call for
“enhanced public disclosure about the amounts of, and in so far as possible, the outcomes produced by investments in intangibles”. In northern Europe, Mouritsen, Bukh and Marr (2004, p. 47) relate the content of annual reports to the knowledge economy and argue that the “value relevance of traditional annual reports is declining”. They (2004, p. 46) explain that “traditional financial statements do not provide the relevant information for managers or investors to understand how their resources – many of which are intangible – create value in the future”. Therefore, “for external communication purposes, additional kinds of reporting may be necessary” (Mouritsen, Bukh and Marr, 2004, p. 47).

This paper discusses the shortcomings of existing annual reports and provides empirical evidence to support the argument that the value relevance of annual reports is declining. It is based on an investigation of an Australian public sector organisation’s IC management, measurement and reporting (ICMMR) practices. The overarching research objective is to compare and contrast the organisation’s internal IC management issues and practices with its external IC reporting practices. This is achieved through an empirical examination of the case study organisation’s: 1) strategic management challenges, the knowledge resources enacted and KM activities implemented to overcome these management challenges and the IC indicators deployed to assess the composition and performance of the knowledge resources and KM activities; and 2) the reporting of these management challenges, knowledge resources, KM activities and IC indicators in the organisation’s annual report.

The research objectives are facilitated by the Intellectual Capital Value Creation (ICVC) framework, which is utilised as an analytical model for investigating the case study organisation’s ICMMR practices (see, Boedker, Guthrie and Cuganesan, 2005). The ICVC was beneficial to the research team in that it facilitated the identification and assessment of the organisation’s knowledge management gaps and made ‘visible’ the case study organisation’s knowledge resources and KM activities.

The paper is structured as follows. Section 2 briefly introduces the case study organisation. Section 3 provides definitions of IC and KM and illustrates the ICVC framework. Section 4 outlines the organisation’s three main strategic management challenges, knowledge resources, KM activities and IC indicators. Section 5 outlines the reporting of information on the organisation’s three strategic management challenges, knowledge resources, KM activities and IC indicators in its annual reports. Section 6 concludes the paper and summarises the consistencies and inconsistencies that exist between the organisation’s internal IC management issues and practices and its external IC reporting practices.

2. Case Study Organisation: New South Wales Department of Lands

The case study organisation is an Australian public sector organisation employing 1500 employees throughout the state of New South Wales (NSW). The organisation was created in April, 2003, at which time three previously separate operating divisions were consolidated into one department. The three operating divisions include:
• **Land and Property Information (LPI).** LPI is the provider of land and property information for NSW. LPI provides mapping, titling, valuation, survey and related land information services to individuals, businesses, government agencies and non-profit organisations. It is the largest of the three divisions, employing approximately 900 out of 1500 employees. It is a Government Business Enterprise.

• **Crown Lands.** Crown Lands is responsible for the management of state land in the State of NSW. State land accounts for over half of all land in NSW, around 29mn hectares valued at over $8.3bn. Responsibilities include administration and management of land leases and licences, reserves and state parks, caravan parks and other uses. The division employs approximately 230 staff. Crown Lands is in the planning stage of becoming a Public Trading Enterprise, which is expected to commence in 2005.

• **Soil Services.** Soil Services is a specialist conservation earthmoving and soil consultancy business. Services include soil conservation earthworks and consultancy services, farm water supplies, soil and water testing and education and training. The division employs approximately 160 staff.

The motivations of the case study organisation to engage in the field study of its ICMMR practices were driven by changes in its operating environment pertaining to organisational restructuring, changing customer requirements, new public policy reforms and an ageing workforce. An important driving force was the implementation of market oriented performance management systems resulting from the introduction of New Public Management reforms by NSW Treasury (see Guthrie, Parker and English, 2003). The case study organisation has consequently focused much attention on the implementation of Public Trading Enterprise structures and on improving organisational performance both in regards to cost savings and revenue development (Guthrie, Boedker and Cuganesan, 2004).

These more stringent performance requirements have stimulated senior management’s interest in identifying the value and significance of the organisation’s ‘invisible’, knowledge resources and making these known to external stakeholders. ICMMR was seen as a means to provide external stakeholders with a broader perspective on the organisation’s value creating abilities and activities and to demonstrate to Treasury, in particular, the significance of the organisation’s knowledge resources and KM activities, which thus far have not been captured in Budget Papers and financial accounting reports. Senior management was also interested in examining the role, contribution and utilisation of the organisation’s knowledge resources and how these enhance or subtract from organisational value creation. This interest was driven by the need to better understand the performance of the organisation’s ‘invisible’ resources in order to improve resource allocation, increase the effectiveness of capital and ensure the sustainability of the organisation within the community.

3. Definitions, Analytical Framework and Research Methods
Existing literature on IC shows that a plethora of terminologies are used to inform the discussion of IC. Some of the most frequently used terminologies include: knowledge resources; knowledge assets; knowledge-based assets; intellectual resources; intangibles; and intellectual capital. Often these terminologies are used interchangeably and ambiguously. This ambiguity poses a challenge to practitioners and researchers aiming to establish IC as a plausible field of management concern. To reduce the level of ambiguity surrounding IC, the research team introduced a tripartite model of IC, adapted from Petty and Guthrie’s (2000, p. 166) original model, to frame the investigation of the case study organisation’s ICMMR practices. The tripartite model classifies IC as follows:

- **Internal capital** pertains to knowledge resources such as corporate culture, management philosophy, organisational structure, service and product quality, management processes, information systems, intellectual property, and research and development.

- **External capital** pertains to knowledge resources such as corporate name and brands, alliances and partnerships, licensing and franchising, distribution channels, favourable contracts, community relations, customer relations, supplier relations, and financial relations.

- **Human capital** pertains to knowledge resources such as innovation, EEO and diversity, education, training, learning and development, employee demographics, industrial relations, employees thanked, compensation and remuneration, career planning and development, senior executive performance and results, involvement in the community, knowledge identification, sharing and retention, and work-related qualifications.

In regards to KM, Petty and Guthrie’s (2000, p. 159) definition “that knowledge management is about the management of the intellectual capital controlled by a company” and that “knowledge management, as a function, describes the act of managing the object, intellectual capital” was used by the research team. The terminology ‘knowledge resources’ was used interchangeably with the terminology ‘intellectual capital’. This definition corresponds with Fincham and Roslender’s (2003, p. 3) argument that “the imperative to manage knowledge coincides with that of managing intellectual capital”. In regards to KM activities, these were defined as tactics and initiatives adopted by the organisation to identify, enact, develop and dispose of its knowledge resources.

The research team devised a series of research questions to facilitate the investigation of the case study organisation’s ICMMR practices. These research questions pertained in particular to the investigation of three KM gaps, as follows (see Boedker, Guthrie and Cuganesan, 2005):

i. **Gap 1. Strategic Management Challenges vs Knowledge Management Initiatives:** Does the organisation respond to its strategic management challenges through the implementation of KM activities, including the identification, enactment, development and disposal of its knowledge resources?
ii. **Gap 2. Knowledge Management Activities vs IC Measures**: Does the organisation measure the composition and performance of its knowledge resources and KM activities?

iii. **Gap 3. Organisational KM Activities vs External Reporting of IC**: Does the organisation report to its external stakeholders its strategic management challenges, knowledge resources, KM activities and IC indicators via its annual reports?

The research study and questions were informed by the Intellectual Capital Value Creation (ICVC) framework illustrated in Figure 1 below.

**Figure 1: ICVC Framework & Gaps Analyses**

Besides Petty and Guthrie’s (2000) tripartite model of IC, discussed above, the ICVC framework was informed by Mouritsen et al’s (2003) IC statement model. In summary, the ICVC framework is structured as follows:
The y-axis elements are derived from Petty and Guthrie’s (2000) tripartite model of IC, categorising IC into external, internal and human capital.

The x-axis elements are adapted from the reporting categories of Mouritsen et al’s (2003) IC statement model. They detail the: 1) organisation’s Strategic Management Challenges; 2) Knowledge Resources enacted, and Knowledge Management Activities implemented, by management to respond to the management challenges; 3) IC indicators assigned to measure the composition and performance of the organisation’s knowledge resources and KM activities.

The z-axis details the research methods. These pertained to: 1) content analysis applied to the organisation’s annual reports (2000–03); 2) content analysis applied to the organisation’s business management and strategy documents including its Corporate Plan (2003-06), Divisional Business Plans (2004) and Target Business Model (2003) document; and 3) 90 minute semi-structured interviews with fifteen senior managers and executives. These research methods are discussed in more detail in the following.

Content analysis was deployed as a research method to analyse the level and type of IC reported in the case study organisation’s annual reports and internal business documents (Guthrie et al, 2004). The outcome of the content analysis was a quantitative summary of the levels and types of IC reported to internal and external stakeholders. The analysis enabled the researchers to identify patterns in the presentation and reporting of information and gain an insight into which resources and activities are important to the organisation. A rationale for applying this research method to analyse business documents is that these are viewed as communication devices, which tell a story of how the organisation and its resources are managed, developed and enacted. The starting point for conducting the content analyses was to classify IC information into categories and sub-categories according to a pre-defined coding scheme. The business documents were thereafter analysed and the level of reporting of IC, within each pre-defined category, was recorded. The recording of an IC item is referred to as one incident.

Semi-structured interviews (Patton, 2002) were applied to investigate how the organisation and its members manage, measure and report their knowledge resources within the organisation’s strategic context. To facilitate this objective, the interviewees were asked to: (1) identify the organisation’s strategic management challenges; (2) comment on the knowledge resources enacted, and KM activities implemented, by senior management to respond to the management challenges; (3) outline the IC indicators, if any, assigned to assess the composition and performance of the knowledge resources and KM activities.

The empirical analysis, facilitated by the ICVC, illustrated that all three knowledge management gaps were found to be present at the case study organisation, indicating weaknesses in its utilisation of knowledge resources and in its ICMMR practices.

This current paper focuses on KM gap three. Sections 4 and 5, as follows, detail the empirics of the study; section 4 outlines the organisation’s three main strategic management challenges and related knowledge resources, KM activities and IC
indicators, highlighting the organisation’s transition to a knowledge based organisation and the challenges experienced by management during this process; section 5 compares the research findings outlined in section 4 with the information reported in the organisation’s annual reports. Section 6 concludes the paper and summarises the consistencies and inconsistencies between the organisation’s internal IC management issues and practices and its external IC reporting practices.

4. Strategic Management Challenges, KM Activities and IC Indicators

This section of the paper reviews the outcome of the semi-structured interviews. The objective is to identify and summarise the organisation’s internal IC issues and practices. Each of the following sub-section contains an outline of: 1) one of the organisation’s three main strategic management challenge (SMC); 2) the knowledge resources enacted, and the KM activities implemented, by senior management to overcome the SMC; and 3) the IC indicators assigned to measure the composition and performance of the knowledge resources and KM activities.

SMC One: Responding to Changing Customer Demands – The Transition to a Knowledge Intensive Business Model

The first SMC identified during the semi-structured interviews pertained to meeting the changing demands of an increasingly sophisticated customer base requiring instant, reliable, responsive and value added services. This SMC was mentioned by all fifteen interviewees. For example, a representative from the Finance department from one of the smaller divisions explained: “we need to change, adapt and employ a different set of criteria in the way in which we deliver service to our customers … we need to become more responsive”. A representative from Policy and Planning supported this argument and highlighted the need to become more responsive, emphasising that “customers are demanding instant responses and value added services”.

The senior management team has responded to the changes in customer requirements by instigating a review and redesign of the organisation’s business model placing increased emphasis on knowledge intensive business practices such as marketing management, business development, value added service offerings, e-commerce and online distribution. The new business model was, at the time of the interviews, being implemented and KM activities pertaining to business development, marketing management and information technology (IT) were in progress across the three operating divisions. An example of the organisation’s KM activities relating to marketing management and business development includes the instigation of advertising and customer relationship development activities. An example of KM activities relating to IT includes the transition of the organisation’s IT infrastructure and systems towards an online environment, which is intended to accommodate customers’ requests for instant and convenient access to the department’s services. A senior executive from information technology explained:

My challenge now is the transformation needed to make services available online. Our systems are not ready for that. We are at a cross road in that we have a lot of legacy systems that support work in the shop front but that do not lend themselves to this new
paradigm and online environment that we want to move into. The organisation’s IT initiatives have been a reflection of hyperventilation, not effective planning. To move forward we have to replace old processes systems and old knowledge.

The General Manager (GM) of one of the divisions told the story of the division’s new IT initiative, which he saw “as a mechanism for digitising and automating information management”. The interviewee explained that the system moves manual processes online and reduces the need for customers to physically visit the division’s offices. In doing so, it improves service delivery to customers by offering more convenient and timely access. Representatives from HR, Business Development and Plan Registration & Titling made similar comments about the role of IT, highlighting that “IT makes us work smarter” (HR); “automation through IT reduces overheads and improves the timeliness of information to customers” (Business Development); and “IT is a key business driver which improves efficiency and opens up opportunities for value add” (Plan Registration & Titling).

Eight interviewees pointed out the effects that the new business model has had on the organisation’s human capital base, and in particularly the changing nature of staffs’ skills and competencies. Representatives from HR and Learning and Development explained that the new business model has impacted on the nature of the job tasks of individual staff and replaced manual data processing tasks with information technology. This has increased operational efficiency through automation. It has also opened up opportunities to move staff into business development roles and increased the number of knowledge intensive job functions such as customer relationship management and business analysis. Doing so, has reduced staff overhead whilst creating more revenue generating opportunities. Consequently, knowledge resources such as employees’ interpersonal, project management, marketing management, communication and creativity skills are increasingly important to the organisation’s value creation processes and abilities. These observations were among others emphasised by one of the Area Managers, who explained:

There is a move away from manual processes towards automations along with increase in use of IT. This has implications for staffing, and is causing an increase in higher value add positions.

This transition towards knowledge intensive business model and the greater reliance on employee competencies such as interpersonal, project management, marketing management, communication and creativity skills have led to changes in the organisation’s KM activities in the areas of recruitment and education, training, and learning and development. For example, the GM of one operating division explained that the organisation’s recruitment and promotion criteria are “increasingly based on leadership, management, communication, negotiation, people management skills, and not on internal expertise and technical competencies”. The representatives from HR and Learning and Development explained that a number of KM activities have been introduced in the area of training and development in order to develop the organisation’s skills base. Such initiatives include among others competency based training, TAFE certification and an International Computer Licensing Course. Senior staff is also encouraged to engage in post-graduate education and currently four senior
executives are undertaking master degrees programmes in public sector administration. At the largest division, consideration has also been given to bringing together specialists in teams. Doing so is envisioned to provide technical staff, in particular, with more exposure to general management issues and activities and develop their managerial skills and competencies to become more customer focused. Initiative has also been taken to introduce a graduate recruitment programme intended to broaden the existing skills base.

In regards to the deployment of IC indicators, the interviews showed that besides customer satisfaction surveys, which were conducted infrequently and inconsistently across the three divisions, the organisation had in place limited IC indicators. The interviews also showed there was no reporting system or processes in place for capturing and communicating information about the composition of the organisation’s human capital base. The representative from information technology however mentioned that some IC indicators exist in the organisation’s IT systems but these are currently not reported internally.

In summary, in response to an increasingly sophisticated customer base, the case study organisation has initiated the design and introduction of a new knowledge intensive business model. This has transformed its business focus and KM activities, placing increased emphasis on marketing management and business development activities, value added service offerings, e-commerce and online distribution. This transition has had implications for the organisation’s human capital base and required the development of a different set of employee competencies, specifically in regards to interpersonal, project management, marketing management, communication and creativity skills. The organisation has responded by implementing a series of KM activities pertaining to recruitment, education, training, learning and development. The extent to which the organisation has in place measures to assess the composition and performance of these knowledge resources and KM activities is however limited.

SMC Two: Public Sector Reforms Resulting in More Stringent Performance Requirements

This SMC pertained to changes in public policy, including the introduction of Public Trading Enterprise and Government Business Enterprise (GBE) structures resulting in more stringent performance requirements. All fifteen interviewees highlighted this issue as a key management challenge and pointed out the difficulties associated with implementing enterprise structures and practices in a public sector organisation. Emphasis was on the need to improve revenue management and engage in cost cutting exercises, and the challenges associated with servicing the growing demands of its increasingly sophisticated customers with scarce resources. The GM of one of the operating divisions emphasised that the “recent tightening of budget and increased budget control calls for new ways of running the business”.

In response to this management challenge, KM activities pertaining to redundancies and business process re-engineering have been introduced across all operating divisions with a view to reduce costs and increase operating efficiency. A representative from Policy and Planning explained that the “public sector is being reduced through redundancies and by improving efficiency through business process re-engineering”. A representative
from HR highlighted that the move towards an enterprise focus, including the introduction of GBEs and the reduction in funding, has translated into “hiring freezes and layoffs, including voluntary redundancies”. The interviewee also pointed out the organisational challenges associated with the implementation of GBEs and raised the questions “what are the implications of the enterprise focus on internal operations and structures” and “how to manage the department from an enterprise perspective?”. In particular, the interviewee emphasised the role of culture in facilitating the transition towards the GBE and commented that:

The process of culture change is important along with the introduction of the GBE business model. The financial arrangements introduced by the GBE model, where revenue pays wages and where the business is no longer funded by Treasury is a very significant issues and requires a very different mindset.

The interviewee from HR went on to highlight the challenges associated with instigating an entrepreneurial mindset in a public sector organisation and explained that an innovative and dynamic work environment goes against traditional public sector beliefs and work processes characterised by life long employment, slower decision making processes, a strong reliance on operating policies and procedures, seniority based career advancement, high levels of job security and resistance towards change. The interviewee emphasised:

Many people have been with Lands for many, many years, including some staff for 42 years. Loyalty and stability is the foundation of the organisational mindset. These traditional values conflict with the introduction of GBE structures, which require a higher degree of risk taking, innovation and entrepreneurship.

At the time of the case study, no explicit KM activities had been instigated or implemented to respond to and overcome the challenges associated with culture change and the development of an entrepreneurial mindset.

In regards to increasing revenue, KM activities were being taken to engage in business development and marketing management, as discussed in the section on SMC one above. This was particularly evident in the smallest of the three divisions, which was placing increased effort on attracting new contracts and building up the consultancy side of the division.

The more stringent performance requirements have also had implications for managerial decision-making processes, including the type of information required by senior management to assess the performance of the organisation and base their resource allocation decisions on. The interviews showed that senior management are interested in developing a better understanding of the performance of the organisation’s knowledge resources and KM activities in order to improve decision making processes and enhance the effectiveness of capital. The highest ranking executive officer, the Director General, provided his perspective on the role of IC information in managerial decision making, emphasising that organisations need to broaden the scope of their information base, managerial philosophy and planning horizon. He commented:
The greatest value of organisations in today’s business environment is in intangible assets. However, in most organisations, senior executives pay little attention to the greatest asset in their organisations, that is the knowledge or intellectual capital. Decision making is skewed towards short term materialistic gains, which undervalues the real value and influences whether an organisation is sustainable or not. At the moment, organisations are undervaluing their true wealth. They don’t know if they are adding value or taking value away, and most businesses are taking value away. We need to develop a greater sense and appreciation and awareness of the true value of what the intangibles are, and in doing that, being able to better allocate financial and other related resources. We need to be able to, in a structured sense, have an objective discussion about where we should be cutting or increasing our resource allocation. Our objective, at present, is to get a better understanding of what constitutes the organisation, the value of the organisation, and how we can use that knowledge generally, augmented with other tools, to bring about better decision making.

In regards to indicators, the analysis showed that financial indicators were used extensively across all operating divisions. IC indicators, on the other hand, were limited. For example, there was no mention of the deployment of IC indicators to assess the performance and/or the effects of the organisation’s business process re-engineering activities. In regards to IC indicators pertaining to staff redundancies, the Director General explained: “I was asked to take 150 staff cuts and I took 50. Had I taken 150 it would have eaten away the intellectual capital, and I just would have been on a merry-go-round". Another comment about IC indicators was made by the GM of one of operating divisions, who mentioned that in his division the Area Managers are responsible for assessing the likelihood of getting a new job by assigning a percentage allocation, which indicates the likelihood of winning a contract. A representative from Finance from the same division further highlighted that the division had in place a performance management system featuring key performance indicators such as chargeable hours, number of new clients and number of hours spent on a task.

In summary, in response to the more stringent financial performance requirements imposed by NSW Treasury, the case study organisation has implemented several KM activities pertaining to cost cutting and revenue development. One of the challenges not responded to by senior management relates to changing the organisational culture, instigating an entrepreneurial mindset and creating a dynamic work environment to ensure the successful implementation of GBE structures. Another issue, yet to be resolved by the senior management team, is how to better identify and understand the value and contribution of the organisation’s knowledge based resources and KM activities. In regards to IC indicators, some indicators were used in the area of customer relationship management and business development.

**SMC Three: The Ageing of the Workforce**

The last management challenge pertained to changes in the composition of the organisation’s human capital base with a high proportion of staff scheduled for retirement in the short to medium term. This management challenge was mentioned by all fifteen interviewees as an important issue, who emphasised that addressing this issue is critical to ensuring the sustainability of the organisation in the years to come. For example, the GM of one operating division explained that up to 60 per cent of the workforce in his division is scheduled for retirement and estimated that he has between
three and five years to capture and transfer the knowledge currently held by the retiring staff. A representative from Finance highlighted the financial imperative of an ageing work force by stating that “knowledge loss is expensive”. The interviewee commented:

Knowledge management is extremely important because of what it represents to the organisation as a whole, especially considering the upcoming retirements of senior staff with valuable and possibly irreplaceable knowledge. If we relinquish expert knowledge, we are letting go of a host of things that we need to retain for the health of the business. If we let that knowledge leave us, we can never recover it. If a key person with the background, experience and knowledge leaves without having passed on the knowledge, you might need two people in order to undertake that same task, so there are cost and financial implications involved.

An Executive Manager explained that in his work group, approximately 20 out of 35 managers are scheduled for retirement in the short to medium term. The interviewee highlighted that a key issue pertains to capturing and transferring the tacit knowledge held by senior staff to younger staff, as the value of these key staff members lies in their “relationships and reputations, which are very important to the business and to maintaining confidence with clients and sub-contractors”. Another interviewee, a representative from Policy and Planning, supported this view and explained:

Our main challenge is to capture the knowledge of retiring staff, and transfer the expertise, experiences, networks and relationships that they have built up over a period of life long employment with the organisation. How do we facilitate knowledge sharing and reduce the risk of turnover? [emphasis added].

Whilst all interviewees agreed that KM activities pertaining to knowledge identification, sharing and retention are a strategic priority to the organisation, they also highlighted the difficulties associated with getting staff to engage in knowledge sharing activities. One frequently mentioned aspect was the role of the organisation’s culture in facilitating knowledge sharing. One interviewee commented “the existing environment is not conducive to knowledge sharing. It is characterised by a high number of loyal employees, who often only can be promoted when their superior leaves. Progression has traditionally been based on length of time, not necessarily ability”. This has been compounded by the “tendency towards internal recruitment, which makes people resistant towards sharing knowledge as knowledge is seen as power”. Another interviewee supported this view, highlighting that “knowledge sharing is a threat to job security. Senior staff wants to make sure new comers start at the bottom, as they should go through what I went through”.

One interviewee mentioned that the first step in facilitating culture change and initiating and implementing KM activities to retain knowledge is to:

Get people to understand what we are doing and why we are doing it. Achieving buy in and overcoming employee resistance is a key challenge … it is a culture thing, where there has to be a willingness within the organisation to share things.
In regards to implementing knowledge identification, sharing and retention activities to overcome this SMC, the interviews showed that such KM activities have been done in pockets at a divisional level with no overarching strategy or action plan in place.

One activity has been the establishment of a Knowledge Management and Development Committee, which was set up as a central coordination unit to oversee the organisation’s KM activities. The committee has held three meetings since its inauguration, hosting guest speakers and facilitating relevant discussions. Another activity is the organisation’s intranet website featuring FAQs and general information about the organisation’s operating policies and procedures.

Furthermore, one project was, at the time of the interviews, being undertaken in a work group in the largest division. The objective of the project was to identify how knowledge relates to decision making, how knowledge can be captured, which structures can be created for staff to more easily record and retrieve information and knowledge (in particular in regards to precedent cases) and how the knowledge can be reliably measured or valued.

Another activity conducted within one of the work groups was a skills assessment programme, which aimed at identifying and evaluating the skills and knowledge of the work group’s key staff members. The activity entailed reviewing and documenting the competencies of 20 employee with a view to identify what knowledge exist, how such knowledge relates to the business and what needs to be captured. The Executive Manager of this work group mentioned that he has teamed up with the division’s ‘champions’ to build up support and trust among the peers:

What we are doing is we get the ‘champions’, who have credibility amongst the peers, to advocate and push forward the [knowledge sharing and retention] projects. But it is a slow process. We have to tread carefully as staff feel uncertain about the intent of the project and what it will do to their positions.

Other activities in the planning phase, at the time of the interviews, pertained to: the creation of a mentor network where knowledge experts are identified and made available to provide advice on business topics to other members of the organisation; and the implementation of a software programme, which automatically maps the business processes executed by staff while working in the organisation’s accounting and procurement systems.

The smallest of the three divisions had not initiated or implemented any KM activities pertaining to knowledge identification, sharing and retention. The interview with the division’s executives and senior managers showed that they were awaiting information and instructions from the head office on how to do so.

In regards to IC indicators, the interviews showed no deployment of indicators to assess the performance of the KM activities pertaining to knowledge identification, sharing and retention activities.
In summary, this section of the study has shown that the case study organisation has been facing, and continues to face, a key management challenge in regards to the ageing of its work force. The extent to which KM activities relating to the identification, sharing and retention of explicit and tacit knowledge have been implemented varies across the three divisions and within the work groups. Several activities have been undertaken in the largest division and no activities in the smallest division. The interviews indicated in this regard that KM activities have been done in pockets at a divisional level with no overarching strategy or action plan in place. Furthermore, IC indicators measuring the performance of the department’s knowledge identification, sharing and retention activities have not been deployed in any of the work groups or divisions.

5. Intellectual Capital Reporting

This section of the paper contrasts and compares the three strategic management challenges and related knowledge resources, KM activities and IC measures discussed in section 4 above with the IC information reported by the organisation via its annual reports. The empirical analysis was facilitated by content analysis, as discussed in section 3.

Reporting of SMC One: Responding to Changing Customer Demands – The Transition to a Knowledge Intensive Business Model

The first SCM, discussed in section four above, pertained to the organisation’s transition towards a knowledge intensive business model driven by customers’ demand for instant, reliable, responsive and value added services. The instigation of a customer focused business model was, to some extent, reflected in the organisation’s annual reports (2000-2003). For example, the opening statement made by the Director General in the 2002/03 annual report communicated the following:

> The Department’s programs over the years were shaped by our values of customer service, accountability, innovation, respect, integrity, teamwork and leadership. These values signal that NSW is moving into a new era of land information and management, strengthening the partnership with business and the community” (Annual Report, 2002/03, p. 4).

Furthermore, the content analysis of the 2002/03 annual report showed a strong emphasis on customers with Customer Relations receiving the third highest number of incidences in the external capital category. However, in comparison with the 2001/02 and 2000/01 annual reports, the 2002/03 annual report showed a decline in the number of incidences reported for Customer Relations.

The transition towards online distribution and e-commerce, driven by customers’ demands for instant, reliable services, was reflected in the 2002/03 report where Information Systems and Technology showed the highest number of incidences across all reporting categories. This was consistent with the comparative analysis, which showed an increase in reporting of this IC sub-category over the 2000/01 and 2001/02 periods.
In the human capital category, both Training and Education showed high levels of incidences in the 2002/03 annual report, reflecting the changing requirements and the development of new employee skills and competencies. For example, the 2002/03 annual report (p. 117) stated “…the People Strategy Project continued to be implemented enabling staff participation in planning for the future and in the clarification of the skills and other competencies required for the future as client expectations, needs and technologies change”. On the other hand, the 2002/03 annual report showed limited reporting of categories such as Innovation, Learning and Development, and Employee Skills and Competencies, indicating a lack of disclosure of information about these strategically important KM activities.

In regards to IC indicators, the content analysis showed very limited reporting of information about the composition or performance of the organisation’s knowledge resources and KM activities pertaining to customer relations, IT, and employee skills and competencies. For example, the annual reports showed no mention of IC indicators pertaining to customer satisfaction, retention or acquisitions, employee satisfaction or retention, services offered online or completed IT projects. The 2002/03 annual report (p. 25), however, provided information on the intention to “commission a customer survey to gather information from LPI’s Queens Square Sydney customer base and to develop benchmarks for customer service levels”.

In summary, the gap analysis showed both consistency and inconsistency between the organisation’s internal IC management issues and practices and external IC reporting practices. Whilst the annual reports provided no direct mention of the transition towards a knowledge intensive business model, they contained information about the KM activities implemented by the senior management team to facilitate the transition to the new business model. The main inconsistencies between internal IC management practices and external IC reporting pertained: firstly, to the decline in reporting of the customer category in the 2002/03 annual report, which was inconsistent with the organisation’s expanding customer management activities; and secondly, to the limited mention in the annual reports of three strategically significant human capital categories: Innovation, Learning and Development, and Employee Skills and Competencies. Consistent with internal management practices, the reporting of IC indicators was limited across all categories and sub-categories. The only inconsistency was the lack of reporting of customer satisfaction rates in the annual reports.

**Reporting of SMC Two: Public Sector Reforms Resulting in More Stringent Performance Requirements**

The second SCM related to changes in public policy and the introduction of public sector reforms, resulting in more stringent financial performance requirements. The interviews, discussed in section 4 above, demonstrated that the organisation has implemented a series of KM activities aimed at fulfilling Treasury’s more stringent performance requirements, in particular in regards to reducing costs. In contrast, the annual reports provided limited mention of the organisation’s KM activities pertaining to cost cutting activities including those activities pertaining to staff redundancies and business process re-engineering. For example, there was no mention in the 2002/03
annual report of the redundancies undertaken across the three operating divisions, despite the layoff of 50 staff. The 2002/03 report showed one mention (p. 5 and p. 53) of the organisation’s business process re-engineering activities:

Landirect will offer substantial cost savings to the Department with the re-engineering and streamlining of business processes and supporting services and the move towards customer self service via the use of online technologies.

In regards to the instigation of enterprise structures, the 2002/03 annual report mentioned that the largest of the divisions is operating as a Government Business Enterprise, which is “functioning in a manner which is consistent with government policy” (annual report, 2002/03, p. 7). It also mentioned that the second largest operating division is being transformed into a Public Trading Enterprise (annual report, 2002/03, p. 6).

The annual reports, however, provided no mention of the challenge associated with instigating an entrepreneurial mindset and creating a dynamic, performance driven work environment. The reports neither mentioned the challenges experienced by senior management in identifying the value and contribution of the organisation’s knowledge resources to business performance nor their aspiration to provide external stakeholders with a broader perspective on the performance of the organisation’s knowledge resources and KM activities.

In regards to IC indicators, the annual reports neither provided any mention of indicators pertaining to business process re-engineering, redundancies, GBE structures, work environment or culture.

In summary, the analysis demonstrated no reporting of SCM two, which pertained to Treasury’s more stringent financial performance requirements. Furthermore, the annual reports showed no or limited mention of the knowledge resources enacted and KM activities implemented by the senior management team in response to SCM two. Particularly noteworthy is the lack of reporting of the staff redundancies. The challenges pertaining to facilitating cultural change, creating a dynamic, innovative, performance driven work environment and measuring the performance of the organisation’s knowledge resources were not mentioned either. The empirical analysis demonstrates, in this regard, inconsistency between the organisation’s internal IC management issues and practices and its external IC reporting practices.

**Reporting of SMC Three: The Ageing of the Work Force**

The third management challenge pertained to the changes in the composition of the organisation’s human capital base with up to 60 per cent of senior staff scheduled for retirement in some work groups. This management challenge was considered to be of strategic significance to the sustainability of the organisation by all interviewees. However, the annual reports did not reflect this SCM and provided no mention of the age profiles of the organisation’s human capital base. Nor did they reflect the knowledge identification, sharing and retention activities instigated by the senior executives to overcome this management challenge. The lack of disclosure of this SMC
was also evident in the risk management section in the 2002/03 annual report, which provided no mention of the ageing of the workforce despite the acknowledgement by the interviewees that this is a significant risk to the organisation. Nor did the annual reports provide any information about the challenges associated with capturing the tacit knowledge held by senior staff and the expertise embedded in their work flows, networks and relationships, although this was identified as a key issue by the executives and senior managers during the interviews.

The low level of reporting of this SMC was also reflected in the content analyses, which showed low levels of incidences in the Knowledge Identification, Sharing and Retention category across all reporting periods. However, the comparative analysis showed an increase in reporting over time, with five incidences in the 2002/03 annual reports, compared to one incidence in the 2001/02 annual report and no incidence reported in the 2001/00 annual report.

The only KM activity relating to knowledge identification, sharing and retention mentioned in the 2002/03 annual report was the staff skills assessment. The objective of the assessment was however not related to the ageing of the workforce and the need to instigate knowledge identification, sharing and retention activities. Instead the objective of the assessment was stated to be “to optimise investment in training” and “to improve service delivery” (Annual Report, 2002/03, p. 28).

In regards to IC indicators, there was no mention in either of the annual reports of the deployment of indicators to measure the composition or performance of the knowledge resources and KM activities pertaining to knowledge identification, sharing and retention.

In summary, the analysis showed inconsistency between the organisation’s internal IC management issues and practices and external IC reporting in regards to SMC three, which pertained to the ageing of the work force. Neither the SMC nor the knowledge resources enacted, and KM activities implemented, by senior management to overcome the management challenge were reported to external stakeholders in the organisation’s annual reports. Consistent with the lack of deployment of IC indicators internally, the annual reports did not disclose information about IC indicators detailing the composition of the organisation’s human capital base or the performance of the organisation’s KM activities pertaining to knowledge identification, sharing and retention.

6. Conclusion

The paper set out to compare and contrast the case study organisation’s internal IC management issues and practices with its external IC reporting practices. In doing so, empirical data detailing the organisation’s internal SMCs, knowledge resources, KM activities and IC indicators have been contrasted to empirical data on the information reported by the organisation its annual reports. This has been done in accordance with KM gap three identified in the ICVC framework.
Table 1 summarises the outcome of the empirical analysis.

**Table 1: Summary of Findings of Knowledge Management Gap Three**

<table>
<thead>
<tr>
<th></th>
<th>1. Reporting of SMC</th>
<th>2. Reporting of KM Activities</th>
<th>3. IC Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMC 1: The transition to a Knowledge Intensive Business Model</td>
<td>No</td>
<td>Yes</td>
<td>Limited use internally Not reported externally</td>
</tr>
<tr>
<td>SMC 2: More Stringent Financial Performance Requirement</td>
<td>No</td>
<td>No</td>
<td>Limited use internally Not reported externally</td>
</tr>
<tr>
<td>SMC 3: Ageing of the Workforce</td>
<td>No</td>
<td>No</td>
<td>Limited use internally Not reported externally</td>
</tr>
</tbody>
</table>

In regards to the reporting of the case study organisation’s strategic management challenges, column one in table 1 shows that the organisation made no explicit mention of the three SMCs in the annual reports. There was no direct mention of the organisation’s transition towards a knowledge intensive business model, the more stringent financial performance requirements and the ageing of the workforce. The lack of explicit reporting of all three SMCs stands in contrast to the emphasis placed on these SMCs by the senior management team during the semi-structured interviews. The lack of disclosure of information about SCM 3, the ageing of the workforce, is particularly noteworthy given the risks this SMC poses to the sustainability of the organisation, with up to 60 per cent of the workforce scheduled for retirement in some work groups over the next three to five years. The comparative analysis shows in this regard inconsistency between the SMCs faced by the case study organisation internally and the information reported to its external stakeholders via its annual reports. This research finding illustrates that strategically important management challenges pertaining to IC are not accounted for in contemporary annual reports.

In regards to the reporting of the knowledge resources enacted and KM activities implemented by senior management to overcome the SMCs, column two in table 1 shows that the organisation disclosed information about one out three KM activity areas. The information disclosed pertained to SMC one and included information on the knowledge resources enacted, and KM activities implemented, to improve customer relations, IT systems and human capital. In contrast, there was limited reporting of information about the knowledge resources enacted and KM activities implemented by management in response to: 1) SMC two, which pertained to improving financial performance and, in particularly, reducing costs; and 2) SMC three, which pertained to reducing the heightened risk exposure associated with the ageing of the workforce. This stands in contrast to the emphasis placed on these knowledge resources and KM activities by the senior management team during the semi-structured interviews. The comparative analysis demonstrates in this regard some inconsistency between the
knowledge resources enacted, and KM activities implemented, internally and the information reported to external stakeholders in the organisation’s annual reports. This research finding supports the proposition that strategically important knowledge resources and KM activities are not accounted for in contemporary annual reports.

In regards to the reporting of IC indicators, column three in table 1 shows that the annual reports provided no, or very limited, reporting of IC indicators detailing the composition and/or performance of the organisation’s knowledge resources and KM activities across all three SMCs. This is consistent with the lack of deployment of IC indicators internally. The only exceptions to this were the limited use of IC indicators pertaining to customer satisfaction by the three operating divisions and the use of IC indicators such as chargeable hours and number of new clients by the smallest of the three operating divisions. This research finding supports the view that the composition and performance of strategically important organisational knowledge resources and KM activities are not accounted for in contemporary annual reports. Furthermore, it illustrates the lack of use of IC indicators to inform managerial decision making and resource allocation, as acknowledged by the senior management team, and in particular the Director General, who emphasised this as a weakness of the organisation’s performance management processes and practices.

In summary, the empirical analysis has shown both consistencies and inconsistencies between the case study organisation’s internal IC management issues and practices and its external IC reporting practices. Notably, the analysis has illustrated a lack of reporting of internal IC management issues and practices with three out of three SMCs and two out of three KM activity areas not reported to external stakeholders in the organisation’s annual reports. This indicates that external stakeholders are not fully informed about the management challenges, knowledge resources and KM activities, which are of strategic significance to the organisation. The study illustrates in this respect the strategic importance of the provision of information about organisational IC, and in particularly human capital, to external stakeholders. It raises the question as to how external stakeholders such as capital markets and governments can adequately judge, value, assess and make forecasts about organisational performance without having access to critical information about the issues, resources and activities that impact, and drive organisations’ value creation activities, abilities and processes.

The empirical data presented in this paper has in this regard provided evidence to support the argument that the value relevance of annual reports is declining. Furthermore, it has highlighted the importance of extending existing reporting practices and requirements to incorporate information on the composition and performance of organisations’ management challenges, knowledge resources and KM activities, and in particularly information about organisations’ human capital. Reflecting this, early trend-setters within European governments set an affirmative example of initiatives pertaining to IC reporting. Of these, the most advanced are the efforts of the Danish Ministry of Science, Technology and Innovation (DMSTI), which has released guidelines for the production of IC Statements (see Mouritsen et al, 2003). More recently, the UK Department of Trade and Industry has required a new Operating and Review Section which places more emphasis on intangibles (CIPD, 2004). In Austria, the Austrian University Act 2002 came into force on January 1, 2004, requiring all state universities...
to provide external reports in the form of IC statements that “inform about the past development of the university as well as forecasts of performance outcomes” (Schaffhauser-Linzatti, 2004:2). The intellectual IC statement is designed as an inventory of the existing intellectual capital within the university and serves as an important basis for the university’s budgetary reimbursement (Schaffhauser-Linzatti, 2004:6). In Australia, the government has taken initiative to set up the Australian Government Consultative Committee on Knowledge Capital (AGCCKC, 2004:2) with a view to “produce a set of comprehensive knowledge capital standards whose application across the public and private sectors will contribute to the development of Australia as a competitive knowledge economy”.

These early initiatives provide encouraging evidence that IC reporting is receiving increased attention by governments concerned with the establishment of guidelines and positioning their nation-states as ‘knowledge-economies’. There are however many barriers to the further establishment of public policy legislation on IC reporting including the inherent challenges associated with establishing consensus on how to value and report IC, and therefore a continued need for researchers and accountants to further establish empirical evidence to validate the inconsistencies between internal management issues and practices and external reporting practices.
Bibliography


1 It should be noted that a total of twelve strategic management challenges were identified in the research study. This paper reports on three main challenges. See Guthrie, Boedker and Cuganesan (2004) for details on all twelve management challenges.

2 Petty and Guthrie’s (2000, p. 166) tripartite model of IC was adapted from Sveiby’s (1997) original classification of IC.

3 It should be noted that the content analysis for 2001/02 and 2002/03 was done separately for the three previously independent entities reflecting the separate structure of these entities prior to April, 2003.

5 In brief, the outcomes of the three gap analyses were as follows. Gap analysis one showed that the organisation responded poorly to six out of twelve of its strategic management challenges, indicating that it does not manage all areas of its IC in a strategic manner. Gap analysis two showed that the organisation does little to measure its knowledge resources and KM activities and indicated that IC indicators are not used to inform decision making and resource allocation (for more details see Guthrie, Boedker and Cuganesan, 2004, and Boedker, Guthrie and Cuganesan, 2005).

6 Comparative analyses for annual reports prior to the 2002/03 reporting year were not feasible for the human capital category due to the restructure of the organisation. Annual reports prior to the merger contained human capital information on other operating divisions, which could not be separated, and was therefore deemed invalid for inclusion in the content analysis of the human capital information.