

# Internal Intellectual Assets: A Management Interpretation

**M. Gordon Hunter**  
**University of Lethbridge,**  
**Lethbridge, AB, Canada**

[ghunter@uleth.ca](mailto:ghunter@uleth.ca)

**Nina Evans**  
**University of South Australia,**  
**Australia**

[nina.evans@unisa.edu.au](mailto:nina.evans@unisa.edu.au)

**James Price**  
**Experience Matters, Stepney, SA, Australia**

[james.price@experiencematters.com.au](mailto:james.price@experiencematters.com.au)

## Abstract

This document reports on the investigation of senior managers' interpretation of Intellectual Assets and their value to the corporation. The participants included ten senior managers from nine large Australian organizations. Confidential qualitative interviews were employed and emerging themes were identified. The research participants recognize the need to manage intellectual assets and their importance to operations and competitive advantage. However, because of the intangible nature of Intellectual Assets there is a lack of management of this valuable resource.

**Keywords:** Intellectual Capital Theory; Intellectual Assets; qualitative; Grounded Theory Method; Narrative Inquiry; Long Interview Technique

## Introduction

Information and knowledge management is an evolving discipline and is increasingly growing in importance for organizations. Organizational knowledge is a key factor in management practices (Garcia-Parra, Simo, Sallan, & Mundet 2009). Knowledge management and the role of knowledge leadership are vital factors and essential ingredients for addressing issues involved in competitive advantage. Intellectual capital has replaced tangible assets as the most important source of competitive advantage (Stam, 2009). The ability to manage Intellectual Assets in a well-conceived strategy is the key to formulating a plan for sustainable competitive advantage. An important competency which can contribute to sustainable competitive advantage is the capacity to create, transfer, and employ knowledge (Davenport & Prusak, 1998; Drucker, 1994; Nonaka and Takeuchi, 1995; Spender, 1994; Teece, 2007).

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The investigation reported here involves interviews with ten senior managers regarding their interpretation of various aspects of Intellectual Assets. A qualitative perspective was adopted for data gathering and analysis to determine if the senior managers were aware of Intellectual Assets and that their manage-

ment contributed value to the corporation.

Intellectual Capital Theory outlines three categories of assets. These categories are discussed in detail in the following section. The focus of this document is on the sub-group of Human Capital which involves tacit knowledge. Many terms and definitions are employed regarding Intellectual Assets. These assets are intangible. That is, they are regarded as non-material and consisting of, to a large extent, tacit knowledge.

The format for the remainder of this manuscript is as follows. In the next section literature which relates to the terms variously used for intellectual assets is discussed. Then the presentation of method provides a context for a description of the project. Findings are then discussed relative to the identified emerging themes. The Discussion section provides an explanation of what was determined in the project and how that relates to the important aspects of managing Intellectual Assets. Conclusions are then drawn about this project and what future investigation might entail.

## Literature Review

Intellectual Capital Theory has been employed to outline the flows of knowledge within the firm (Choo & Bontis, 2002; Edvinsson & Malone, 1997; Stewart, 1991; Sveiby, 2001). These flows of knowledge are organized into three categories as shown in Figure 1. Relational capital involves the relationship between the firm and external entities such as customers, suppliers, partners, and competitors. Structural capital includes administrative processes and collaborative standards which promote knowledge sharing within the firm. Human capital represents the tacit knowledge of employees and the business processes they follow when carrying out their duties. The combination of structural and human capital resides within the domain of knowledge management. The focus of this project is on the human capital aspects of Intellectual Capital Theory.

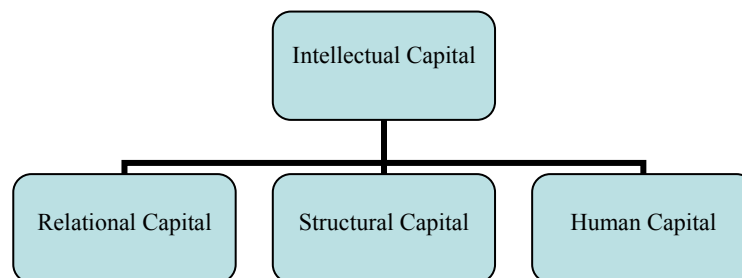


Figure 1. Intellectual Capital Sub-Groups

Huggins and Weir (2007) suggest that intellectual assets are intangible corporate assets that can be recorded and consist of "... assets such as the company name, reputation and good will of the company, as well as company brands, trade secrets, business process and know how". The latter aspects of business processes and know how is the focus of the investigation reported here.

The remainder of this section is organized by themes identified in the available literature that relate to the human capital aspects of Intellectual Capital Theory. These themes are Intellectual Capital, Intellectual Liabilities, and Intangible Assets.

### ***Intellectual Capital***

Early research investigated the identification of hidden sources of value in organizations (Garcia-Parra et al., 2009). Much of this work involved the development of models to assist in the measurement of Intangible Assets.

Marr, Schiuma, & Neely (2004) discuss the importance of measuring organizational knowledge assets. They propose the development of key performance indicators as a way to measure a

firm's knowledge assets. Watters, Jackson, & Russell (2006) refer to intangible assets as those related to, "... brands, know-how, relationships and intellectual property." They developed a series of tools to assist small business to capture information about their Intellectual Assets. These tools facilitate the identification and management of items considered by the business to be related to Intellectual Assets. The tools focus on three groups of intellectual assets. These are organizational capital, network capital, and IP capital. Both organizational and IP capital relate to internal or external documentation of explicit knowledge. Network capital focuses on lists of contacts, customers, and partners. The other Network capital component is competitive intelligence. While this component seems to be related to the focus of the investigation reported here, it is not clear how this component relates to the internal management of tacit knowledge.

While most investigations into intellectual capital focus on this concept in relation to one firm, Solitander and Tidstrom (2010) investigated the collaborative relationships that firms establish through the exchange of Intellectual Assets. They extend Allee's (2000, 2002, 2008) value network analysis to include both cooperative and competitive knowledge flows between organizations.

At the country level Bismuth and Tojo (2008) investigated how to determine if economic returns may be generated by employing intellectual assets. They provide policy recommendations for OECD countries about reporting non-financial and Intellectual Assets.

### ***Intellectual Liabilities***

Garcia-Parra et al. (2009) contributed to the methods for assessing intellectual capital by investigating the concept of intangible liabilities. They defined the concept as "... a non-fulfillment of perceived obligations by the company [which] might cause organizational members to refrain from deploying the organizational knowledge in organizational processes" (Garcia-Parra et al., 2009, p. 819). Stam (2009) also investigated the concept of intellectual liabilities. He drew a distinction between external and internal intellectual liabilities. External liabilities are beyond the control of the organization and may relate to things such as natural disasters. Internal, and thus controllable, liabilities are categorized as relating to human, structural, and relational, which are the major categories of Intellectual Capital Theory.

### ***Intangible Assets***

A series of projects investigated the development of specific measures or indices in an attempt to assess the value of intangible assets. Rodgers and Housel (2009) analyzed financial reports and proposed the use of knowledge value-added (KVA) metrics to assist in understanding and valuing intangible assets. Their general suggestion involves identifying knowledge units in order to determine return on knowledge (ROK) ratios to be used in trend analysis. Salamudin, Bakar, Ibrahim, & Hassan (2010) investigated the difference between corporate market value and accounting book value in Malaysian companies. They suggest the difference relates to intangible assets which are more commonly known as good will. Current financial reporting standards do not require or support the explanation of intangible assets. A method to assess the affect of tacit knowledge on firm performance is the tacit knowledge index (TKI) (Harlow, 2008). The index was derived from expert evaluations of knowledge management practices. Results of this investigation showed a strong relationship between TKI and innovative performance, which in turn was determined by market impact initiatives such as new products and patents. While these measures may be employed internally, there has not been a move by regulatory agencies to develop a standard assessment approach.

Jhunjunwala (2009) employed causal maps to investigate the relationship amongst intellectual assets. She suggests this process assists in linking intangible assets to the objectives relating to

maximizing shareholder value and provides indicators for measuring the performance of various intangible assets.

Lapointe and Cimon (2009) suggest that sustained value creation requires the management of intangibles. They define intangibles as “non-material assets” and suggest that their replication is difficult. The knowledge component of services and production has been increasing in importance. Tacit knowledge is the main source of competitive advantage. The difficulty arises in attempting to document tacit knowledge in order to share it throughout the organization. Khanchel (2007) suggests that one of the variables in determining effective corporate governance is the management of soft capital such as intangibles by senior level executives.

In summary, the literature review above started with an overview of Intellectual Capital Theory. Within this theory the remainder of the presentation focused on the human capital aspects, referred to in this manuscript as Intellectual Assets. The development of various measurement methods have been attempted with varying degrees of success. As shown in the first paragraph of this sub-section, a factor limiting the valuation of Intellectual Assets relates to currently accepted financial reporting standards. This is supported by the statements of the research participants involved in the investigation reported here. Thus, it remains difficult for organizations to justify employing any technique to formally recognize this valuable asset.

## Methodology

This section provides a generic discussion of the approach taken to conducting this investigation. It includes an overview of qualitative research and Grounded Theory Method. As a context for conducting the interviews a description of Narrative Inquiry and the Long Interview Technique are also included.

### **Qualitative Perspective**

Myers (2009) has suggested that qualitative research involves an interpretive approach to documenting the comments of research participants. The comments are gathered in the research participant’s natural surroundings and represent their interpretations of personal experiences relating to the research question.

Qualitative researchers interact very closely with individuals who will provide comments about the research question. This level of interaction leads to the use of the term *research participant* as opposed to the quantitative term of *subject* and its consequent distance relationship. This relatively close relationship with the research participant will provide valuable and rich in-depth data. However, the qualitative researcher must remain vigilant to ensure the conversation remains as bias-free as possible. The research participant’s comments will be based upon their interpretation of their experience. Thus, the qualitative researcher will attempt to document these comments in a way that does not influence the research participant. Relying upon an interview guide will promote an approach to the interview that may reduce researcher bias. Further, an interview guide will also promote a consistent approach across a number of interviews.

### **Grounded Theory Method**

Grounded Theory is “... the discovery of theory from data systematically obtained from social research” (Glaser & Strauss, 1967, p. 2). This theory may be employed to generate new theory or as a technique to analyze data (Urquhart, 2001). As an approach to generate new theory, a research question is developed with no *a priori* adoption of a research framework. Appropriate data are gathered and analyzed with a view to the generation of a new theory. When the theory is employed as a data analysis technique, it is generally referred to as Grounded Theory Method, and it involves a constant comparison of the data. “By comparing where the facts are similar or

different, we can generate properties of categories that increase the categories' generality and explanatory power" (Glaser & Strauss, 1967, p. 24).

As data gathered from qualitative interviews are compared, this method will either support the creation of new categories or provide support for existing categories. When no new categories emerge from the data a point of "theoretical saturation" is reached and it is not necessary to continue data gathering.

It can be very difficult to make the initial contact with potential research participants. Success with this process may be increased through a third party who is known by both the researcher and the research participant. Once this initial contact has been made the research participant must be convinced that their participation will be worthwhile. They might recognize that their experience will allow them to make valuable comments about the research question. They may feel obligated to give their time to support an investigation because of their social responsibility to their profession.

Collecting and analyzing qualitative data involves significant effort (Luna-Reyes & Andersen, 2003). An approach to conducting interviews will be described later in this section. Before the preparation commences for the interviews it is incumbent upon the qualitative researcher to understand how the data will be analyzed.

In qualitative research it is common practice to identify emerging themes. Interview transcripts are thoroughly reviewed to identify categories of data which will subsequently support the identification of emerging themes which in turn may be employed to construct a research framework in response to the research question.

The data may be analyzed by employing three types of coding: open, axial, and selective. Open coding (Strauss & Corbin, 1990) involves a thorough review of a transcript to identify conceptual categories. Patterns of comments are identified and assigned to a conceptual category. Axial coding (Strauss & Corbin, 1990) involves identifying the connections between conceptual categories within one transcript. Selective coding is carried out across a number of transcripts and entails an approach referred to as "constant comparison" where data are allocated to an existing conceptual category or employed in support of the identification of a new conceptual category. As the process is carried out it is incumbent upon the researcher to "... be open to possibilities afforded by the text rather than projecting a predetermined system of meanings onto the textual data" (Thompson, 1997, p. 441). Finally, data analysis is complete when "theoretical saturation" is reached. This situation is determined when no new categories of data can be identified.

### ***Narrative Inquiry***

Narrative Inquiry is "... the symbolic presentation of a sequence of events connected by subject matter and related by time" (Scholes, 1981, p. 205). The concepts of contextually rich and temporally bounded are related to this definition. The term contextually rich means the events are personally experienced by the research participant and are therefore more vividly remembered (Swap, Leonard, Schields, & Abrams, 2001; Tulving, 1972). The term temporally bounded suggests that a recollection of events will be more vividly remembered (Bruner, 1990; Czarniawska-Joerges, 1995) if they are recounted sequentially with a specific start and end event.

Within the purview of Narrative Inquiry, an interview guide will facilitate gathering the personal qualitative stories of research participants. Recall that the interview guide will serve to focus an interview on the research questions, and it will support a consistent approach to a series of interviews.

## ***Conducting Interviews***

A framework for conducting qualitative interviews is provided by the Long Interview Technique (McCracken, 1988). This technique involves the following phases:

1. Review the relevant literature
2. Ensure a thorough understanding of the research question
3. Conduct the interviews
4. Analyze the interview data to identify emerging themes

The first two phases relate to background preparatory tasks carried out before the interviews. In general, an interview guide will relate to the terms “grand tour”, “planned prompts”, and “floating prompts” (McCracken, 1988). At the start of the interview grand tour questions may be asked to develop trust between the researcher and participant. These questions also serve to provide a context for the more detailed discussion to follow. Planned prompts relate to the research question and offer an opportunity to delve into the topic in more detail. These questions should be devised to facilitate the research participant’s recitation of their interpretation of their experience related to the research question. Floating prompts are not planned in advance, and they relate to the researcher’s decision to explore a comment in more detail.

More specifically, an interview protocol will be developed relative to the above terms which will facilitate the discussion about the research question. The protocol will focus the discussion on the specific research question and the research participant’s experience (Swap et al., 2001). The sequence of the items in the protocol should relate to a chronological discussion of events (Bruner, 1990; Czarniawska-Joerges, 1995).

The following section includes a description of the specific approach to this investigation within the context of the approached outlined above.

## **The Project**

The objective of this investigation was to determine if senior management recognizes the existence of Intellectual Assets and whether Intellectual Assets are managed in such a way to provide business value.

Qualitative investigations were conducted to identify the perceptions of senior managers in organizations about the leadership aspects of intellectual assets, including lessons learned from past experience, current practices and roles, and future plans. Confidential interviews were conducted and emerging themes were identified.

Initial contact was made with the research participants through the personal contacts of one of the authors. The participants included ten representatives of senior level management at nine large Australian organizations (see Table 1). Because of confidentiality agreements individual names and specific firm names have not been identified.

For this exploratory investigation, while the focus was on contacting and interviewing senior level managers, a variety of organizations were included in order to obtain different perspectives on managing internal Intellectual Assets.

**Table 1. Research Participants**

<b>RESEARCH PARTICIPANT (RP)</b>	<b>POSITION</b>	<b>INDUSTRY</b>
RP-1	Data Management	Bank
RP-2	Data Management	Bank
RP-3	Chief Financial Officer	Transportation
RP-4	Managing Partner	Law
RP-5	Chief Financial Officer	Automotive
RP-6	Chief Executive Officer	Human Resources
RP-7	Chief Financial Officer	Bank
RP-8	Chief Knowledge Officer	Utility
RP-9	Chief Knowledge Officer	Government
RP-10	Chief Executive Officer	Manufacturing

Once agreement to participate was obtained, an interview was scheduled. Two researchers attended in person and the third, who facilitated the discussion, attended via the phone because of separation of both distance and time.

Within the interview the discussion was focused on the questions included in the Interview Protocol (see the Appendix). The interviews were about one hour in duration. They were audio recorded for future analysis to identify emerging themes.

## **Findings**

Several emerging themes have been identified from a review of the interview transcripts. These themes are presented below. They have been categorized in relation to the objectives of this investigation and presented in sub-sections relating to recognition, management, and future.

### **Recognition**

The presentation of this sub-section relates to defining the term Intellectual Assets. When asked to define the term Intellectual Assets the research participants referred to two interpretations. One interpretation focused on aspects with external value such as patents, copyright, and intangible items relating to goodwill and reputation. The other interpretation related to aspects with the potential to contribute to internal value such as data, information, and knowledge. While it is recognized that the former is important, the latter interpretation is the focus of this investigation so it was pursued in more detail.

Examples of comments about the interpretation of Intellectual Assets include the following:

RP-3: "... I think the intellectual assets in the organization are primarily around the skills and knowledge and the capabilities of ... the people ..."

"... a key issue is to what extent you are able to leverage them ... [to build] ... a base of information ... that will survive the individuals ..."

RP-6: "...what's in the heads of my ... staff."

These representative comments suggest the importance of people and processes. Thus, an interpretation of Intellectual Assets includes the tacit knowledge of individuals, which relate to the Human capital section of Intellectual Capital Theory outlined above and presented in Figure 1.

## **Management**

This sub-section includes a presentation of the emerging intellectual asset themes related to the management aspects of costs, benefits, valuation, and challenges.

The determination of *costs* associated with the administration of Intellectual Assets was nebulous. The research participants suggested that most costs for intellectual Assets were not determined.

RP-1: “We are very much driven by ... the formal requirements from an accounting standards perspective ...”

RP-4: “...we don’t account for it.”

RP-3: “We don’t think that would be a value added exercise. So we tend to be driven by the [accounting] standards ...”

When costs were not recorded it was either because accounting standards do not allow such costs, or it was decided the costs were too difficult to determine. Identified costs usually relate to amounts associated with the acquisition, operation, and maintenance of an information system employed to document Intellectual Assets associated with employee tacit knowledge. None of the research participants indicated that cost was determined associated with the time to interact with an Intellectual Asset system to enter required data.

*Benefits* associated with intellectual assets were not specifically identified.

RP-5: “...we probably don’t look after it to the extent that maybe we should.”

RP-7: “I know that value is intrinsic ... I can see improvement in the way people conduct their work.”

In relation to costs, while it was difficult to identify the cost component associated with time to interact with an Intellectual Asset process, it was considered even more difficult to determine the benefit which might accrue to reallocating the time to another task or process.

As reported above, the costs and benefits of identifying Intellectual Assets is considered difficult and, in most cases, for those individuals interviewed for this project no attempt was made to relate specific financial amounts to the *valuation* of Intellectual Assets.

RP-3: “We are managing [our intellectual assets] in response to a cascading down from our mission and objectives into our strategies and then into our tactics.”

RP-10: “People confuse [intellectual assets] with information technology, which is not information management.”

“Accounting systems doesn’t allow you to value information on the balance sheet.”

*Challenges* relate to the attempt to have Intellectual Assets recognized within the firm as creating value and to processes which should be established to manage the acquisition and dissemination of this resource.

RP-5: “...the challenge about intellectual assets is how do-we as the business understand the value of these assets ... if you’ve got someone pushing it really hard ... that is going to add incredible value to the business.”

RP-9: “I think we need to get enough momentum for business units to see value in the concept.”

## **Future**

The comments below relate to the opinions of the research participants about what actions will/should be taken by the respective organizations in the future in order to more appropriately deal with the management of Intellectual Assets.

RP-3: "...we will continue to see increased focus on capturing the information and skills of individuals for the benefit of the organization because ... [turnover] continues to increase."

RP-7: "We should [document] key business processes with people saying this is what I do ..."

In summary, the above themes and supporting comments provide a further, more detailed, elaboration of the Human capital component of Intellectual Capital Theory. The research participants could identify Intellectual Assets and suggested they involve people's tacit knowledge and business processes. Issues surrounding the costs, benefits, and valuation suggest that while there is recognition of Intellectual Assets there are challenges associated with their management. Further, there is also the challenge of creating an environment and momentum to develop processes to manage this valuable asset.

## **Discussion**

The transcripts, as indicated by the quotes above, show that the research participants recognize the need to better manage the Intellectual Assets of their organization. Unfortunately, not everyone at the senior level of the organizations recognizes the need. This situation represents one of the major challenges of these organizations, and indeed organizations in general, to initiate the development of processes to manage Intellectual Assets.

However, while the need to manage Intellectual Assets exists amongst a few senior level managers and there is acknowledgement that Intellectual Assets are vital to operations and competitive advantage, not much progress has been made in identifying Intellectual Assets or determining their costs and benefits. This is a surprising result. That is, some senior managers recognize the importance of a valuable corporate resource but are unable to convince others of the importance or to initiate a program of management of this resource. The determination and measurement of Intellectual Assets could provide organizations with valuable information to manage operations and contribute to competitive advantage.

Rather than an increased focus on the management of Intellectual Assets, often a misguided solution is proposed relating to the acquisition of information technology and the implementation of hardware and software. Perhaps the appropriate solution resides in addressing aspects of tacit knowledge and business processes. The management of Intellectual Assets should be of vital interest to senior management. Unfortunately, there seems to be a lack of governance from this senior level. Perhaps these challenges are difficult to address because of the intangible nature of Intellectual Assets. But, it remains incumbent upon senior level managers to address the management of this valuable corporate resource.

The focus of this research was on Intellectual Assets which are tangible in nature and encompass tacit knowledge. While it was acknowledged that measuring is important (Marr et al., 2004), there was no facility to accomplish such an initiative. Indeed, there is no regulatory requirement to develop and employ measurement and analysis tools such as those proposed by Harlow (2008), Rodgers and Housel (2009), and Salamudin and associates (2010). This situation is unfortunate. It represents an example of intangible liabilities as outlined earlier by Garcia-Parra et al. (2009). It inhibits sustained value creation (Lapointe & Cimon, 2009).

One of the research participants provided a very descriptive analogy of the Intellectual Asset situation which may be applied to many organizations. This provides an interesting perspective about the management of Intellectual Assets. The concept of Intellectual Assets may be compared to a bucket full of water. The bucket represents technology and the water represents the tacit knowledge and business processes. In most situations administrative activities are focused on the bucket – the technology. So, effort is placed on ensuring that the hardware, software, and communication technologies are in place and available. Indeed, it is relatively easy to determine development and maintenance costs for these tangible assets. However, the content of the bucket – the Intellectual Assets is where the focus should be placed. Processes must be in place to ensure the data (water) is clean and that nothing is entered that may contaminate the data. Thus, it is less important to focus on fixing the holes in the bucket and beating it into a different shape. The organization should concentrate on ensuring the water is not rancid and that processes are in place to both purify and ensure new water does not pollute. This latter sentence of the analogy relates to ensuring processes exist to document tacit knowledge and ensure the data obtained will support decision making and contribute to competitive advantage.

## Conclusions

This article reports on an investigation of the interpretation held by senior management regarding Intellectual Assets. While Intellectual Assets are considered a valuable resource, their management is impeded by their intangible nature and the consequent lack of governance initiative to establish a program.

This qualitative research reported here represents a preliminary investigation into aspects regarding the management of internal Intellectual Assets and, specifically, tacit knowledge of employees. A limitation of this type of investigation is the small number of research participants. However, interviews were conducted until theoretical saturation (Glasser & Strauss, 1967; Strauss & Corbin, 1990) was attained and no new themes emerged from the interviews.

Subsequent investigations will delve further into why the lack of progress in managing Intellectual Assets exists and how this situation may be addressed. Further, more research will include an international perspective.

Where intellectual asset management programs exist they seem to be compliance driven. That is, if industry or professional regulators require the administration of Intellectual Assets then organizations respond appropriately. However, there is a lack of a value driven response to the types of Intellectual Assets investigated in this project. It is therefore incumbent upon senior management to recognize the value of this resource to their organization and to take action to devise an environment and a program to effectively manage their Intellectual Assets.

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# Appendix

## Perspective on Intangible Assets Interview Protocol

### Intangible Assets

There are tangible and intangible assets. What does the term "Intangible Assets" mean to you?

What intangible assets do you have in your organization?

Are intangible assets considered valuable in your organization?

- Are they considered a scarce resource?
- Are they seen as building sustainable value?
- How are decisions made to invest in intangible assets?

How do you value your intangible assets?

How do you determine the cost of managing intangible assets?

How does your organization currently manage intangible assets?

- Who is responsible for managing intangible assets in your organization?
  - What is the job title(s) of the person(s)?
  - What are their duties?
- What investments have been made in intangible assets?
  - How effective have they been?
- What lessons have you learnt regarding the management of these intangible assets?
  - Can you describe a positive example?
  - Can you describe a negative example?
- What are your current issues and challenges regarding the management of intangible assets?
  - Describe the three most important ones.

Does your organization recognize the benefits of managing intangible assets?

How do you see the future of intangible asset management unfolding in your organization?

### Personal Background

How does your personal background help to manage your organization's intangible assets?

Do you have any other comments?

## Biographies



**Dr. M. Gordon Hunter** is a Professor Information Systems in the Faculty of Management, University of Lethbridge, Alberta, Canada. He has been appointed Visiting Professor, London South Bank University. He has held visiting positions at universities in Australia, England, Germany, Monaco, New Zealand, Poland, Turkey, and USA. In 2009 Gordon was a Fellow at the University of Applied Sciences, Munich, Germany. During 2005 Gordon was an Erskine Fellow at the University of Canterbury, Christchurch, New Zealand. Gordon's research approach takes a qualitative perspective employing Personal Construct Theory and Narrative Inquiry to conduct in depth interviews. He applies qualitative techniques in interdisciplinary research such as small business, agricultural management, governance of intellectual assets, and cross-cultural investigations. His current research interests in the information systems (IS) area include the effective management of IS personnel; the role of Chief Information Officers; and the use of IS by small business.



**Dr. Nina Evans** has extensive experience in Higher Education in various positions, such as Senior Lecturer, Head of Department and Vice Dean. Currently she is the Associate Head of School (Teaching and Learning) in the School of Computer and Information Science (CIS) at UniSA. She teaches in the areas of ICT Leadership, Business Information Systems, Management, Knowledge management and E-business. She holds tertiary qualifications in Chemical Engineering, Education and Computer Science, a Masters in Information Technology, an MBA and a PhD in Organisational Behaviour. She has been involved in diverse research projects in the fields of Knowledge Management, Business-IT fusion, Corporate Social Responsibility, ICT Education, Personal and Professional Skills for ICT professionals, Technology for Business Enhancement and Women in ICT. She has published in a number of international journals and delivered presentations at numerous international conferences.



**James Price** is currently the Managing Director of Experience Matters, a firm of business advisers in the management of data, information and knowledge. James has previously held the positions of Chair and Executive Director of Para//elo, a cross-cultural performance company, Group Managing Director of AMS Holdings incorporating Australian Medical Services, C2 and Reach100 and Managing Director of Reach100, a preventative health services company. James holds a Bachelor of Economics from the University of Adelaide.