The Management of Intellectual Capital and its Implications for Business Reporting

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Finally we acknowledge the contribution to this research made by our respective families. Not only do they allow us to spend so much time writing up our work, they happily accommodate to our need to make the numerous trips to conduct the interviews reported in the following pages, not to mention attending conferences to present and discuss it. We greatly appreciate that they accept that "someone has to do it".

FOREWORD

Oscar Wilde famously remarked:

> *one can survive everything nowadays, except death, and live down everything except a good reputation*

Today, the commercial power of brand and reputation is universally recognised. As a result good management recognises the value of relationships, employee experience and expertise, and the contribution that is made by strong and creative organisational cultures. All of these elements make up "intellectual capital". Paradoxically however, many businesses shy away from developing a view on how these factors impact their business reporting, and how to manage them, despite accepting that they bring value to the business.

It is perhaps easy to identify with the reasons why most boards have not made much progress in developing a financial perspective on this "intellectual capital". There is an inherent difficulty with accounting for intangibles, and a lack of understanding about the possibilities for intellectual capital reporting. Nevertheless, there have been significant developments overseas, and it is important that UK management harnesses the thinking that underlies these developments and uses it to challenge their own ideas and so manage their intellectual capital better.

The Research Committee of The Institute of Chartered Accountants of Scotland is pleased to have funded the research that underlies this report, not least because there has been little research on this issue up until now from a UK perspective. We hope that this paper will prompt boards and management to develop a better perspective on how to manage and report the factors which can contribute so much to increasing the success – and ultimately the value - of their business.

Nigel Macdonald
Convener
Research Committee

September 2003

Executive Summary

Background

In recent years there has been a growing realisation that a company's stock of intangible assets is a key contributor to its capacity to secure a sustainable competitive advantage. Knowledge-based intangibles in particular are recognised to be central to the value creation process. Such assets have increasingly been referred to by a new term, that of *intellectual capital*, in order to distinguish them from the financial capital that has traditionally provided the foundations for wealth creation. Intellectual capital refers to a much wider range of assets than those normally recognised as intangible, *eg* goodwill, brands, company reputation, *etc.* Consequently, it is often referred to as *intangibles*, particularly in the European literature. Successfully managing intellectual capital has emerged as a significant challenge to management, and is intimately related to another contemporary development, *knowledge management*, the management of knowledge-based assets in the pursuit of competitive advantage.

Accounting and intellectual capital are linked to each other because of the necessity to provide an accounting perspective on value creation. At one level there is a need to explain the hidden value attributed to intellectual capital by the capital markets, *ie* the excess of the market value of a company over the book value of its assets, determined in accordance with prevailing accounting principles. At the same time, it is important to set about documenting the growth of the value creation capacity of a company in some way, and in particular to provide an account of the prospects for continued value creation. In addition, there is a necessity to clearly distinguish intellectual capital from intangible assets in order that the repertoire of accounting treatments of the latter is not stretched to accommodate the former.

All of this proceeds against a background of growing interest in the establishment of a model of business reporting as a more comprehensive, customer oriented approach to the tasks traditionally associated with financial accounting and reporting. Given intellectual capital's central role in the value creation activities of companies, there is a pressing need to ensure that the information that accountants make available in any business report includes appropriate details of a company's stock of intellectual capital.

Prior research

Intellectual capital has been the subject of a rapidly expanding research effort since the term was first introduced into the literature in the mid 1990s. It is possible to identify several interlocking strands within this research:

- *taxonomies of intellectual capital*: there have been a number of attempts to identify the various constituents of intellectual capital. A key distinction is between human capital and structural capital, or the people capital in an organisation and the capital the people leave behind when they go home after work. The latter is often sub divided into external (or customer) capital, and internal (or organisational) capital.

- *management of intellectual capital*: here the focus is upon the requirement on management to grow the stock of an organisation's intellectual capital, in order to ensure the sustainability of competitive advantage. The links with the knowledge management literature are very evident here, not least the observation that it is important to recognise how reliant organisations are on intellectual capital *before* it is lost to the organisation.

- *valuing intellectual capital*: intellectual capital's hidden value status has resulted in a number of attempts to estimate the value of an organisation's stock of intellectual capital. Underlying such work is the belief that it is possible to devise an enhanced balance sheet that will provide information in greater accord with market valuations.

- *case studies and field studies*: there have been a number of companies in which intellectual capital and attempts to account for it have been extremely influential in promoting interest in the topic, *eg* Skandia, CIBC, Celemi, and more recently Coloplast. There have also been a small number of field studies of intellectual capital measurement and reporting practice, documenting the extent of interest in accounting for intellectual capital. Surveys of intellectual capital accounting practice are less numerous.
- *reporting intellectual capital*: mechanisms for reporting the success (or failure) that organisations have enjoyed in growing their stocks of intellectual capital, together with a number of additional reporting frameworks have appeared in the literature. These frameworks overlap with the idea of a business reporting framework to a considerable extent, confirming that despite their distinct origins, intellectual capital and business reporting are in fact intimately related developments.

An extensive literature has evolved since intellectual capital was first publicised. Until recently, apart from a small number of professional magazine articles, very few contributions have been made by UK researchers. This suggests that intellectual capital, and its close associates knowledge management and intangibles, are not presently of great importance within the UK. In this way it continues the situation previously evident in the case of human resource accounting, with which intellectual capital shares a number of continuities, that of limited interest. This, of course, is in stark contrast to interest in accounting for intangible assets, which has been both widely subscribed and is intimately linked with the established financial accounting and reporting model.

The research project

In the light of this lack of UK research on intellectual capital, a study was proposed to establish the current level of management's interest in, and knowledge of intellectual capital and related ideas, and what approaches, if any, to accounting for intellectual capital, both internally and externally, were presently in place. As these enquiries were viewed as *exploratory* in nature, the research design adopted was a field study of companies identified by a form of selective or purposive sampling as being heavily reliant on their stocks of knowledge-based assets. In parallel, a series of interviews was pursued with a range of experts with an interest in intellectual capital, including consultants, user groups and key opinion formers. Overall, the focus of the study was on the management of intellectual capital, and how this impacts on business reporting. Interviews were secured with representatives of a variety of management functions in six companies, the case companies, and with twelve experts, expert opinion.

The findings

In general, the managers in the case companies were not familiar with the term intellectual capital, and did not use it during our discussions. This did not mean that they were unaware of the importance of what the intellectual capital concept incorporates, nor that they did not focus significant attention on it. People, their experience and expertise, skills and commitment, together with customers, suppliers and relationships with them, and intellectual property, organisational cultures and knowledge networks, were all recognised as key assets that provided the foundations for sustained value creation. There was also evidence that managers were recognising the need to ensure that the stock of their intellectual capital was being grown successfully. In order to facilitate this process, a number of initiatives were in place that involved the measurement of intellectual capital, using a range of soft metrics, often some distance removed from conventional financial numbers.

The greater part of this intellectual capital related activity was being pursued in the absence of any familiarity with the literature on the subject. Much of it seems to have occurred because such activities fit with the prevailing set of management practices that have been embraced by the different companies, rather than as a consequence of the diffusion of the intellectual capital fashion within the UK. Whether it will be possible to take the next step, reporting on intellectual capital management initiatives, both internally and externally, on the same basis, is debatable. There was evidence that management already recognises that reporting will be a more problematic

exercise, and have made comparatively limited progress in this direction. They are also aware that it will not be easy to link such reports with those of a financial nature, which continue to be accorded significant importance by all parties. A collective lack of understanding about the possibilities for intellectual capital reporting, with its intimate business reporting associations, therefore exists as the major obstacle to further progress.

Expert opinion on intellectual capital and related topics confirmed that in the UK these are not yet widely understood ideas. A number of the consultants were concerned that what was beginning to be put in place in this regard might readily be replaced by the next wave of management prescriptions. The difficulties that intellectual capital poses for accountants and their financial reporting practices were widely recognised, with some respondents arguing that this might contribute to a failure to embed it within organisations. At the same time, however, there was evidence of concern about the continuing value of these reporting practices, and by implication support for the exploration of new and expanded approaches to reporting the value creating endeavours of companies. The sub group of investment analysts and corporate lenders claimed to be able to take the growing importance of intellectual capital into account when assessing financial propositions. This was despite the absence of an informed view of either intellectual capital or how to report it. Of particular interest is the importance they place on the quality of management as a key determinant of prospective business performance.

Moving forward

On the basis of these findings it would appear that the process of managing and accounting for aspects of intellectual capital in the UK has just about reached the limits of possibility. Almost all of what has been achieved to date has happened with only a very limited understanding of, or familiarity with, the growing body of literature on intellectual capital and related ideas including intangibles and knowledge management. In order to ensure that intellectual capital practices become more firmly established, and thereby less likely to be swept away by the next management fashion, it is necessary for the UK accountancy profession to become better acquainted with the expanding stock of developments in accounting for intellectual capital. Of particular relevance are those exemplars of intellectual capital reporting practice that have been developed in the Nordic countries in recent years. Exhibiting a much greater reliance on narrative information than has traditionally been commonplace in conventional financial reports, these intellectual capital statements may also serve as a basis for a more general business reporting model, one that could be further enhanced by the inclusion of a corpus of intellectual capital self-accounts.

Chapter One

Introduction and Overview

The topic of intellectual capital has attracted increasing interest in recent years as management recognise the contribution it makes to their pursuit of competitive advantage. Until recently, a critical indicator of intellectual capital's role in this process was the growing gap (albeit currently in decline) evident between the book value of companies and the value attributed to these companies by the market. This has been especially marked in the case of knowledge-based companies, those in which intellectual capital has superseded physical capital as the principal source of value, including shareholder value. Management must therefore attend to the task of growing their stocks of intellectual capital if they wish to compete successfully in the newly emergent knowledge economy. Hence the "management of intellectual capital" element of this study.

The gap between book value and market value evident in the case of many intellectual capital rich companies is of particular interest to the accountancy profession. Intellectual capital exists as something to account for, *ie* to bring within the scope of accounting calculation. This problem is compounded by the fact that many of intellectual capital's most important elements cannot be readily represented in terms of the accounting calculus. There is considerable overlap between intellectual capital and the category of assets termed intangible. Intangible assets have long posed a problem to the accountancy profession since they are not readily incorporated within the conventional model of financial reporting. Business reporting has recently been identified as a development that may meet the needs of the profession. The rise of intellectual capital, with its intangible assets associations, has further "implications for business reporting", hence the presence of this element in the title of the study.

Background to the project

Interest in intellectual capital begins with the publication of a number of popular management books in the mid 1990s (Brooking, 1996; Stewart, 1997; Sveiby, 1997a). Intellectual capital is identified as providing a new source of wealth for businesses in the information age or knowledge economy. Managements are implored to recognise the importance of their workforces, customer relationships, information systems and corporate cultures in creating value. These are the assets that promise to provide sustained wealth creation, increasingly replacing traditional physical sources of value. Their link with "knowledge" and "information" results in them being referred to as knowledge-based intangible assets, further differentiating them from the tangible foundations for value creation evident in previous eras.

Intellectual capital management at Skandia

The most renowned contribution to the intellectual capital debate emanates from Skandia, a Swedish financial products conglomerate that had begun to actively manage its intellectual capital in the early 1990s. In a seminal paper, Edvinsson, Skandia's first Director of Intellectual Capital, sketches out the agenda for future discussion (Edvinsson, 1997; see also Edvinsson and Malone 1997). Intellectual capital is linked with the "hidden value" of many contemporary businesses, evidenced by the gap between market and book values. The Skandia value scheme identifies the various elements of intellectual capital, providing a founding taxonomy that continues to inform the literature. The difficulties entailed in accounting for intellectual capital within the existing financial accounting and reporting framework are outlined, together with a possible alternative approach, one more attuned to the imperative that management must grow their stock of intellectual capital in the pursuit of sustained competitive advantage.

Emergence of a global movement

In 1998 a group of academics from Denmark, Finland, France, Norway, Spain and Sweden formed a research community that subsequently became the *Proyecto Meritum* (Meritum, 2002). The objective of the project was to produce "guidelines" for managing and reporting on intangibles, which would in due course be applied throughout the European Union. The term intangibles is used here as synonym for intellectual capital, rather than to refer to intangible assets. The researchers regard intangible assets as a sub division of intellectual capital, being those elements that can be readily identified and incorporated within the prevailing financial reporting model. In order to report the majority of the elements of intellectual capital, they conclude that it is desirable to develop some form of intellectual capital report. One formulation of such a report has been developed by the Danish participants in Meritum, following a parallel study funded by the Danish Agency for Trade and Industry (DATI, 1999, 2000). The intellectual capital statement format is characterised by a strong narrative emphasis and the use of many different forms of pictorial representation. It has the further merit of being able to incorporate the financial information usually contained in annual statements.

There have also been contributions to the intellectual capital debate from North America. Early enthusiasm for intellectual capital in Canada by companies including CIBC and the Royal Bank of Canada was evident in a study by Lynn (1998), funded by the Society of Management Accountants of Canada. In parallel, the Canadian Institute of Chartered Accountants included intellectual capital as a focus of the Canadian Performance Reporting Initiative, subsequently lending support to Total Value Creation International Inc. in 2000[1]. In the US, Lev, a professor at the Stern School of Business and Director of the Ross Institute for Accounting Research, has been active in promoting interest in accounting for an expanding portfolio of intangible assets, which he refers to as intellectual capital or knowledge assets (Lev, 2000, 2001). The American Society for Training and Development has also embraced the intellectual capital concept (Bassie and McMurrer, 1999). In Australia, Guthrie has been active in researching the topic (Guthrie, 2001; Guthrie and Petty, 2000; Guthrie, Petty, Ferrier and Wells, 1999) and in promoting the work of other scholars in the field (Petty, Johanson and Guthrie, 2001).

Links with knowledge management

Over time, it has become apparent that when referring to intellectual capital, accounting academics are often making similar observations as their counterparts with an interest in knowledge management (Demarest, 1997; Prusak, 1997; Scarbrough and Swan, 2001). Knowledge management itself emerged a couple of years earlier than intellectual capital, but reflects the same broad changes: the rise of the knowledge economy; the role of information; the creation and leveraging of knowledge assets. As a new development, knowledge management seeks to build on the role of knowledge as an increasingly important source of competitive advantage.

In the same way that managing finance, managing marketing or managing human resources, and more recently managing information, have been identified as promising superior business performance, managing knowledge now assumes the same importance. The overlap between "knowledge" and "intellectual capital" means that the imperative to manage knowledge coincides with that of managing intellectual capital. If this identity is accepted, it is possible to recognise accounting for intellectual capital as being concerned with reporting the success, or otherwise, of management's attempts to grow its stock of intellectual capital or knowledge assets.

An intellectual capital report (account or statement) might therefore be expected to incorporate a number of metrics designed to convey such information. Equally, given the nature of the processes on which it focuses, alongside such metrics more narrative representations may be developed, something evident in much recent intellectual capital reporting literature. In order to enhance knowledge management, it is important that the underlying division of managerial labour is rejected in favour of an integrated pursuit of measurement, management and reporting. Accountants are not to be concerned with only the measurement and reporting aspects, leaving their managerial colleagues the task of management itself. All three aspects should be of interest to both parties. In this way, knowledge management and intellectual capital, as contemporary management themes, are best understood as being two sides of the same coin.

Links with business reporting

Recent interest in the future of financial reporting can be traced to the publication in 1994 of the Jenkins Report (AICPA, 1994). In order to improve business reporting, Jenkins proposed the adoption of a customer focus, one designed to meet the growing information needs of investors and creditors. As a contribution to the ensuing debate, the Research Committee of The Institute of Chartered Accountants of Scotland (ICAS), proposed a blueprint for business reporting, *Business Reporting: The Inevitable Change?* (ICAS, 1999). This discussion document advances proposals that relate to any prospective business reporting package, and calls for the publication of a wide range of information for which "a clear external demand" can be identified. Much of this information is non-financial in nature, often being related to the "soft" drivers of business performance, and commonly concerned with the future. While some of this information is currently collected by management, it is not commonly disclosed as part of the financial reporting package. Other types of information that might be of use are not even presently captured by management information systems.

Among the latter is intellectual capital, described as being "critical to the company's long term success", and "of critical importance in obtaining sustainable competitive advantage in a knowledge and service-based economy", hence "worthy of further discussion" (ICAS, 1999, p.77). ICAS also suggests that, as part of their business reporting packages, companies should "report externally on the measurement and management of intellectual capital" (p.78). In the concluding discussion, this position is affirmed, although now intellectual capital is identified with intangibles assets (and intangibles), while the potential difficulties entailed in developing "sufficiently reliable reporting methods to make information about these key assets of use to external users in assessing future performance" are acknowledged. ICAS commends research into the use of non-financial indicators in order to establish any that may be of generic value, together with those that may have relevance to specific industries. Research on reporting the "quality of management", described as "the most critical driver of company performance", is also necessary.

Research objectives and approach

Researchers' interests and expertise

The research reported in the following chapters was partly designed to pursue the recommendations on intellectual capital and business reporting set out in the ICAS blueprint. It also reflected the interests of the two researchers. One had become interested in the area of knowledge management as a successor to business process re-engineering, arguably the principal management fashion of the early 1990s. Of particular interest was the necessity to understand the interplay between two conflicting approaches to knowledge management: the "technical" with its information systems foundations, and the "cultural" with its organisational behaviour foundations. In addition, there were questions about how it might be possible to measure the success of knowledge management initiatives.

The second researcher was interested in the development of "strategic" management accounting approaches, viewed as interdisciplinary initiatives. With the emergence of the intellectual capital concept came the possibility of a further development, incorporating measurement, management and reporting dimensions. This was overlaid with an interest in advances such as the balanced scorecard for external reporting purposes, as well as the formulation of more enabling or socially inclusive modes of accounting (Broadbent, Ciancanelli, Gallhofer and Haslam, 1997; Gallhofer and Haslam, 1997).

The status of intellectual capital in the UK

At the beginning of the process of formulating a research proposal, apart from a small number of professional journal articles, there was little evidence of an interest in intellectual capital in the UK accountancy profession (Roslender, 2000). All of the references to intellectual capital cited in the previous section emanate from

scholars outwith the UK, a situation that has not changed significantly in the interim (see Petty, Johanson and Guthrie, 2001). Consequently, it became apparent that the research needed to focus on how widely established the intellectual capital concept was in the UK. What progress had there been in developing accounting for intellectual capital? Who were the UK counterparts to Skandia, and were they involved in the fabrication of some variant of intellectual capital reports? The absence of evidence about UK intellectual capital developments *per se* did not necessarily indicate that none existed, rather that they may not, as yet, have been identified and publicised. The research proposal was therefore to go in search of intellectual capital (accounting) in the UK, in the light of the growing stock of experience and insights derived from other countries.

An exploratory field study

In order to pursue this objective, a field study research design was adopted. Interviews were sought with senior managers in knowledge-based companies, environments in which intellectual capital provided the foundation for sustained value creation. If accounting for intellectual capital was evolving in the UK, it was likely to be found in companies of this sort, employing significant levels of intellectual labour or knowledge workers, and in which a high proportion of market value is the result of the brand and reputation that such employees create.

The exploratory emphasis of the research design was also evident in the choice of respondents who would be interviewed. In addition to accounting and finance specialists, an attempt was made to establish contact with specialists in human resource management, information management, operations management, and beyond, reflecting the many dimensions of intellectual capital. In parallel to this field study of companies, another series of interviews was also to be carried out. A number of categories of what were designated "experts" were identified, parties who might have an interest in intellectual capital and attempts to account for it. Among those originally identified were key users such as corporate lenders and business analysts, together with financial journalists, shareholder groups and senior auditing practitioners. In the original proposal to ICAS a target figure of forty interviews in total was envisaged, generating "in excess of fifty hours of detailed insights on the measurement and management of intellectual capital".

Structure of the report

The body of the report is in two parts, each of three chapters, together with a concluding chapter that brings together the principal findings and offers recommendations regarding the measurement, management and reporting of intellectual capital.

In chapter two the intellectual capital concept is linked with business reporting. The chapter draws on theoretical literature to provide a conceptual framework for understanding intellectual capital and its association with business reporting. Chapter three contextualises intellectual capital within the broader knowledge society, and within the organisation, and discusses its close affinity with knowledge management. The fourth chapter outlines a number of approaches to understanding intellectual capital and the frameworks that have been developed in order to report on intellectual capital. Taken together these chapters provide the theoretical underpinnings for the empirical enquiries reported in the second part of the report.

In chapter five further details are provided of the research objectives of the study, and of the research design employed to accomplish them. The chapter also provides overviews of the two samples of interviewees. Chapter six reports the findings of the field study of six companies in which interviews with senior management were conducted. Included here are details of management's familiarity with the intellectual capital concept, the specific dimensions of intellectual capital that have attracted their interest, and how they approached the tasks of measuring and reporting, *ie* accounting for intellectual capital. In chapter seven a range of findings identified as "expert opinion" are reported, including views on intellectual capital held by cognate experts, opinion formers, and key user groups.

Chapter eight concludes the study. Details of the interview schedule used in the course of the interviews with managers are contained in appendix one.

Endnote:

[1] Unfortunately the web sites on which most of this work was reported, *inter alia* www.cpri.matrixlinks.ca and www.totalvaluecreation.com, are no longer in existence.

CHAPTER TWO

INTELLECTUAL CAPITAL: A CHALLENGE TO BUSINESS REPORTING

The topic of intellectual capital and its relationship with accounting practice has rapidly given rise to an extensive and insightful theoretical literature. In this chapter the main elements of the conceptual framework that connects intellectual capital and business reporting, and thereby underpins the present study, are briefly outlined. Initially a number of definitions of intellectual capital are identified, and then linked with the hidden value problem to which intellectual capital accounting was originally developed as a response. In the third section, value realisation and value creation as competing foundations for accounting and reporting are explored. Following this, the relationship between the overlapping concepts of intellectual capital, intangibles and intangible assets is considered. In the final section intellectual capital is compared with human capital, arguably its most important constituent.

Defining intellectual capital

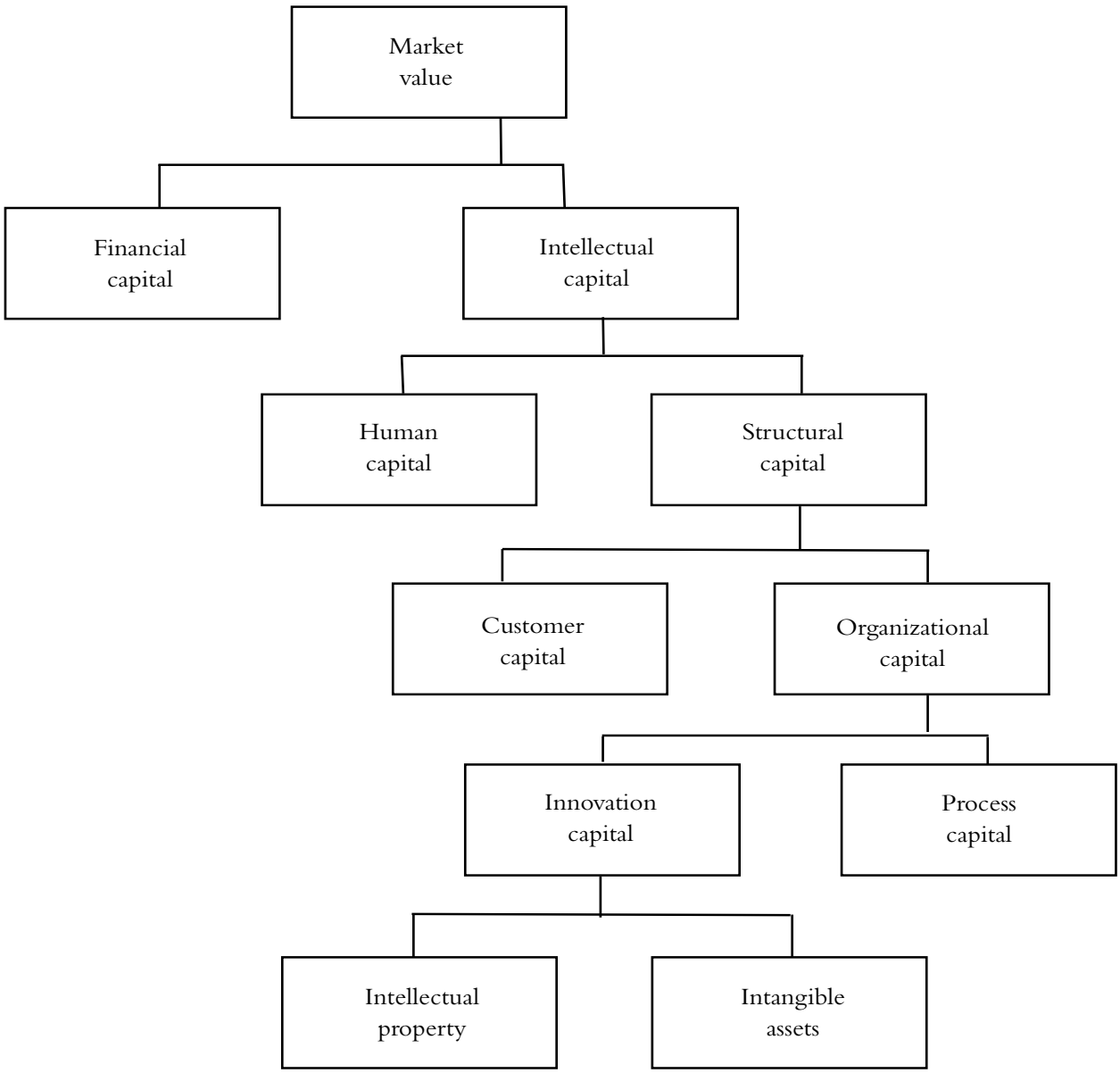
The Skandia Value Scheme

The founding definition of intellectual capital embraced by Skandia AFS, the birthplace of intellectual capital accounting, was:

> *The possession of knowledge, applied experience, organisational technology, customer relationships, and professional skills that provides Skandia AFS with a competitive edge in the market.* (Edvinsson, 1997, p.368)

Over time at Skandia, a "simplified" definition emerged that focused on two components: human capital and structural capital. Intellectual capital was viewed as human capital together with "those dimensions beyond the human capital [that] were left behind when the staff went home", structural capital having grown out of human capital. The Skandia Value Scheme (Figure 2.1) captures the varied constitution of intellectual capital, with structural capital initially being sub-divided into customer and organisational capital, which in turn sub-divides into innovation and process capital, with the former being constituted by intellectual property and intangible assets.

Figure 2.1 The Skandia Value Scheme



Source: Edvinsson(1997)

Intellectual capital taxonomies

Reviewing the early intellectual capital literature, Lynn (1998) derives a tripartite taxonomy of intellectual capital (Figure 2.2).

Figure 2.2: A Taxonomy of the Elements of Intellectual Capital

Human Capital	Relational (Customer) Capital	Organizational (Structural) Capital	
		Intellectual Property	Infrastructure Capital
• Know how • Education • Vocational qualification • Work-related knowledge • Occupational assessments • Psychometric assessments • Work-related competencies • Models and frameworks • Cultural diversity	• Brands • Customers (names, purchase history) • Customer loyalty • Customer penetration and breadth • Company names • Backlog orders • Distribution channels • Business collaborations (joint ventures) • Licensing agreements • Favorable contracts • Franchising agreements	• Patents • Copyrights • Design rights • Trade secrets • Trademarks • Service marks • Trade dress	• Management philosophy • Corporate culture • Management processes • Information systems • Networking systems • Financial relations • Corporate strategies • Corporate methods • Sales tools • Knowledge bases • Expert networks and teams • Corporate values

Source: Lynn (1998)

Human capital is distinguished from relational or customer capital, and organisational or structural capital. The latter is further sub-divided into intellectual property and infrastructure capital. Sveiby (1997b) refers to a similar taxonomy as the "family of three": individual capital; customer capital; and structural capital. Mouritsen (1998), reviewing the same literature concludes that writers on intellectual capital typically mobilise three dimensions when discussing the subject:

> *They generally talk about human capital (which leaves the firm during the weekends), organisational capital (procedures, manual and administrative systems) and customer capital (customer-loyalty, product-brands and corporate image).* (Mouritsen, 1998, p.468)

More recently, Meer-Kooistra and Zijlstra (2001) have distinguished four rather than three components of intellectual capital: human capital; customer capital; process capital; and innovation capital. In so doing, they confirm that while most commentators can agree on the constitution of human and customer capital, or what

Likert (1967) had termed "the human organization", the remaining elements of intellectual capital can be classified in a variety of different ways, each of which has its merits.

Summarising, then, as various definitions and classifications have been identified, and have attempted to develop and improve upon earlier definitions, a consensus seems to have emerged. Intellectual capital can be divided into three relatively "concrete" components: one relating to human abilities, another to internal organisational structure, and a third to external structure. In addition, it has occurred to later commentators that a fourth somewhat more elusive (but no less important) component needs to be specified, namely the innovative capabilities that flow from intellectual capital, and which could, perhaps, be seen as a sum total of these other three elements, or the result of their correct alignment. These taxonomies provide the starting point for more detailed enquiry into the nature of intellectual capital.

Hidden value

Market values and book values

The importance attributed to intellectual capital lies in the role that its various components have for the pursuit of competitive advantage by companies. People's skills and expertise, know-how and organisational commitment, together with customer databases, brand awareness and reputation for quality and service on the one hand, and corporate culture, internal knowledge-sharing networks and information systems on the other, have increasingly been recognised as the basis for superior business performance. As such they have become regarded as amongst the most valuable assets that a company can possess. In those cases where a business does not have access to such a portfolio of assets, its absence may serve as a fetter on the attainment of competitive advantage.

By the mid 1990s it was accepted that the capital market was able to recognise those companies that possessed a desirable stock of intellectual capital, and to reflect this in the value of the companies' shares. As a consequence, the gap between the market value of particular companies and their book values was growing rapidly. In some instances, *eg* Microsoft, Intel and CocaCola, the gap translated into a double-digit multiplier, as exemplified by Tobin's q and similar metrics (Dzinkowski, 1999; Flamholtz and Main, 1999; Gu and Lev, 2001; Yakhlef and Salzer-Morling, 2000). The prevailing regulatory framework governing financial reporting did not (and still does not) permit companies to incorporate intellectual capital valuations within their financial statements. It is for this reason intellectual capital is identified with the *hidden value* of the assets that compose it.

Within the Skandia Value System, for example, intellectual capital is represented as being the difference between market value and financial capital. The latter can be sub-divided into physical capital, *eg* plant, equipment and inventories, and finance capital, *eg* cash, investments and debtors. More significantly, however, it is possible to sub-divide intellectual capital into its constituent elements, as described earlier. By so doing, the hidden value of the business becomes more visible and is also amenable to the application of the prevailing accounting calculus. Knowing the market and book values of a business provides a global figure that can be accounted for in terms of the values of its constituent parts. In this vein, Edvinsson (1997) refers to a "tentative new balance sheet" in which intellectual capital is borrowed from stakeholders such as customers and employees, in parallel with the financial capital borrowed from shareholders and financial institutions.

Limitations of the hidden valuation perspective

Unfortunately, such thinking permits only limited progress. First, great difficulty is encountered in identifying the various elements of intellectual capital in any particular company. The various taxonomies on offer are intended to indicate the possible composition of intellectual capital rather than providing definitive categorisations. Second, even assuming that it is possible to enumerate the elements in the case of a particular company, their contribution to value creation occurs both individually and interactively. As Kaplan and Norton have observed,

the balance sheet is based on a linear, additive model, while value creation, with its crucial intellectual capital associations, is neither linear nor additive in nature, being multiplicative (Kaplan and Norton, 2001a).

Third, given the extent of disagreement about establishing the value of relatively well understood elements of intellectual capital such as brands and customer databases, it is unlikely that much accord can be established in relation to organisational cultures, tacit knowledge and professional expertise. Fourth, while the elements of intellectual capital may be valued in ways that can be justified individually, it is unlikely that there will be much internal consistency between the various valuations, resulting in serious difficulties in integrating them with the standard balance sheet valuations. Finally, too great a credibility may be being placed on the residual value between market and book values, compounded by a search for a set of valuations that will add up to it. In practice this might result in simply disregarding critical elements of intellectual capital having already accomplished the objective of making the numbers balance.

Value realisation *versus* value creation

Intellectual capital and sustainable competitive advantage

As observed earlier, the importance of intellectual capital lies in its contribution to the pursuit of competitive advantage. The notion of competitive advantage is a contemporary one, and reflects the imperative that businesses must now embrace a *future* orientation. The concurrent use of the term "sustainable" in association with competitive advantage indicates that businesses are being urged to put in place the means of continuing to deliver superior business performances. Implicit here is an acceptance that past and present performances, however impressive, by no means guarantee continued success. Reports of past performance, and financial statements in particular, are also to be regarded with some scepticism, since all they reliably represent, in a formalised and constrained way, are accounts of previous attempts to pursue competitive advantage.

This observation helps us to understand the growing disjunction between market and book values. As incorporated in financial statements, book values are carefully constructed representations of financial value. If the market were to take into account only such constructions, there would be no significant gap between the two valuations. The gap therefore suggests that the market *is* interested in the steps individual companies are taking in pursuit of sustainable competitive advantage. Those that are doing so, *inter alia* by building up their portfolios of intellectual capital, may currently report comparatively poor financial performances, yet be highly regarded by the market. Indeed many investments in intellectual capital had the result of significantly reducing profit levels, through the expensing of associated expenditures, and in turn reducing the finance capital of the business in the balance sheet, reflecting the actual outflow of cash funds. Conversely, failure to make such investments, or to invest in physical capital, and thereby to be in a position to take advantage of the prevailing accounting and reporting conventions, can result in impressive current financial results, but provide no real basis for future optimism, and thus low market valuations.

Value realisation

The underlying distinction at work here is between *value realisation* and *value creation* (McLean, 1999a, b). Traditionally, financial accounting and reporting have focused on the value realised by the business entity during specific time periods. A framework of accounting principles has been developed, allowing accountants to provide information about the performance of a business that is reliable and comparable with previous performances, or with the performances of other business entities. Two further characteristics of the value realisation approach are critically important. First, what is accounted for or reported can be understood in terms of transactions of various sorts that have occurred between the business and various third parties. Second, what is being reported is a set of past transactions, hence the notion of the historical cost foundations of financial accounting and reporting.

The accounting treatment of brands permitted in the UK after 1997 per FRS 10 and 11 exemplifies the value realisation approach, together with its limitations. It is now possible to include any brands acquired by a company in the course of a business combination among its stock of fixed assets, at cost, and to depreciate the cost of these brands over a period of twenty years, subject to the regular performance of impairment tests. In the event that the cost of purchasing these brands exceeds their agreed market value, the difference is to be accounted for as goodwill. Should the subsequent sale of this asset occur at a price in excess of its written-down (book) value, the resultant profit is accounted for in the conventional way, through the profit and loss account. Any knowledge that the company's senior management may have about the market value of the brand cannot, however, be reported within the value realisation approach. Together with the value that may, however accurately, be ascribed to home-grown brands, this information cannot be reported until this value is realised as a consequence of a recognised financial transaction. The adoption of a creative practice that would record such speculative valuations offset by the introduction of unrealised profit further highlights the limitations of the value realisation approach.

Value creation

A value creation approach is more concerned with the provision of information on the capacity that companies have to deliver sustainable competitive advantage. Such an approach is not bound by the necessity of identifying a transaction basis for inclusion in any account or report. The emphasis is now on current and future activities rather than the historical emphasis of a value realisation approach. Reliability of the information on offer would remain a requisite attribute. Comparability between companies would be less crucial than comparability over time within the company. The relevance of information produced would, of necessity, assume a critical significance, the challenge being that of identifying the value drivers of future business performance, and then reporting how these are presently growing. The value realisation approach, and in particular financial accounting and reporting, would provide periodic confirmation of actual value creation, albeit within the constraints that define it.

Given intellectual capital's associations with value creation and sustainable competitive advantage, a value creation approach to accounting for and reporting on intellectual capital would seem appropriate. Emphasising the success a business has had in growing its stock of intellectual capital may prove more instructive than pursuing the traditional value realisation approach. There is no longer any need to incorporate the value of intellectual capital into the balance sheet since this is now recognised to be an inappropriate way of seeking to account for intellectual capital. Released from this requirement, there is also no longer a need to provide such an account employing the calculus of value realisation, *ie* using traditional financial measures. In their place will be accounts that employ whatever metrics are best suited to capture and represent future value creation capacity. Financial measures are no longer a pre-requisite, nor required to 'add up' in the usual way.

Intellectual capital accounting as "valuing the future"

In this context, Mouritsen, Larsen and Bukh (2001a) have charted the evolution of intellectual capital accounting at Skandia in terms of "valuing the future". They provide a description of the intellectual capital approach that accords with much of the above:

> *While the finance view is concerned to describe the set value of the firm, the intellectual capital approach is concerned to transform value … Rather than forming a bottom-line, intellectual capital numbers is a loosely coupled assemblage of financial as well as non-financial indicators that illustrate the flows of action developed in the firm … It is concerned to move value and increase it. Its numbers are not constructed merely to describe the world in a set valuation of the firm. These numbers are broad, and in a particular intellectual capital statement they are assembled uniquely. The intellectual capital statement is open-ended and has no logical closure.*

> *Is the intellectual capital statement a conservative calculation of intangibles - ie separable material assets – in the financial balance sheet? No, it is a story of coalescence, complementarity and inseparability. Is it a capitalisation of the value of intangibles and tangibles? No. It is not about the financial balance sheet at all. There is no bottom line. It is not directly about a set value of a firm even if intellectual capital sometimes is defined as market value of a company less book value. It is a theory of what creates value, and a story of how the resources of the firm are composed and bundled in order to create value.* (Mouritsen, Larsen and Bukh, 2001a, pp.403-404).

These writers stress the *narrative* element of this alternative form of reporting. Business reporting is no longer solely about the financial representation, *ie* valuation, of tangible and intangible assets. Instead the emphasis is on telling the "story" of how different assets and values within the organisation evolve jointly and coalesce. The new business reporting is "a theory of what creates value", one that is set in narrative form, albeit a reliable and valid form.

Intellectual capital, intangibles and intangible assets

The problem with intangible assets

Within the intellectual capital literature there is a widespread tendency to use the term interchangeably with two further terms: *intangibles* and *intangible assets*. There is a danger in such inexactitude, however. Although it may be acceptable to regard intangibles as a synonym for intellectual capital, both should be distinguished from the more familiar and widely used term intangible assets. This is more than a terminological exercise: it has strong links with the previously discussed distinction between a value realisation approach and a value creation approach to business reporting. To the extent that intellectual capital and intangible assets continue to be viewed as being the same, or broadly similar, it will be more difficult to promote the case for a value creation approach, and thus to progress intellectual capital accounting. This is particularly the case in the UK where, to date, intellectual capital and attempts to account for it have only limited visibility, in contrast to accounting for intangible assets, interest in which continues to be widespread.

The Meritum project solution

In an attempt to introduce definitional rigour, the authors of the Meritum Report observe that the terms intangibles and intellectual capital both apply to the same thing: non-physical sources of future economic benefits (Meritum, 2002). The term intellectual capital is seen as originating in the human resources literature, while the term intangibles has an accounting origin. As well as lacking physical substance, intangibles (and intellectual capital) are:

> *… controlled (or at least influenced) by a firm as a result of previous events and transactions (self-production, purchase or any other type of acquisition) and may or may not be sold separately from other corporate assets.* (Meritum, 2002, p.62)

Intangible assets are to be viewed in a more restricted way, as:

> *… representing the set of* Intangibles *or elements of* Intellectual Capital *that are susceptible of being recognised as assets in accordance with the current accounting model.* (Meritum, 2002, p.61, italics per the original)

To be recognised as an asset, from the perspective of *financial* accounting, "an item must fulfill several restrictive requirements; notably, it must have a reliably measurable relevant attribute and be *separable*" (p.62). Consequently, while all intangible assets can be viewed as examples of intellectual capital or intangibles, something that is evident from scanning the various taxonomies of intellectual capital, the converse does not hold.

The shortcomings of the prevailing financial accounting and reporting model are exposed as the authors continue:

> *Some examples of Intangible Assets can be found in the balance sheet: copyrights, franchises, patents, trademarks, brand names, etc. In contrast, elements of intangible nature such as advertising and promotion expenses, marketing research expenses, restructuring costs, organization costs, training costs, corporate culture, customer loyalty, employee satisfaction, etc., are not normally included separately in the balance sheet, appearing only aggregately under Goodwill after the acquisition of a company or at the time of the first consolidation of a group's financial statements.* (Meritum, 2002, pp.62-63)

In so arguing, the authors focus attention on many critical sources of future value creation on which companies are reliant, and for which it will be difficult, if not impossible, to satisfy the prevailing financial accounting and reporting recognition requirements. While it may, with the exercise of ingenuity, be possible to transform some of them from intangibles to intangible assets status, a more beneficial option would be to approach the whole issue in a quite different way. In place of the value realisation approach that underpins financial accounting and reporting, an approach that is more attuned to the process of value creation again commends itself.

Accounting for the "new goodwill"

Roslender and Fincham (2001) describe intellectual capital as the *new goodwill* in an attempt to underscore the difficulties associated with approaching it from a traditional financial accounting and reporting perspective. Goodwill is a residual category within the value realisation approach. It represents a global figure for the difference between the cost of an acquired company and the aggregate fair value of all its identifiable assets and liabilities. Goodwill arises because the acquiring company is prepared to pay in excess of this fair value in order to gain control of the acquired company. In many cases the reason why companies are willing to make such payments is to acquire commercially valuable intangible assets, which have not been recognised in the financial statements of the acquired company. Over time, attempts to convert elements of the stock of intangible assets into less intangible assets have allowed them be included in the balance sheet of an acquiring company separately from goodwill.

The emergence of intellectual capital, however, has had the effect of increasing the variability and intangibility of intangible assets and, more importantly, their value and thus their challenge to the value realisation approach. Overlaying this scenario is the proviso that goodwill is only to be accounted for if it is acquired, despite the fact that it is now actively grown in most businesses, whether in its traditional intangible assets guise, *ie* as the "old" goodwill, or as intellectual capital, *ie* the "new" goodwill. The tried and tested process of converting elements of intangible assets into less intangible assets, and thereby reporting their value within financial statements, has been overtaken by events. Not only is it a case of the wrong solution. The problem itself is wrongly conceived (cf Wallman, 1996).

Intellectual capital *versus* human capital

The legacy of human worth accounting

Some contributors to the literature of accounting for intellectual capital were also associated with earlier attempts to account for the worth of employees. This project began in the early 1960s as human asset accounting (Hermanson, 1964), or putting people on the balance sheet as it was described by Hekimian and Jones (1967). Later the emphasis was refocused, with Flamholtz arguing for a more managerially oriented project, human resource accounting (Flamholtz, 1974). More recently, further development was evident in the form of human worth accounting (Roslender and Dyson, 1992; Roslender, 1997), and human resource costing and accounting (Johanson and Nilson, 1996; Grojer and Johanson, 1998). In this context, the emergence of the intellectual capital concept, within which the human capital component is sometimes portrayed as being dominant over the other components, has significance for the continued development of accounting for the worth of employees,

in the guise of human capital accounting. Previous developments were informed by traditional conceptions of accounting, *ie* people on the balance sheet or management accounting information regarding human resources. The intellectual capital–value creation linkage has highlighted the value of a break with the prevailing accounting and reporting framework.

Human capital and intellectual assets

The relationship between intellectual capital and human capital merits further discussion. Human capital is the most dominant form of intellectual capital, something captured in Edvinsson's founding distinction between people and what people leave behind in the organisation. It is people who provide businesses with experience and expertise, educational qualifications and occupational competencies. People deliver customer service and create brand associations, as well as constructing customer lists and desirable products. People are also the source of intellectual property while being the mainsprings of corporate culture and knowledge networks. Collectively, the people who inhabit any organisation provide it with a stock of *intellectual assets* that it is able to draw upon in the pursuit of competitive advantage, *ie* the intellectual capital that is required to complement the stocks of both physical and finance capital deployed in this process.

Although it might be argued that people also provide physical and finance capital, nowadays these are not usually the same people who provide the intellectual assets. In accounting for intellectual capital, therefore, there would appear to be a strong case for accounting for human capital separately from accounting for intellectual assets as the product of human endeavours. They would, of course, form complementary aspects of any intellectual capital account, in much the same way as such an account might complement a more traditional statement of value realisation. Consequently, a set of interlocking accounts would seem to be the most appropriate formulation, with no imperative to pursue total integration.

Accounting for human capital: intellectual capital self-accounts

While it may not be too difficult to envisage the form an intellectual assets account might assume, *ie* a statement of how successful a business has been in growing its stock of key value creating assets, the format of a human capital account is arguably more problematic. There is little to be gained from providing some anodyne statement similar in nature to an employment account: numbers, trends, costs, targets, *etc.* A preferable approach might be to have human capital provide its own accounts, which later in the study are termed *intellectual capital self-accounts*. Such accounts would provide human capital with the opportunity to outline how it experiences the process of value creation. This would be quite different from previous efforts to account for the worth of employees, reflecting the attempt to have them articulate their own worth in terms far removed from the traditional constraints of financial accounting and reporting.

A number of frameworks intended to provide the means of reporting on intellectual capital already exist, having emerged in parallel to the literature reviewed in this chapter. These frameworks are discussed in chapter four. First, however, it is useful to contextualise intellectual capital in order to understand how it relates to contemporary ideas such as the knowledge economy or the information society, and more particularly the relationship between intellectual capital and developments such as knowledge management. This is the subject of chapter three.

Chapter Three

Wider Business and Management Issues

Interest in intellectual capital and business reporting, as we saw in chapter two, reflects changes and developments within the accountancy profession. It also derives from wider changes in economy and society. Intellectual capital shares features in common with a range of ideas and management concepts that have been growing in influence, both recently and over the longer term. In particular, intellectual capital has linkages with a battery of concepts that revolve around new organisational forms, the phenomenon of the information society and the role of knowledge in organisations.

A number of relevant business and management literatures are briefly reviewed in this chapter. Initially the twin concepts of corporate and organisational cultures are discussed before moving on to consider the more macro-issues associated with the information society and new economy. These two pairs of concepts are then considered in combination in the context of the learning organisation, which in turn has provided a crucial impetus for the development of those practices known as knowledge management. Attention then switches to the emergence of more inclusive approaches to the task of management, and the necessity for greater knowledge sharing. In the final section, the relationship between these ideas and the topic of intellectual capital is discussed.

Corporate and organisational cultures

An important context for intellectual capital, given its tripartite focus on human, relational and structural capital, is the growing concern with a broadly "cultural" dimension of business and management. An interest in social factors and values can be found in the work of pioneering management writers like Chester Barnard, Peter Drucker and Tom Burns. Modern interest can be conveniently dated to the early 1980s and the emergence of a specific focus on corporate and organisational culture. This sociological construct became a 1980s buzzword that has since enjoyed sustained influence. The interest in culture stresses qualities of co-operation and the whole organisation, and contrasts starkly with traditional cultures of competitive individualism and the tendency to seek efficiencies in the elements of management.

Corporate culture

When corporate culture first emerged as a distinctive concept, influential writers linked it to notions of business success, excellence and innovation, and in particular to how organisations operate in the current climate of unpredictable change and fierce competition. For example, Deal and Kennedy (1982) established the notion that "culture fosters success". Their survey of US corporations found that firms that were perceived to "believe in something" or to "stand for something" were the strong culture companies and high performers. Similarly, in what is probably the most widely read of the popular management books, Peters and Waterman's *In Search of Excellence* (Peters and Waterman, 1982), the possession of a unique set of cultural attributes was argued to underpin several of the prescriptions for corporate "excellence". Another of the gurus of modern management, Kanter, has focused on the pressing need for innovation. The model she develops (Kanter, 1989) centres on large corporations retaining the flexibility and dynamism of their entrepreneurial youth. This they achieve largely by inculcating a "culture of change".

Change management, innovation and leadership

One of the attractions of culture is the sense in which it represents an organising concept linked to other concepts that define the new management agenda. Thus broader ideas on *change management* suggest that, in the conditions of global competition, organisations need adaptable business cultures that stress values of openness, good communication and shared commitment. In addition, the ability of companies to generate cultures of innovation is strongly related to new kinds of *leadership*. Top management must take responsibility for building strong cultures that fit market needs. Here Deal and Kennedy (1982) found that managers who pioneer successful companies rarely operate on a narrow financial or administrative front. Rather, they are preoccupied with developing values and acting as role models. Leaders construct the reality of the organisation for members. They shape values and create the drama and vision of the organisation.

This said, these ideas are not without their critics. What the proponents of the cultural approach to change management effectively argue is that cultures can be explicitly created and changed. Successful companies can promote their heroes and myths and in the process modify their cultures. Others, however, have questioned whether organisational cultures are "manageable" in this way. If culture is the natural product of social interaction, that evolves and emerges over time, and is the residue of countless experiences, events and actions, how can it be directly manipulated? Much of what is loosely called "corporate culture", it is suggested, amounts to little more than the mission statements coming out of corporations, or images of the organisation that top management wishes to promote.

Organisational culture

Whatever the truth of this, there are management writers who provide more sophisticated accounts of organisational culture. Pettigrew (1985), for instance, believes that culture can be shaped to suit strategic ends, but he is not referring to any kind of managed consensus or corporate brainwashing. He has in mind the capacity of organisations to transform themselves from within, and argues that cultures can be adapted using the power process of the organisation and new forms of leadership. The "management of meaning" is possible in organisations, Pettigrew suggests. Morgan (1997) is another writer who stresses that tackling managerial problems can be combined with the subtleties of organisational culture. He advocates the building up of a sense of commitment among enterprise members, and through that the desired corporate ethos.

The information society and new economy

Post-industrial society

Another organising concept in recent management thinking, and an idea evident in the growing interest in intellectual capital, is the knowledge-information axis. This has been a popular theme of the past 30 or more years, but again is often traced to Bell's (1974) evocation of a "post-industrial" society built around the dominant role of the science-based industries. Economic revolutions and industrial changes have given way to the information revolution powered by scientific know-how and new technologies. Others such as Reich (1991) have highlighted new types of knowledge formation as the basis of the wealth of nations. In particular, knowledge-based occupations (the so-called knowledge workers) are the new elite responsible for spearheading an economy's or company's success in global markets.

Clearly this kind of argument casts a wide net and there have been some who have questioned the realities behind such a sweeping vision. Kumar (1979) provided the classic critique of the information society (see also Lyon, 1988), asking whether any society was ever not a knowledge society? Kumar questions the uses to which knowledge is put, and whether the real basis of political influence in modern society has shifted from its traditional origins in ownership and wealth. In spite of doubts, however, what is true is that a range of "higher level" roles (in scientific, technical and professional areas) have been expanding relative to older industrial occupations. The

new bases of power and economic strength relate to new knowledge communities and cultural assets that are less tangible than previous institutions.

The emergence of new organisational designs

The "new economy" that has arisen on the basis of the information revolution is defined by novel and distinctive sources of wealth creation. The exploitation of knowledge and the crucial role of innovation in the modern corporation have brought about a range of quite unexpected ways of doing business. For example, new organisational designs have moved far from the old patterns of bureaucracy and wealth creation through manufacture. New "lean structures" will often outsource the very activities that were the source of wealth of the old-style corporation. Instead, the modern corporation makes money *via* a quite different set of rules. Activities like supply chain management, and "assurance" of quality or warranty systems, expand the firm's market and exploit a range of network externalities. The same networking principle extends beyond the organisation into new partnering arrangements.

The agile business models of the e-economy use strategies of intermediation and they leverage new types of alliance. These are often based around virtual structures brought into existence by the technologies of the Internet (Barnes and Hunt, 2001). New value networks exploit a range of "reputational" assets, such as the power of branding and the global presence the Internet provides.

The learning organisation

These new business structures imply a high level of complexity and a quality of management that is both crucial and demanding. The types of leadership required are "visionary" and "transformational" if a high level of trust and a shared vision are to be established between business partners. All this can be maintained only by the perception of mutual benefit. The kind of organisation that can sustain these structures and cultures has been characterised in many ways, but one crucial concept is that of the *learning organisation*.

Organisational learning

The concept of organisational learning - and its outcome, the learning organisation - dates back to the 1960s and the work of major figures in the management development tradition, like Argyris and Schon. More recently it has been popularised by management gurus and consultants, notably Senge (1990). It is thus a kind of "lasting fashion" that has outlived other transient management ideas. The learning organisation is a model that draws its power from the resemblance to individual processes. Individual learning is fundamental for personal development; it is the psychological basis of the whole process of turning the infant into the functioning creative adult. By analogy the learning organisation is a metaphor that conveys a range of powerful images of progress and maturity.

Organisational learning is directly connected to (indeed is more or less equivalent to) the process of organisational change. Just as individual learning is about transforming the person, so organisational learning represents the basis of change and transformation in business. As with other aspects of the wider management context, the social dimension plays a key role. The learning organisation extends beyond traditional "hard" areas of management, and also beyond the individual. Meaningful organisational learning, it is suggested, takes place as part of an organisational culture. The outcome of useful learning is manifest in various co-operative patterns - in the interaction between members and in relationships to outside stakeholders.

In this way, the learning organisation provides a benign context in which the collective and individual "growth" of members can take place (Easterby-Smith *et al*, 1999). Key contributory concepts include Senge's (1990) suggestion that organisational progress occurs *via* the mastery of distinctive "disciplines." In his model, four basic disciplines: personal mastery; building a shared vision; mental modelling; and team learning, contribute to an organisational capacity greater than the sum of individual talents. The crucial fifth discipline - what

Senge calls *systems thinking* - represents a level of collective awareness that integrates the other disciplines into a coherent whole.

Single- and double-loop learning

Similarly, Argyris and Schon (1978) made the influential distinction between single- and double-loop learning. The former refers to the capacity to detect error and failure in a set of system rules, and so to correct faults and improve the working of the system. Double-loop learning occurs at a higher level and involves a more creative response to information; it is the capacity to rethink the rules of the system itself. This distinction has enjoyed lasting influence as it maps directly onto current preferences for radical change. Single-loop learning is the basis of incremental change. The double-loop is required for change at the strategic level and the capacity to rethink the business. Argyris and Schon's "double-loop learning" and Senge's "fifth discipline" both represent the power to innovate - in other words, the power to improve and become excellent, and to remain excellent.

Despite the positive spin on the "social" perspective on organisational learning, others have stressed that broader social considerations may be anything but positive. Critics of learning have suggested that, while learning represents an idealised rational process, organisations themselves are often anything but rational. Power structures and competing rationalities can lead to non-adaptation and organisational "forgetting". Thus some studies of decision making around innovation have shown that interest group politics and the politics of career often mean the denial and blocking of unwelcome information. As a result, organisations can become "stuck" in patterns of formal rules and ritualised responses, despite the mounting costs of misconceived courses of action (Blackler, Crump and McDonald, 1999). This is only to acknowledge the complexity of these phenomena, however. Others have suggested it is pointless trying to deny the existence of power processes, but that learning can still take place *via* strategies that attempt to "work with" the political nature of organisations (Coopey ,1995).

Knowledge management

Learning itself also connects to the knowledge-information axis. Learning, whether individual or organisational, is based on the acquisition of useful knowledge, and the learning organisation exploits knowledge to the full. Hence the capture, sharing and dissemination of a pool of organisational knowledge are defining features of the change dynamic. More recently this kind of *knowledge management* has been identified as a concept in its own right.

Knowledge management refers to the capacity of organisations to utilise and develop their knowledge base. It recognises knowledge of all types: technological; strategic; financial *etc*, as the essential ingredient in global competitiveness. Under this perspective the nature of knowledge and the means of processing it become key subjects of study. Not only is objective or "explicit" information, *eg* from financial sources, sought but also that derived from subjective or "implicit" sources. The forms of tacit knowledge that can accrue in organisations - the "feel" for a job that an experienced incumbent has, or the intuition of a skilled decision maker - become crucial areas of interest. Indeed, in practice, a concern with knowledge management in firms frequently follows on the heels of experiencing the loss of employees who possessed crucial knowledge. Such tacit knowledge tends to be recognised only when lost to the organisation.

Communities of practice

Several writers have noted that knowledge management is not about the simple codification or collection of information. Salient knowledge is "constructed" *via* complex social pathways. Brown and Duguid (1991), for example, stress that knowledge creation and innovation occur crucially through informal channels, and in particular the communities of which the organisation is (or should be) composed. Their concept of *communities of practice* stresses that organisational learning is not just an abstract process of cognition. Learning takes place by

the individual participating in a live social system. Much tacit knowledge consists of the rules of communities of practice, the acquisition of which involves membership of that organisational community. The innovation process is based on the participation and engagement of individuals in new communities and on how communities themselves expand and grow. In this sense, the formal means of accruing and passing on knowledge, such as training, though important, can never compensate for a vibrant and inclusive organisation culture.

As with the other perspectives reviewed above, knowledge management has its critics, who voice what are by now familiar doubts. These echo concerns about whether complex social processes can be brought to heel, so to speak, for organisational purposes. Thus Elkjaer (1999) has queried whether a "community" can supply the kind of controlled learning that theory requires. McKinlay (2002) provides one of the few empirical studies of this very recent phenomenon. He reports on the efforts of a multi-national pharmaceutical company that poured considerable resources into managing knowledge, and notes that their success was strictly limited. The company attempted (through practices like a cyber cafe and groupware databases) to codify and spread the know-how of their research staff. In the event, none of the methods worked very well. The contradiction between tacit know-how and attempts to freeze it and distribute it for organisational benefit were never overcome. The very act of capturing tacit knowledge threatened the process of spontaneous innovation it was supposed to encourage.

Nevertheless, despite reservations, ideas of managed learning remain influential and debate around them continues. The images of organisation that they create, though idealised in some respects, are persuasive in their appeal and the basis of much practical intervention. At the very least the field is rich with new theories and perspectives, and provides an arena for academics and practitioners to meet.

Inclusive management

Another strand in the debate about wider business and management reflects a new wave of thinking about organisational structures and relations. The emphasis on more "inclusive" patterns of management shares common ground with many of the above advances, and has frequently been an aspect of wider restructuring and the move to flexible and less bureaucratic organisational designs. Old occupational and functional divisions in organisations are increasingly giving way to new forms of managerial integration.

Bureaucratic organisational structures and silo management

Like other recent initiatives, the germ of these ideas goes far back. There never was a time when rigid forms of administration were considered a good thing, and almost from their inception, "bureaucratic" types of management seem to have been referred to in an ironic and critical sense. Nevertheless, after the mid 1980s, a cluster of new managerial patterns emerged that marked a shift from traditional notions of specialist or *silo management* with their functional or disciplinary foundations. Central themes were to be the spreading of responsibility to all groups and levels to enable people to use their skills more effectively. Management was being urged to step outside its silos and provide forms of leadership that integrated wider organisational communities.

A central aspect was the replacement of bureaucratic structures by organisation designs based around concepts of process. Influential ideas like Porter's (1985) value chain, for example, and more recently the fashion for re-engineering, stressed that managerial relationships needed transforming. Relations based on a functionally-divided model of the organisation, with mechanical links between work units, were less and less effective. Instead, underlying business processes that charted the flows of work and information around the "real organisation" needed to become the basis of design. So, for example, one of the key structures that has accompanied knowledge management initiatives are the so-called communities of practice; these are intended to re-form work and interest groups to promote the flow of information and knowledge beyond bureaucratic boundaries (Barnes, 2002, McKinlay, 2002). Also new models like the lean organisation crystallised the key

tasks of particular managerial groups. They were associated with flatter designs and complex lateral structures that integrated managerial effort.

The management of the knowledge-sharing process

For these changes to occur, management itself has to become a new institution. Inclusive management means that no longer are the familiar competing managerial philosophies - marketing, financial, personnel, and so on - to be so starkly defined or the source of so much conflict. Nor is a unifying theme like "strategy" to be seen as purely a top-down, corporate activity that sits on top of the competing groups. Instead, new corporate processes will make strategic action more widely owned; strategy becomes an "emergent" process based on forms of planning that include multiple stakeholders.

The managerial philosophies behind these moves reflect many of the changes in the new economy mentioned above. Knowledge managers, for instance, are not represented as simply another managerial specialism but a function that shares knowledge across boundaries and disciplines. Similarly, organisational learning cannot take place where knowledge is being retained and guarded *within* groups; knowledge has to become common property in order that shared learning experiences can be constructed. In short, whilst "exclusive" patterns regulated the bureaucratic structure, these are being replaced by a new managerial *zeitgeist* in which cooperative links between specialisms are the common practice.

Linkages with intellectual capital

A number of obvious, and some not so obvious, themes in common between these various practices and the intellectual capital topic can be identified. First, both exhibit a strong human/social component. Change nowadays means changing people not changing things, and several of these concepts (intellectual capital included) owe their existence to the dawning realisation that traditional more "formalised" (financial, administrative) approaches are no longer sufficient. Second, intellectual capital and several of the wider themes share an emphasis on unification and inclusiveness. The central feature of intellectual capital models reflects a concern with aggregating information and bringing it together for corporate perusal. This echoes the consensual element of corporate culture, as well as the use of methods in combination that is found with team working and inclusive management.

Third, virtually all the above, particularly those that constitute actual techniques, occupy that awkward quadrant of concepts that are "crucial but complex". The ambivalence over whether cultural processes and processes like learning can be managed resembles the uncertainties about accounting for a will-o-the-wisp phenomenon like intellectual capital. Yet we are constantly urged that they are fundamental to business success and professional relevance. Culture in particular is actually a constituent element of some intellectual capital models (to be discussed in the following chapter) but is frequently regarded as a "residual" that may be highly important but is unlikely to be successfully accounted for.

There are also a number of other areas in which intellectual capital and the above aspects of the new management make contact. Thus observers of the information society and learning organisations (*eg* Reich, 1991) explicitly define common attributes such as creativity and problem-solving powers that strongly echo intellectual capital models, especially dimensions focused on innovation and development. Also, the intangibles of the intellectual capital model bear a strong resemblance to (and indeed in some cases duplicate) many of the "virtual" forms of wealth creation that characterise the new economy. Arguably the closest parity is between intellectual capital and knowledge management. Intellectual capital can in several respects be seen as the accounting equivalent of knowledge management. The two concepts are close in meaning; both are contemporaneous and represent influential "fashionable" elements of new management thinking.

A further area of comparison worth noting is attitudes toward *measurement* as the signature of a "hard" approach to both wider management issues and accounting. In the wider context there are a number of spheres where management metrics have been developed. Practitioner research in the learning organisation,

for example, has developed the so-called learning curve which relates product costs to output; if an inverse relation is observed (if cost reduction follows increases in output) it is assumed that learning has taken place (Easterby-Smith *et al*, 1999). Similarly, the field of knowledge management has developed software for codifying the knowledge base of the organisation, while the more sophisticated products (proponents regard these as "real knowledge management") claim to be able to process even tacit knowledge.

In this sense, there is certainly no aversion in principle to measurement in management (the familiar aphorism: "what gets measured gets managed", is attributed to Tom Peters). Nevertheless, because of the subjective and socio-political nature of management skills, the emphasis in this area lies on a variety of means of management control. By and large, the strategies surveyed above are for managing and regulating effort, and indeed lean towards forms of self-regulation. This contrasts with the accounting preference for control by quantifying performance variables (sometimes termed "management by numbers"). The resulting tension is also evident within the stock of intellectual capital reporting frameworks developed to date, to be discussed in the following chapter.

Chapter Four

Intellectual Capital Reporting Frameworks

A range of mechanisms has emerged in recent years that allow companies to report developments within the sphere of intellectual capital. Three are relatively well known, and constitute a first wave of reporting frameworks. A second wave has subsequently emerged, characterised by the attempt to link intellectual capital more explicitly with innovation and the value creation process. The development of a third wave of a more narrative-based format for intellectual capital reporting is also currently being explored.

The first wave: scorecards

The three relatively well-known intellectual capital reporting frameworks are the Skandia Navigator, the Balanced Scorecard, and the Intangible Assets Monitor. All share a similar scorecard format that provides a mechanism for companies to report a greater variety of information about the various elements of its intellectual capital

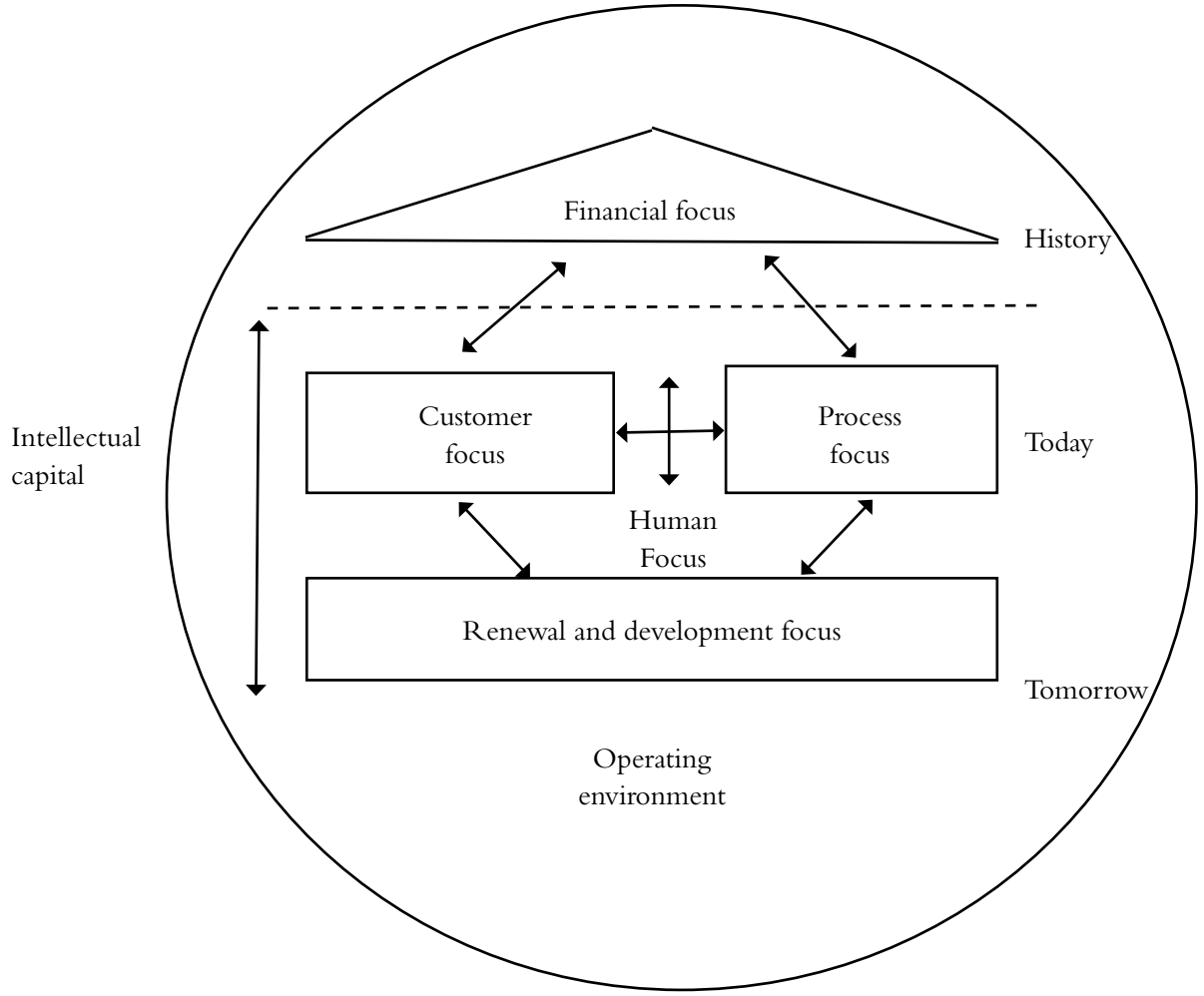
Skandia Navigator

The origins of intellectual capital reporting are found in practices pursued by Skandia AFS, the Swedish financial services conglomerate. Having established an intellectual capital function in 1991, it began to develop a balanced annual report approach three years later (Edvinsson, 1997; Edvinsson and Malone, 1997). This entailed the incorporation of an intellectual capital supplement in the reporting package. In 1995 the first such document was published, the supplement to the 1994 Skandia Annual Report, entitled *Visualising Intellectual Capital*. In succeeding years, further supplements were published, evolving from the first single page reports to documents in excess of twenty pages, together with CD-ROMs and videos (Mouritsen, Larsen and Bukh, 2001a).

The initial supplements also provided the origins of the Skandia Navigator, the purpose of which was to provide a more balanced overall picture of operations, as well as furnishing a new business planning mode in which the long run is integrated with the concerns of yesterday and today. The Navigator (Figure 4.1) is represented in the form of a house. The financial focus is afforded by the roof (past). The walls, the customer focus and the process focus, together with the human focus, the soul of the house, are principally concerned with the present, while the future is associated with the floor or platform, the renewal and development focus. Edvinsson observes that:

> *The metaphor of navigation constitutes a search for another language of dynamic reporting beyond management. It aims to highlight the continuous process of adding to the long-term sustainability of the organization and nurturing the roots for sustainable value generation.* (Edvinsson, 1997, p.371)

Figure 4.1 The Skandia Navigator



Source: Edvinsson (1997)

From the outset, Skandia's many business units were asked to identify the most appropriate measures for reporting their performance within the five foci. There was no requirement to include any particular measures, and as a consequence any measures that have been employed must be regarded as examples of what is possible. Mouritsen, Larsen and Bukh (2001a) reproduce a table of indicators, (Table 4.1), drawn from the 1998 *Human Capital in Transformation* supplement, which extends to 87 indicators for six different business units. Despite the fact that the financial focus is only one of five within the Navigator model, 46 of the examples on display are classifiable as financial.

Table 4.1: Skandia's indicators

	American Skandia	Skandia Real Estate	Skandiabanken	Skandia Life UK Group	Dial	Skandialink
Financial Focus	Return on capital employed Operating result Value adding/ employee	Direct yield Net operating income Market value Total yield	Operating income Income expense ratio Capital ratio	Return on capital employed Operating result Assets under management	Gross premiums written Gross premiums written/employee	Gross premiums written Operating result Assets under management
Customer focus	Number of contracts Savings/contract Surrender ratio Points of sale	Customer satisfaction index Average lease Average rent Telephone accessibility	Number of customers	Number of contracts Savings/contract Service awards	Telephone accessibility Number of individual policies Customer satisfaction index	Number of contracts Surrender rate
Human focus	Number of employees Number of managers Of whom, women Training expense/ employee	Human capital index Employee turnover Average years of service with company College graduates/ total number of staff	Average number of employees Of whom, women	Number of employees	Average age Number of employees Time in training	Number of employees Human capital index Share of employees with secondary or higher education Share of employees with three or more years of service
Process focus	Number of contracts/ employee Admin expense/ gross premiums written IT expense/admin expense	Occupancy rate Financial occupancy rate Net operating income/sq m Cost per sq m	Payroll costs/ admin expenses	Number of contracts/ employee	IT-employees/ total number of employees	Admin expenses/ gross premiums written IT-expense/ admin expense
Renewal and development focus	Share of gross premiums written from new launches Increase in net premiums written Development expense/Admin expenses Share of staff under 40 years	Property turnover Sales Purchases Change and development of existing holdings Training expenses/ admin expense	Total assets Share of new customers Deposits and borrowing, general public Lending and leasing Net asset value of funds	Increase in net premiums, new sales Pension products, share of new sales Increase in assets under management	Increase in gross premiums written Share of direct payments in claims assessment systems Number of ideas filed with Idea Group	Number of contracts/ employee Fund switches *via* Telelink Fund switches *via* Internet

Source: Mouritsen, Larsen and Bukh (2001a)

The majority of the non-financial examples do not appear very radical, largely because they are presented *in situ*. For each of the six business units, we have the underpinnings of the story that management wishes to tell about its efforts to grow its own stock of intellectual capital; or expressed in a different way, the account it wishes to provide of its intellectual capital. Released from the constraint of having to do so in a prescribed manner, and no longer having to worry about making the numbers on show balance in some way, nor about generating one crucial number, management is now free to contribute a further element to Skandia's stock of intellectual capital.

In 1998 Skandia instructed all of its business units to begin to develop their own specific Navigators, and to explore the possibility of installing a system of personal Navigators for its employees (Roy, 1999). In order to facilitate such advances, the Dolphin information system, so-called because of its intelligence, sensitivity and versatility, is being introduced throughout the Skandia Group. Overall it is envisaged that knowledge sharing will be extended while providing senior management with an accurate, on-line indication of organisational performance.

Upton (2001) reports that the company was not intending to produce an intellectual capital supplement for 1999, and that the 2000 supplement would be published in 2001. The Skandia web site (www.skandia.com) currently acknowledges that the company has "pioneered a number of methods and tools, among them the Skandia Navigator, to manage what we call our Intellectual Capital". More significant is the positioning of this observation within the context of "sustainability" which reflects a sharpening of concerns about environmental management and social responsibility, indicating that the company is presently in the process of rethinking its philosophy on value creation.

Balanced Scorecard

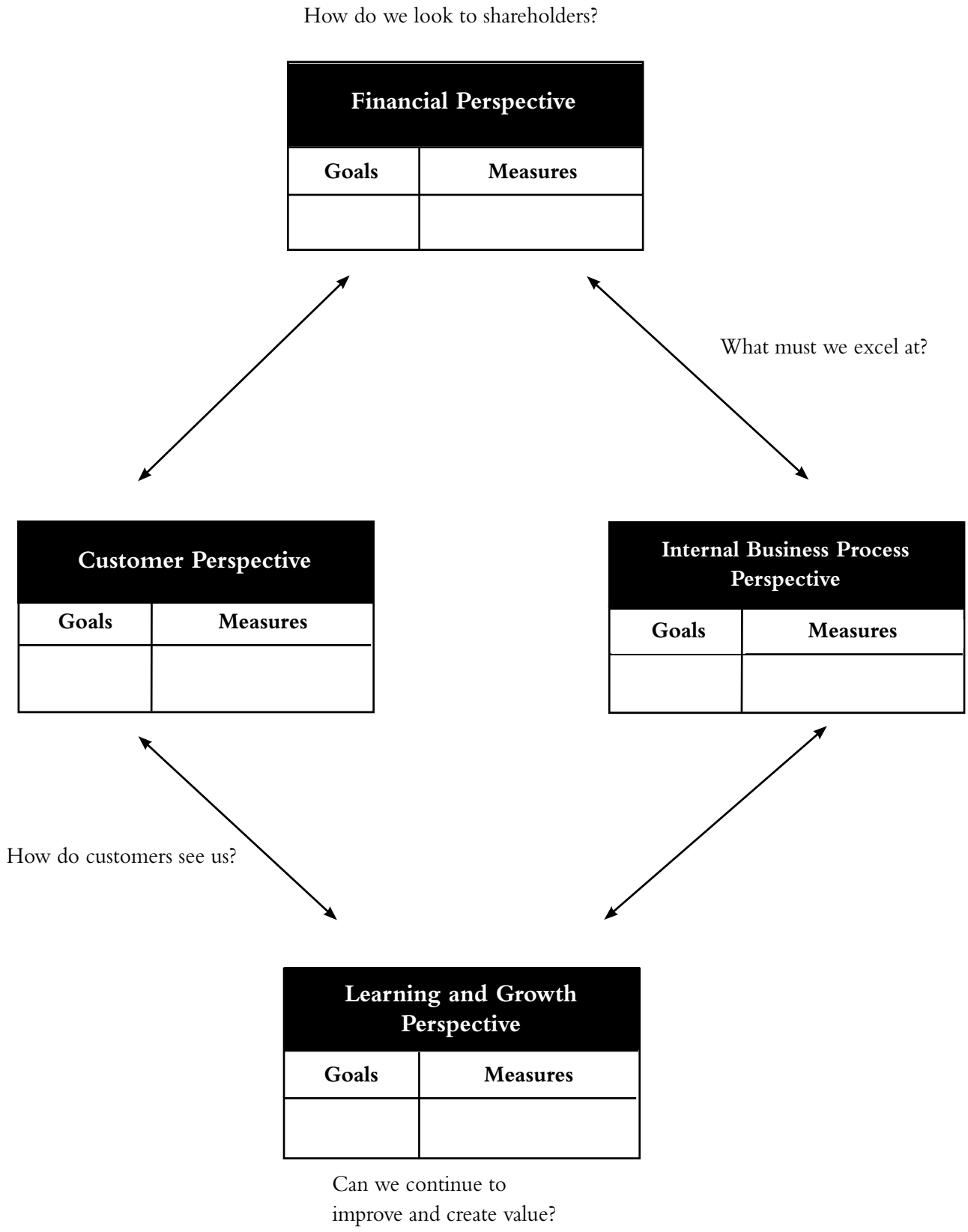
This approach to business reporting was developed by Kaplan and Norton in the early 1990s (Kaplan and Norton, 1992, 1993), predating the Skandia initiative by a couple of years. To date, the term intellectual capital has not been used by the authors, although in 1996 they acknowledged the existence of a link between the Balanced Scorecard and reporting on intangible assets. Reprising their previous work on the scorecard, Kaplan and Norton assert that:

> *It therefore enabled companies to track financial results while simultaneously monitoring progress in building the capabilities and acquiring the intangible assets they would need for future growth*. (Kaplan and Norton, 1996a, p.75)

In a subsequent contribution, Kaplan and Norton (1996b) identified Skandia's early intellectual capital supplements as examples of Balanced Scorecard activity. On balance, Kaplan and Norton's Balanced Scorecard approach is more widely understood than its Swedish counterpart.

The Balanced Scorecard can be seen as an attempt to develop a comprehensive approach to management reporting, *ie* as a management accounting development. Its emergence followed a period of intense activity within management accounting, which resulted in a profusion of new management accounting techniques intended to restore the lost relevance of the discipline (Kaplan, 1983, 1984; Johnson and Kaplan, 1987). In addition to financial measures, the Balanced Scorecard combines performance measurements from three perspectives (Figure 4.2). These measures were to be derived from the new management accounting techniques that had emerged in preceding years. They were more closely aligned with securing and sustaining competitive advantage than with the traditional measures of business performance associated with a financial perspective.

Figure 4.2: The Balanced Scorecard



Source: Kaplan and Norton (1992)

The customer perspective posed the question: "How do customers see us?" and acknowledged that businesses increasingly needed to meet the expectations of customers who now dictate the conditions of trade. The internal business process perspective, posed the question: "What must we excel at?" thereby acknowledging that it was increasingly taken for granted that businesses needed to maximize the added value of their internal processes. The financial perspective affirmed the traditional shareholder emphasis of financial reporting, hence the associated question: "How do we look to shareholders?" Finally, the innovation and learning perspective (later to be redesignated "learning and growth") was more concerned with future events, hence its associated question: "Can we continue to improve and create value?".

In the case of non-financial perspectives, Kaplan and Norton are clear that they expect management to identify measures that represent superior business performance. As with the Navigator, there is no designated combination of indicators, no requirement to make the scorecard balance in the conventional sense, nor any necessity for there to be continuity over time or commensurability across business units within a larger entity. Information overload is to be avoided, Kaplan and Norton (1993) suggesting "15 to 20 scorecard measures" (p.135). The contingent nature of any prospective measures makes the scorecard a valuable mechanism for intellectual capital reporting. The three non-financial perspectives commended by Kaplan and Norton, to which may be added others if necessary, are closely associated with the human capital (learning and growth), relational capital (customer) and structural capital (internal business process) concepts. Kaplan and Norton's preference to explore the strategic potentialities of the Balanced Scorecard has meant that they leave the precise nature of any interface between intellectual capital and the Balanced Scorecard implicit (Kaplan and Norton, 1996a, b, 2001a, b), their recognition of the importance of value creation notwithstanding.

Intangible assets monitor

The third of the relatively well-established approaches to intellectual capital also originated in Sweden. According to its principal advocate, Sveiby, the monitor's roots can be traced back to the work of the Konrad Group in the mid 1980s (Sveiby, 1997a). The group brought together managers from a number of Swedish knowledge-based companies who were interested in using both financial and non-financial indicators to monitor performance. Sveiby identifies two outputs of the group's work as being the development of a theoretical framework for (external) reporting intangible assets, and the identification of the "family of three" elements of (intellectual) capital: individual; customer and structural. In his view subsequent advances at Skandia, including the development of the Navigator in the mid 1990s, and in North America, owe much to this pioneering enquiry.

The Intangible Assets Monitor incorporates a simple 3*3 structure (Figure 4.3). There are three foci, referred to as external structure, internal structure and employee competence. External structure is concerned with such things as relationships with customers and suppliers, brand names, trademarks, company image and reputation. Internal structure embraces a variety of elements, ranging from those already familiar to accountants as intangible assets such as patents and know-how, through such things as administrative and computer systems, to rather intangible intangibles such as the culture or "spirit" of the company. The third focus, employee competence, is regarded as the most important by Sveiby, giving rise to both internal and external structure. Together with the internal structure, the people with whom employee competence resides constitute what is usually referred to as the organisation.

Figure 4.3: The Intangible Assets Monitor

The Intangible Assets Monitor		
External Structure	**Internal Structure**	**Employee Competence**
Indicators of growth/ renewal	Indicators of growth/ renewal	Indicators of growth/ renewal
Indicators of efficiency	Indicators of efficiency	Indicators of efficiency
Indicators of stability	Indicators of stability	Indicators of stability

Source: Sveiby (1997b)

For each focus three types of indicator are to be developed: indicators of growth or renewal; efficiency; and stability. Growth/renewal and stability constitute two different types of what are sometimes termed input measures. Taken together they report the health of a business as a value creating entity. Efficiency indicators are more akin to some form of output measures, illustrating how successful the business has been in its value creation activities. In common with advocates of the Navigator and Balanced Scorecard, Sveiby suggests that indicators need to match the reality of specific companies, and that none fits all companies nor all circumstances (Sveiby, 1997b, p.78). For each of the nine cells it is sufficient to identify only one or two indicators, there being no requirement that these are of a financial nature. Because they may be remote from more familiar reporting indicators, Sveiby encourages paying careful attention to their explanation in narrative form.

Celemi, a Swedish education consultancy, has incorporated a variant of the Intangible Assets Monitor in its Annual Report since 1995. Renaming Sveiby's three foci as Our Customers, Our Organisation and Our People respectively, it presents information in the form of three tables, making use of a total of 23 indicators with accompanying narrative and definitions. In addition, Celemi has developed a colour coding system for reporting actual numbers, with black signifying normal, red too high or too low, green very good, and blue excellent but not sustainable in the longer term. Its 1999 report illustrates that the company had begun to develop its approach (www.celemi.se). In addition to the original three foci, a fourth, termed Our Financial Capital and representing the business's Tangible Assets, is added, with the other three foci representing Celemi's Intangible Assets.

For each of the four foci, the original three categories of indicators are employed, but previous year "strategic comparisons" are now incorporated, adding a degree of continuity to the document. The colour coding system is also amended so that where the cells in the Monitor are coloured green, performance has equalled or surpassed target. In those cases where the performance has been less than 80% of target, the cell is coloured red, with yellow cells indicating performance intermediate between these two levels. Thirty-two indicators are now utilised. Having employed the Celemi Monitor for six years, its contribution to business reporting is described as follows in Celemi's 2000 Annual Report:

> *While our traditional financial statements provide us with a snapshot of past performance, we use the Monitor to assess our current situation. It is a tool to help us gauge whether or not we are growing in line with our strategic plan. It is an effective lead indicator, and alerts us to any untapped business potential … the benefit of the Monitor is not so much the values we calculate as it is the understanding of what is driving the future performance of our company.* (Celemi 2000 Annual Report, p.24, www.celemi.se)

The second wave: linking intellectual capital and value creation

A second wave of intellectual capital reporting approaches can be identified. Because of their relative newness, they are less well developed than the previous group. All three originate in North America, and all

three incorporate the term "value" in their titles, illustrating that over time the link between intellectual capital and the value creation process, discussed in chapter two above, has become more widely understood.

Value chain scoreboard

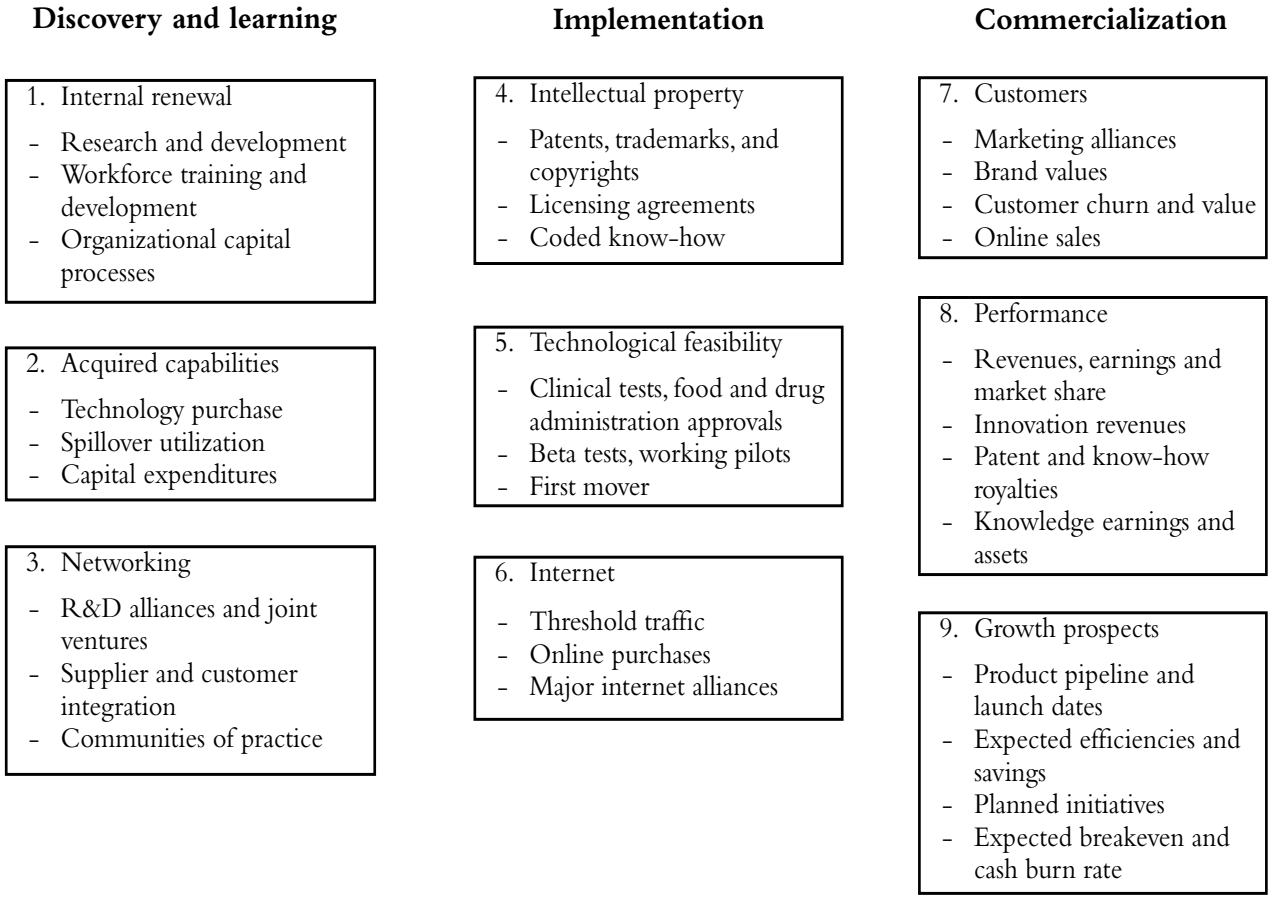
This approach is described in a major study of intangible assets recently published by Lev (2001). Lev has been interested in accounting for intangible assets for many years, most recently R&D expenditures (Lev and Sougiannis, 1996; Aboody and Lev, 1998, 2000), but also with human capital (Lev and Schwartz, 1971). The underlying orientation throughout his study is more towards financial reporting than that of Edvinsson, Sveiby or Kaplan and Norton, none of whose work he cites. His representation of the value chain also departs significantly from that pioneered by Porter (1985):

> *By* value chain*, I mean the fundamental economic process of innovation – vital to the survival and success of business enterprises – that starts with the discovery of new products or services or processes, proceeds through the development phase of these discoveries and the establishment of technological feasibility, and culminates in the commercialization of the new products and services.* (Lev, 2001, p.110, italics as in original)

Nevertheless, the management reporting potentialities of the value chain scoreboard are also evident, Lev describing it as providing "an information system for use in both internal decision making and disclosure to investors" (p.115).

The formulation presented by Lev (Figure 4.4) contains nine boxes (Lev, 2000 presented a slightly different ten box format). Three are identified as falling within the discovery/learning phase of the value chain: internal renewal; acquired capabilities; and networking. The implementation (or development) phase has three boxes: intellectual property; technological feasibility; and internet. The final three are associated with the commercialization phase: customers; performance; and growth prospects. Lev suggests (p.117) that companies should operate with a set of 10-12 key value chain indicators and that, in most instances, one indicator for each box is desirable, although elsewhere he acknowledges that not all companies will find every box appropriate. The challenge, therefore, is to identify a relatively small stock of indicators that collectively provide "a comprehensive and in-depth portrayal of the enterprise's capabilities and success in creating economic value" (p.115).

Figure 4.4: The Value Chain Scorecard



Source: Lev (2001)

Finally, in order to maximise their usefulness, Lev observes that the indicators incorporated within a company's scoreboard should be quantitative in nature, of a standardised form to ensure comparability, and have their relevance confirmed empirically. The financial reporting roots of Lev's contribution require no less, however. It should also be noted that Lev has recently been exploring an alternative approach to accounting for intellectual capital, focusing on the financial accounting-driven quest for intellectual capital and intangible assets valuations (Gu and Lev, 2001; Stewart, 2001). In developing his Knowledge Capital Scoreboard methodology, Lev has rejected a value creation emphasis in favour of one capable of providing valuations that can be tested in the market. These valuations are derived using a combination of earnings attributable to knowledge capital and an appropriate knowledge capital discount rate. The value of knowledge capital is the earnings computed for this component of a company's capital divided by the relevant discount rate, which in the case of the biotech and software industries Lev presently estimates to be in the region of 10.5%.

Value creation index

The second of the value creation approaches is the result of an on-going programme of studying intangible assets pursued by the Cap Gemini Ernst & Young Centre for Business Innovation. Previous research confirmed that a growing proportion of the market value of businesses is due to the presence of intangible drivers. These are viewed as being difficult to quantify, rarely acknowledged, and inadequately measured, managed and reported. Therein lies the challenge to the accountancy profession. The Value Creation Index is identified as a tool that:

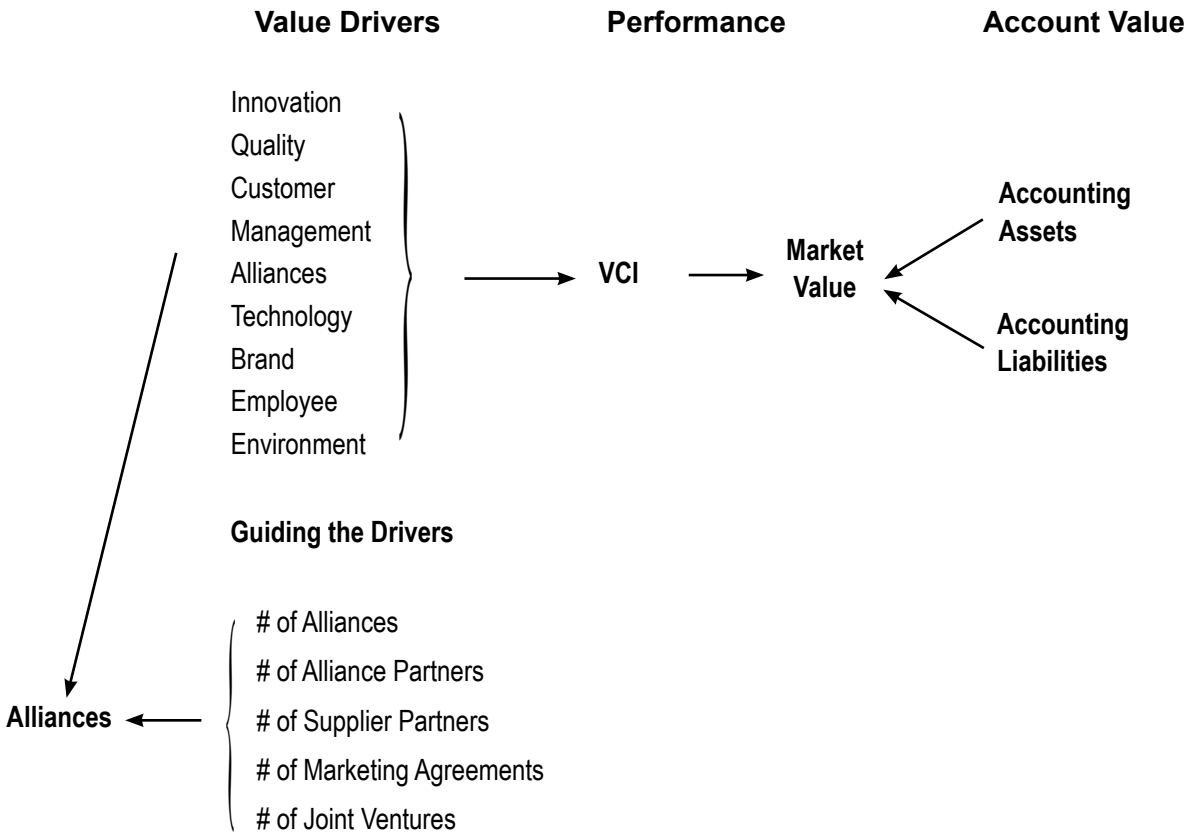
> *… allows managers and owners a more complete view of the wealth creating potential of their companies; and allows investors a more reliable way of evaluation of a company's intangible assets, and the process by which they value their organisations.* (Cap Gemini, 2000, p.2)

In order to devise such an index, it was necessary to develop a model of value creation that is both rigorous and comprehensive, and which enables companies to measure the impact of key intangible asset categories on a company's market value. One input to this model was the findings of an internet survey to determine the extent to which companies' performance measurements were aligned with the decisions made by managers, published in *Forbes ASAP* in April 2000 (Baum, Ittner, Larcker, Low, Siesfeld and Malone, 2000; Low, 2000).

The model incorporates nine categories of intangible value drivers (Figure 4.5). Within each category several indicators were identified, each of which was designed to capture a different aspect of value creation in a particular value category. The construction of a single index is rejected on the basis that in different industries, and by implication at different times, the constellation of intangible drivers that is operative varies. Instead, industry specific indices were formulated including those for the banking industry, the airline industry and the emerging e-commerce industry. In the case of a specific index, particular attention is paid to the relative importance of each value category. Using a combination of standardised indicators and an agreed weighting for the various components of value creation, *ie* the value categories, a single figure or score is determined, which "represents the sum total of a company's performance across the most critical intangible categories" (Cap Gemini, 2000, p.5).

In this respect, the Value Creation Index is fundamentally different from the scorecard approaches discussed earlier, all of which share a commitment to representing performance in a multi-dimensional or multi-perspective way. There is no reason, however, why businesses should not report their performance in a more disaggregated formulation, and forego the single score offered by this approach. In choosing to do so, businesses might also be guided by some of the empirical findings of the Cap Gemini researchers on the importance of particular categories of value driver. Innovation was regarded as being of fundamental significance, followed by two aspects of the people dimension: management capabilities and employee relations. Alliances and process quality were also viewed as being of some importance. Customer satisfaction and technology, somewhat surprisingly, were viewed as being of low significance as value drivers, although the researchers recognise that their beneficial effects might be manifest elsewhere within the model.

Figure 4.5: The Value Creation Index Model



Source: Cap Gemini (2000)

Value creation pyramid

This approach to intellectual capital reporting formed part of the Total Value Creation initiative that evolved as a critical element of the broader Canadian Performance Reporting Initiative (CPRI), pursued by the Canadian Institute of Chartered Accountants in 1995. Intellectual capital management was identified as a key focus for the CPRI, becoming linked with value creation in late 1997 by project director Rob McLean. On its web site, Total Value Creation ®[1] is described as:

> *[A] system to rigorously measure and report on an organisation's value creation performance. It is the next step along a continuum, which begins with financial reporting and moves through non-financial reporting measures to techniques that link performance to the creation of value.* (TVC™, www.totalvaluecreation.com)

TVC ® is based upon five key concepts. First, a distinction between value realisation, which occurs through transactions with third parties and which forms the substance of financial measurement and reporting, and value creation, which now requires its own parallel system of measurement. Second, total value creation encompasses both financial and non-financial value streams, while recognising the existence of multiple stakeholders in

addition to shareholders: customers; employees; suppliers; and society. Third, the focus must be on events rather than simply one type of event, transactions, as in traditional financial reporting. Fourth, the unit of analysis for TVC™ is a single value stream, which may be aggregated in a variety of ways in a corporate context, *eg* by organisational unit, by customer segment, *etc*. Finally, value is viewed from a number of perspectives using the concept referred to as the TVC™ Pyramid. The four perspectives that form the pyramid are: value creation capacity (C-face), value stream modelling (M-face); value creation for multiple stakeholders (S-face); and the value creation/realisation formula (F-face).

The pyramid, like its predecessor the diamond, provides a framework for measuring and reporting the value creation activities of a business, using four complementary perspectives. Since no single perspective tells the whole story about a business's value creation activities, intellectual capital will also be represented within each. The value creation capacity of a business is regarded as having three principal components: key capabilities; business infrastructure; and networks. Included within the value creation capacity are such things as intellectual property, intellectual capital management systems, technical and organisational infrastructures, and the value chain. Crucial to this perspective is the capacity for a business to innovate, as well as being able to retain competitive advantage.

By comparison, the other three perspectives within the pyramid are further removed from the prevailing conception of intellectual capital. Value stream modelling focuses on the value streams that can be anticipated from specific technologies, products and services, and for the organisation as a whole. As a predominantly financial perspective, value stream modelling calculates financial value creation for multiple stakeholders using an events-driven discounted cash flow analysis applied to future value streams. Value creation for key stakeholders recognises that it is necessary to communicate the activities of a business to a range of stakeholders in ways that are meaningful for these stakeholders, and that address their concerns and expectations. Finally, the value creation/realisation formula addresses the question: how does a business create and realise value? Here the emphasis is on identifying the bases for the business's competitive advantage, and the way in which they are presently configured. As such it offers a more strategic account of a business and its performance.

In 2000, the Canadian Institute launched TVC International Inc. (TVCI) as a vehicle for promoting the continued development of a new value creation performance measurement and reporting framework for the 21st century, based on TVC ®. TVCI's mission is identified as:

> *To mobilise international collaboration, leading to the global adoption and continuous evolution of TVC™; to organise TVC™ training and delivery; and to create opportunity and value for all stakeholders.*
> (www.totalvaluecreation.com/TVCIfaq/2)

Illustrative material in the form of the GreenGene case study and the Neural Test is also available on the TVC™ and TVCI web sites. Currently, however, neither the totalvaluecreation.com web site nor the relevant Canadian Institute web pages show any evidence of being updated since Autumn 2000. Consequently, further development of the Value Creation Pyramid appears to have been suspended.

The third wave: narrative approaches

It is interesting to observe that of the models considered above, two are significantly more reliant on a strong narrative content, *ie* the Navigator and the Intangible Assets Monitor. Both originated in Northern Europe rather than North America, and consequently it is not surprising that the final pair of approaches, of a predominantly narrative nature, have similar origins.

Intellectual capital statements

While most of the approaches described above could justifiably be regarded as intellectual capital statements, the term can usefully be reserved for a specific approach that has recently emerged in Denmark. In 1998 the Danish Agency for Trade and Industry funded a major research and development project designed to promote

the use of intellectual capital accounts by businesses. Some initial experiences were outlined in the 1999 pamphlet: *Developing Intellectual Capital Accounts*, to be followed in November 2000 by *A Guideline for Intellectual Capital Statements* (see also Mouritsen, Johansen, Larsen and Bukh, 2001; Mouritsen, Larsen and Bukh, 2001b; MITR, 2002). Twenty three companies participated in the initial phases of the project, 17 of whom published the requisite two intellectual capital statements; in addition Andersen Consulting made a contribution to the project (see www.efs.dk/icaccounts for further details). A variant of the intellectual capital statement, known as an intellectual capital report, has subsequently been commended in the Meritum Report (2002).

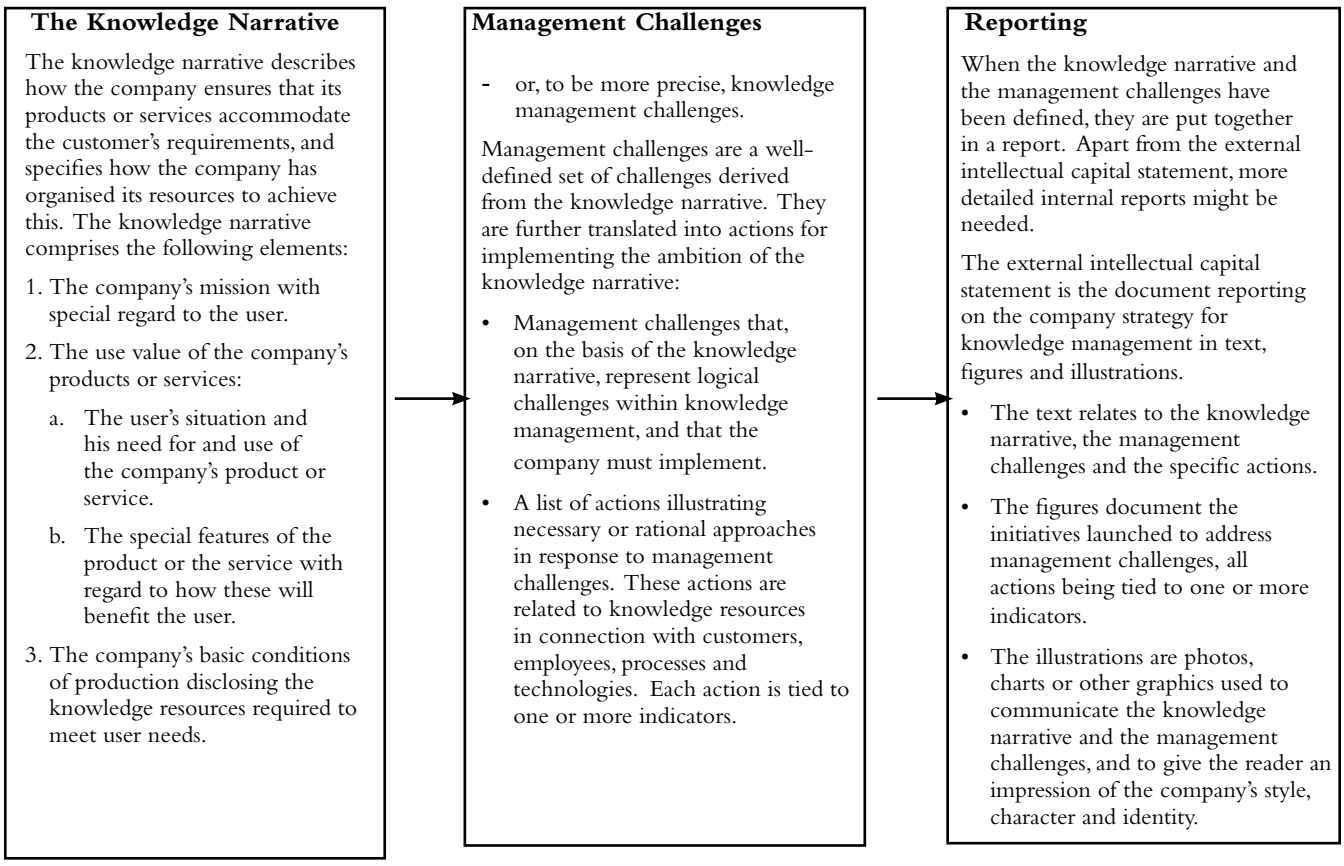
In contrast to a number of parallel approaches, the Danish initiative links intellectual capital reporting explicitly with knowledge management:

> *The intellectual capital statement supports the company's knowledge management, ie the part of management work that obtains, shares, develops and anchors knowledge resources. The intellectual capital statement provides a status of the company's efforts to develop its knowledge resources through knowledge management in text, figures and illustrations.* (DATI, 2000, p.14)

Equally it is not to be used to explain the difference between book value and market value, since it is not designed to calculate the value of a company's knowledge in financial terms.

A generic formulation for an intellectual capital statement is identified in the *Guideline* (Figure 4.6). Such statements have three elements: a knowledge narrative; management challenges; and reporting. A company's knowledge narrative sets out how it intends to ensure that its products or services meet customers' requirements, as well as specifying how it organises its resources to accomplish this. Knowledge narratives will incorporate the company's mission in respect of its customers, a statement of the use value of its services or products from a customer perspective, and the way in which the company will organise its knowledge resources in order to meet customer expectations.

Figure 4.6: The Intellectual Capital Statement



Source: DATI (2000)

The management challenges element of the statement identifies the specific knowledge management challenges that the company faces in implementing its knowledge narrative. These are to be represented in both a holistic and a disaggregated way, the latter providing a set of "actions" that illustrates the necessary or rational approaches in response to the management challenges. These actions are normally identified in relation to customers, employees, processes and technologies, and have relevant performance indicators associated with them. The indicators are largely the sort of metrics contained in parallel reporting approaches. The reporting element of the intellectual capital statement can take the form of either an internal or an external report. In the case of an external report, what is constructed is a document that reports the company strategy for knowledge management by means of a combination of text, figures and illustrations. Internal statements can also be constructed, and incorporate greater levels of detail.

In the closing chapter of the *Guideline* the issue of the credibility of intellectual capital statements is debated. What the authors suggest by way of possible representational devices for intellectual capital statements departs significantly from that evident in the majority of annual reports. Consequently, there may be opposition to such developments from the accountancy profession. A number of quality assessment criteria are therefore identified: relevance; reliability; clarity; materiality; completeness; substance; gross measurements; neutrality; and comparability. The fact that a number of Danish companies have already subjected their intellectual capital statements to auditor verification confirms that an approach is evolving here that may eventually pose a strong challenge to the traditional financial statement format.

Intellectual capital self-accounts

A complementary approach has been sketched out by Roslender and Fincham (2001; also Fincham and Roslender, 2001). The human capital component of intellectual capital is privileged by these authors, who view structural capital primarily as the result of human endeavour. Their approach is informed by the critical accounting tradition, particularly the desirability of promoting awareness of the conditions and consequences of accounting practices within the profession, and the formulation of a more enabling or inclusive mode of accounting. Extant approaches to intellectual capital reporting share the characteristic of being produced by accountants and their managerial colleagues, and represent the success (or otherwise) of value creation, knowledge management or similar initiatives. What Roslender and Fincham propose is that intellectual capital, *ie* human capital, provides its own accounts of these initiatives. Instead of being included in an intellectual capital report as a successful MBA candidate or recipient of an accelerated introduction to a new computer language, rookie manager or home worker, individuals are to be encouraged to tell their own stories about their experiences of the value creation process. In a similar vein, customer relationship managers might describe the challenges of accruing relational capital, while the possessors of much-vaunted intellectual property are encouraged to reflect upon the living reality of being intellectual capital.

Roslender and Fincham (2001) identify the importance of releasing human capital from its imprisonment within accounts produced by others. Although self-accounts might be represented as a subtle mechanism for installing equally unsatisfactory forms of self-management, they stress the necessity of promoting self-awareness through reflexivity. They identify some form of yearbook as a potentially powerful vehicle for communicating self-accounts to a variety of stakeholders. Yearbooks could be published in parallel to the normal annual report package, serving as a complementary source of information on the activities of the business. In the case of larger organisations, it will only be possible to publish a limited number of self-accounts each year. This being so, it is important that a policy of minimal editorial intervention is in place, in order to ensure that all viewpoints are able to find expression. Indeed a willingness to air grievances, and more importantly be prepared to learn from them, could itself be viewed as powerful indicator of a company's health.

This study of the frameworks available to account for and report on intellectual capital completes the review of the existing literature in the area. We now go on to explore the extent of the use of the former concepts and constructs in the UK. In the following chapter we specify the research problem and describe how the fieldwork, reported in chapters six and seven, was conducted.

Endnote:

[1] All the superscripts used in this section reproduce those used on the Total Value Creation website, *ie* www.totalvaluecreation.com. As we noted in chapter one, unfortunately this web site is no longer operative.

Chapter Five

Research Design and Methods

In this chapter the research design adopted for the project is outlined. This includes the main research problems and questions that link the theoretical analysis set out in the previous chapters and the methods used in the field study. Alternative research methods and designs are briefly considered, together with a description of the methods that were adopted, their appropriateness and relation to the research objectives. Also outlined are the sample and the nature of the companies and managers that data were obtained from.

Research design

The principal aim of the research project was to establish the level of interest in intellectual capital and related ideas that exists among UK managers, and what approaches, if any, to accounting for intellectual capital (both internally and externally) are presently in place. In pursuit of this aim, a field study of business enterprises that might be expected to be at the leading edge of intellectual capital accounting and management was proposed. This approach was designed to permit the identification and examination of the methods and metrics in use in such enterprises. In addition, the project sought to determine the extent to which the latter accord with the prescriptions found in the literature (as set out in the previous chapters), and how the measurement and management of intellectual capital is being incorporated into business reporting.

A study of "expert opinion" amongst consultants, opinion formers and users, including analysts and corporate lenders, was also incorporated in the project, the intention being to identify relevant user agendas and the extent to which these reflect existing or envisaged practice.

The research questions themselves were developed around three main foci: the identification of intellectual capital; the measurement of intellectual capital; and the management of intellectual capital (a copy of the interview schedule is found in appendix one). The first of these seeks to establish common ground between researcher and respondent - to what extent do intellectual capital concepts "make sense" to respondents, and do they accord with existing (or intended) practice? Does the researchers' understanding of or perspective on intellectual capital have any resonance with practices in case firms. Also other broad questions, such as the input of the accounting function and the nature of the links to competitive advantage, were addressed in the early stages of interviews.

Secondly, the measurement and reporting of intellectual capital was explored. It was envisaged that the least progress in strictly accounting terms would be in evidence here. This said, the case firms may well gather data and measures in a range of human resources and customer areas, which might form the basis of a scorecard of measures. Here the nature of the intangibles measured, whether any measures are reported and to which audiences, and the sophistication of systems developed for measurement, were among the topics that were usefully explored.

Thirdly, many alternative managerial initiatives were likely to be in place though not necessarily aggregated into any comprehensive perspective, like a Scorecard or Navigator. Cultivating and growing intellectual capital were further issues to be explored, together with the role that accountants may play in this. Questions of organisational learning and the skills base of the firm were also raised.

Interviews and the case study approach

Of the various methods that could be used to explore an issue like the dissemination of a new accounting technique, the survey seems to have obvious benefits. Survey methods generate structured and systematic data,

while the "extensive" nature of the survey enables questions concerning the extent of the spread of particular techniques and what impact they have had, to be addressed. Surveys, however, have a number of well-known limitations (Bryman, 1988; Saunders, Lewis and Thornhill, 2003), and in the view of the researchers such an approach would have only limited usefulness for the present project. Given the early stage of the dissemination of intellectual capital accounting, it would be unlikely that a method confined to asking relatively simple questions about familiar topics would be meaningful to respondents. The researchers anticipated having to ask about topics that respondents may not label in the same way as they did, or having to explore topics that were currently only being formulated within organisations.

Issues and processes such as these fall into the category of complex, partly subjective and problematic concerns. Accordingly, the approach adopted was a "qualitative" one that relied on interviews as the basic means of data collection. The projected interviews were expected to cover a broad spectrum of issues, and consequently a semi-structured format was used in meetings with respondents who by and large occupied senior managerial positions. Sessions were tape-recorded and the transcripts became the basis of analysis. Interviews and qualitative methods themselves have been criticized, mainly for their subjective and interpretive nature, although this is not the place to rehearse the standard defence of them as research tools. Suffice it to say that the case for employing this approach in business and management research is now well established (*eg* Bryman, 1988).

Interview data were obtained in the overall context of the case study approach. This is one of the main qualitative research strategies, and one that has become dominant in business and management research. Case studies fulfil a number of important methodological criteria. They are holistic in that they allow the history and background of an issue to be taken into account as well as a variety of data sources; they permit enquiry at the level of explanation rather than merely description (the "why" questions not just the "how many" questions), and case studies allow the collection of the rich data stream that is the hallmark and strength of qualitative methods.

Perhaps the principal objection to the case study is that it lacks representativeness or the basis from which to generalise. It is the classic "sample of one". Again there will be no attempt to address this problem in full, save to say that the criticism is now accepted as broadly misconceived; the nature of "sampling" in case research, and qualitative methods in general, is acknowledged to be different from that in the quantitative approach. Qualitative sampling is a type of purposive sampling (as opposed to statistical sampling) that does not attempt to generalise to a population. It generalises to a theory, or set of propositions. Case studies themselves are not selected randomly, they are chosen in a "theorised" or purposive manner, by considering the kind of organisation that would be appropriate, given the demands of the research and the research questions being addressed (Yin 1994).

Moreover, the possibility of several case studies (rather than the classic single case) forming the sample, and thereby constituting a *field study*, can greatly strengthen the research design. Strictly speaking this is not because the research is becoming somehow "statistical". Rather multiple case research allows more variables to be incorporated into the theoretical model. The research design itself is able to address a wider range of questions, and problems with the selective use of data can be surmounted. For these reasons the multiple case method (supplemented with other data from expert opinion) was adopted as the main research strategy for data collection.

The sample of case companies

The research in its simplest terms sought the kinds of companies in which intellectual capital accounting might be being adopted or, since this is such a relatively contemporary set of issues, companies where some of the elements of the intellectual capital models discussed above were being implemented. The researchers were seeking companies where, at the very least, the discourse of intellectual capital made sense to managers and was of interest to them. In short, the sampling process entailed identifying the most likely sites for the adoption and use of intellectual capital accounting. Basic criteria of selection included companies that were knowledge-based in the broadest sense, and at least medium-sized. The assumption was that knowledge-based

companies would be likely to find intellectual capital techniques more relevant to their operation, and only larger companies would have the resources to introduce such techniques.

The case companies were chosen to reflect a Scottish dimension to the study. The above constraints meant it was not always possible to meet this criterion, however. "Scottish" was also interpreted in the broadest sense to mean Scotland-based (none of the companies was Scottish-owned). In one case company, the initial interview was conducted in Scotland with subsequent referrals leading the researchers to England and subsequently back to Scotland, as they pursued their interest in intellectual capital. Overall, the sample retained around a 60/40 Scottish/UK emphasis. The actual industries were widely spread, covering a range of industrial and commercial activities, although a high proportion were "new economy" and service sector firms. The sectors from which the six case companies came were computer software and hardware, information provider, financial products, management consultancy and petrochemicals. The sample of case companies is described in Table 5.1.

Table 5.1: Case Companies

Case company/industry	Status
Computer software	Scottish subsidiary of a Scottish-German company
Computer hardware	Scottish subsidiary of US multinational
Information provider	English headquartered firm
Financial products	Scottish headquartered firm
Management consultancy	London HQ of multinational business
Petrochemicals	English headquartered multinational

Senior managers in case companies who could provide information on intellectual capital practices in the firm were preferred as respondents. Those who were sought were in some sense "champions" of this or some cognate approach, or who had implemented intellectual capital-related practices, or a relevant reporting regime in their division. Given the provenance of the research, the researchers normally began by looking at the accounting/finance function, although they were invariably referred to colleagues employed in other departments and functions.

The research design called for four respondents to be interviewed in each of the six case companies. This was regarded as providing a reasonable coverage of the main functions of the firm, and incorporated the main areas in which intellectual capital accounting was expected to be emerging. It also meant that the research focused on "key interviews" and had only a limited focus on the wider context. It was not intended to look at how intellectual capital had penetrated large workforces, or what its overall impact might be. In this sense the case studies differed from the normal academic survey model, or in-depth accounts of particular organisations. Nevertheless, the interviews did enable the researchers to obtain information on the progress firms had made, and the perspectives on intellectual capital that different functions in the firm might provide. The cases also provided invaluable *comparative* insights between firms at different stages of development and with different approaches to intellectual capital accounting.

The two researchers working together interviewed most respondents usually in their own offices or some suitable meeting room. A few interviews that could not be scheduled otherwise were conducted by telephone. A voicebox was used which enabled three-way meetings to take place (*ie* the two researchers and the interviewee); these were judged to be as effective as other interviews though they tended to be briefer. In total, twenty two interviews in the six case companies were conducted, nineteen face to face, and three by telephone. These interviews took place between May 2001 and early March 2002.

Experts and opinion formers

In addition to the case studies, the researchers also sought the views of those who might be regarded as "experts" in the area of intellectual capital accounting. Since the technique is still relatively new, direct expertise is likely to be confined to a small number of people. The internationally recognised names that recur in any intellectual capital reading list (Edvinsson, Lev, Mouritsen, Sveiby, and so on) might be an obvious first-choice group. Below them, however, there will not be a particularly large contingent (unlike, say, the army of consultants who implement techniques like re-engineering and enterprise resource planning). There is likely to be a small group that actually markets intellectual capital accounting, and beyond them others working in the broad area of knowledge-based techniques. It was amongst this kind of specialist that the researchers sought a second sample (of"experts"). Consultants and similar figures who supply and market these techniques were the target population. Those who create the demand for intellectual capital information might also be considered relevant experts, including groups such as financial analysts and corporate lenders.

The experts who were interviewed are listed in Table 5.2. While they were an eclectic group, they can be placed in three main categories. One group broadly comprised of specialists in the new knowledge economy. Intellectual capital accounting is not a well-institutionalised technique, but there are cognate areas in the knowledge economy (such as knowledge management and intellectual property) that have more established forms of expertise. The experts in these areas were, in the main, independent consultants and professionals. Another group was rather similar, but had a more "public" profile. They operated on a somewhat wider stage in publicising and promoting intellectual capital related concepts (though this was sometimes within the private sector and involved selling intellectual capital related products). The third group was formed by financial analysts and corporate lenders. Their functions created a significant demand as *users* of new forms of accounting information.

Table 5.2: Experts and Opinion Formers

Cognate experts	Directors of knowledge-based consultancies (2) Senior legal expert in intellectual property Independent knowledge management consultant
Opinion formers	Founder of a knowledge-based "think tank" Public sector knowledge management strategy advisor Senior members of a Big 4 consultancy (2)
Users of information	City investment analysts (2) Senior bank lending officers (2)

The interviews with experts were more flexible and wide-ranging, partly because they involved such an eclectic group, while the researchers were seeking broad impressions on intellectual capital related issues. In the case of the cognate experts and opinion formers, who tended to have clients, questions focused on the images of intellectual capital they were passing on, and what interested clients about intellectual capital. Issues of the embedding and importing of intellectual capital related ideas were also explored, as well as ideas that might contribute to a new accounting framework. The business reporting angle was also taken up with users and analysts, where questioning probed the kinds of information they sought, and what use new frameworks might be to them. This set of interviews took place between April 2001 and March 2002.

Chapter Six

The Field Study of Companies

In this chapter the findings of the series of interviews secured with employees in the case companies are reported. The six companies provided a range of settings for the adoption of new managerial concepts such as intellectual capital, and the findings that emerged illustrate different aspects of this process. In order to make sense of the mass of qualitative data collected during the interviews, the following structure is adopted. Initially we outline how widely ideas about intellectual capital and related developments were disseminated, followed by an account of the various reasons and motives underpinning companies' interest in intellectual capital. The specific dimensions of intellectual capital currently attracting the attention of companies are then outlined. The analysis continues by reporting the various levels of development of interest in intellectual capital within the sample of companies, together with their efforts to develop the metrics necessary for measuring the various dimensions of intellectual capital, and, in turn, their initial responses to the task of reporting this information.

The dissemination of intellectual capital and related ideas

The general impact of intellectual capital ideas and practices, narrowly conceived, is probably best described as limited. These were all knowledge-based companies, reliant on expertise and acutely aware of the importance of maintaining, and where possible enhancing, their skills bases. Hence they were comfortable with the basic ideas the research was investigating.

In the petrochemicals company, there were suggestions that people were "hearing more and more and more about intellectual capital", but as yet it was a concept that had been relatively slow to catch on. Elsewhere the term intellectual capital exhibited an ambiguous status. The Director of Human Resources in the information provider indicated concern about how the term might be received:

> *Intellectual capital is a bit like HR. When you start to talk in those terms, people think you have left people behind and you are talking about assets. So whilst we might mention it maybe in discussing the study or something, you wouldn't actually use it as a common term.*

Similarly, a Director of a knowledge management project in the management consultancy talked of "people's eyes glazing over" when the term was mentioned, although he himself was well acquainted and comfortable with such ideas.

Intellectual capital was sometimes confused with intellectual property by several respondents. In the information provider, legal services management, perhaps understandably, identified the core intellectual capital in the business with the know-how and expertise of the workforce. A Business Unit Manager in the computer hardware company identified intellectual capital as "the proprietary stuff" within the business, as opposed to knowledge and the communication of information. By contrast, a colleague distinguished intellectual capital from intangibles, identified as "the valuation of IP, goodwill and that kind of thing", adding that it had a strong human resources association.

Overall, then, the picture was a mixed one. Some respondents stressed that although they were sympathetic to these ideas, the concept of intellectual capital was not used or familiar within their company, and may even be regarded with suspicion. Others pointed out that while there may be a growth of interest in such ideas, no one was actually implementing them. Rather more familiar were a number of ideas broadly associated with intellectual capital or sharing some common ground with it. The balanced scorecard, for example, had a reasonably wide currency being mentioned at some point in the majority of interviews. In truth, however, the researchers had to exercise care in reading too much into respondents' use of the term scorecard. Respondents

sometimes seemed happy with the notion of "scorecarding" various aspects of their operation. Whether this indicated a specific interest in intellectual capital ideas and practices, or was a more commonsense response to questioning, remained in doubt.

There was also a good deal more awareness of knowledge management as a concept than intellectual capital, being more familiar to respondents and exhibiting a significantly greater presence in the sample companies. Two of the companies had extensive knowledge management initiatives in place while a second pair was in the process of embedding recognised knowledge management practices. A fifth company was about to embark on a "new phase of knowledge management", while the sixth was beginning to explore what such an approach might offer.

The petrochemicals company had been practising knowledge management since the mid 1990s and could, with some justification, claim to be at the forefront of developments in the UK and globally. Significantly, perhaps, it was in this company that the IC concept also had its greatest, albeit limited, penetration. At the same time, knowledge management had given way to further initiatives, including an "Operations Excellence" programme in which the aim was to spread knowledge sharing to the operational and technician levels, beyond managerial and engineering levels.

In the management consultancy, the knowledge management initiative was also global. In some respects this amounted to little more than the formalisation of long-established practises within the consultancy business. As a Director of Knowledge Management commented:

> *I got involved in it before we actually started calling it knowledge management … It is just what good businesses have always done. It's just that businesses have got so complex in recent years, they need to be a bit more scientific about the way they exploit their people's skills and experience … [The] brand strategy is 'people, knowledge, world', which kind of acknowledges the centre of everything we do. I suppose that as a consulting firm the only asset we really have is the knowledge and skills and experience of our people.*

Reflecting this latter observation, the respondent was concerned that what he regarded as the "cultural" aspects of the initiative should not be dominated by "technical" considerations. In the last analysis, intranet provides a means to an end, that of building an effective knowledge sharing environment.

A pattern in several of the companies was for knowledge management to be encountered in the mid 1990s, and imported into the activities of the human resources function initially to help resolve the traditional challenges of the personnel management: recruitment, learning, staff development, *etc.* Interest in the management of knowledge reflected a growing recognition that retaining people, and their knowledge, was of increasing importance to the success of businesses. In the computer hardware company, for instance, developing and retaining key talent was a priority:

> *Despite us being a hi-tech company in the forefront of these things, we are not particularly disciplined in a lot of the ways we go about approaching doing business … The real valuable assets that [we] would want to capture are really with the people … the leading engineers, the people doing the R&D type activity… I think a lot of people who come into our organisation expect it to be a lot better than it actually is, in terms of its own systems and structures. So as a result it's hard to capture some of that knowledge that you would want to manage and share.* (Human Resources Director)

Knowledge management had only recently come on to the agenda in the software company. This was the result of a merger creating what was described as a global company with global expertise that was "not all in the right place, so we have a huge knowledge management issue". An early initiative had attempted to create a "technical community enthusiastic about sharing knowledge within the company" based on special interest groups and knowledge champions. These practices had proved generally successful, although recent commercial problems for this company resulted in the web sites often being used to debate broader issues.

Concern was also expressed that key groups within the business had not embraced the technical community ethos as wholeheartedly as they might. A parallel initiative involved profiling the (technical) attributes of the

workforce as a precursor to a development process intended to enhance the skills pool. Once again, commercial difficulties plus the existence of a buoyant labour market for key employees conspired to hamper the company in its efforts to pursue this initiative.

Motives for interest in intellectual capital

There was a range of reasons underpinning companies' interest in intellectual capital and related ideas such as knowledge management and scorecarding. Some viewed intellectual capital ideas, broadly conceived, as an answer to a problem, which for others was not a live issue. Specific motives are set out in Table 6.1. For example, the desire not to re-invent the wheel was a fairly common reason. In the petrochemicals company a knowledge-sharing culture was linked with the idea that, somewhere "out there" in the organisation, the solutions to most problems probably already existed. This seemed to be tied to the specific nature of their operations: an enormous company based around project teams that tackled specific technical problems.

Table 6.1: Motives for interest in intellectual capital

Computer software	Potential/general interest; a learning culture
Computer hardware	Avoid reinventing the wheel
Information provider	Increase organisational agility and counter bureaucracy
Financial products	Business process model
Management consultancy	Leveraging intellectual assets
Petrochemicals	Avoid reinventing the wheel; a learning model

In the computer hardware company the parallel desire not to repeat effort unnecessarily was widely reported. There was a widespread view in the company that they had become victims of their own success at creating an open culture. In this high-energy organisation communication flowed readily and staff were motivated to get on with projects "once the green light was shown to them". Yet the mind-set was also one in which problems were tackled afresh each time, so that a knowledge-capture system appealed because they saw much knowledge slipping away.

Another common motive reflected the belief that intellectual ideas were part and parcel of a more effective style of operating. In the software company, there was initial interest in ideas about intellectual assets and knowledge sharing, but few signs that any further concrete developments were imminent. As such, no unique or distinctive motive had emerged yet, over and above a general perception that intellectual capital ideas may have benefit. Nevertheless, the view amongst senior management was that ideas like these may have some payoff in encouraging a culture more attuned to innovation and learning amongst certain groups.

The notion of general effectiveness was linked more directly to competitive advantage in the information provider. A balanced scorecard was being implemented in one of its divisions, in part as a response to the perception that the division was more bureaucratic and slower to market than its main competitor. The scorecard was seen as a way of making them quicker to react and as a way of "engaging people more in the business". Again this perception was conditioned by the nature of the work in this particular division - a solutions-generating part of the business - with the scorecard intended to encourage the generation of ideas from the bottom up.

The management consultancy linked knowledge management and intellectual assets in the context of a major merger the firm had recently undergone. The result was a much larger firm in which knowledge could no longer be managed informally. In order to manage their key asset - their people - they needed better systems. This was seen in terms of leveraging intellectual assets so that fee income could be maximised.

In the financial products firm, intellectual capital related concepts like the scorecard tended to be linked with strategic information architectures, and with a process-driven view of business integration. Like most large financial services companies, it historically had an entrenched functional structure, but also powerful

information systems. The combination of these produced a drive towards a business process model in which knowledge sharing could contribute towards strategic improvements.

To return to the petrochemicals example; this was a company previously referred to as having an almost iconic status in the knowledge management arena. Here we encountered a distinctive reason for an interest in knowledge management. The function responsible for codifying accident and incident data and disseminating it to the health, safety and environmental (HSE) community within the company, had given much thought to how best these data could be utilised. The problem emphasised was a "lack of learning" and a perception that the same mistakes were being repeated. This was a critical problem. In the petrochemicals industry huge resources are ploughed into this area. There are powerful systems for gathering and analysing incident data, and strictly observed procedures for holding moratoria and drawing lessons learned from incidents, especially any serious ones. Nevertheless, there was a feeling that the company still needed to make the final step, and that an effective learning model of incident management remained elusive. A model of learning was needed that would supply a methodology together with rules for the dissemination of information.

The dimensions of intellectual capital

In order to begin to examine the forms that IC and related initiatives assumed within the sample of case companies, it is useful to attempt to fit these into the generic tripartite model or taxonomy of intellectual capital components that has emerged in the literature: human capital; relational capital; and structural capital (see chapter two). Human capital is concerned with the skills and competencies, or "people", dimension, while relational capital refers to the dimension of external (especially customer) relations. Structural capital embraces the mass of internal operating structures and processes, together with the intellectual property of an organisation, providing the contextualising dimension.

Human capital

Despite the absence of an explicit focus on intellectual capital, the embeddedness of knowledge management practices within the sample indicated that human capital constituted a key focus in these companies. This was equally apparent in the case of companies that did not claim to be very far down the knowledge management track, with interviewees in these companies emphasising cognate aspects of their practice. In both the hardware company and the information provider attempts to "account" for their stocks of human capital had recently enhanced employee development and employee retention. In the hardware company the Talent Appraisal Process was of critical importance:

> *We look at our people and ask: who are the top talent that are demonstrating ability right now, who are the, what we would call, the key standard talent that you want to retain, that are the backbone of your business, and who are the people that you are probably looking at developing or investing in? And when we have isolated the top talent, we move on to what we call talent appraisal which is about looking at the potential. Because it's all very well having somebody who is performing well in the role that they are currently doing now, but do you really want to invest in them, have they really got the potential to grow in the future and take on more and more responsibility, take on leadership roles?* (Human Resources Director)

Though this system had proved beneficial, one of the pitfalls was a tendency to focus disproportionate attention on employees deemed to inhabit the lower end of the talent scale. In an attempt to combat this, a "hard percentage split" had been introduced to drive a wedge between the top 20, the middle 70, and the bottom ten percent. In some areas the company had set about developing employees identified as possessing the potential required by the organisation, with the aim of retaining their services in the pursuit of competitive advantage. The business did not need to move everyone through the organisational levels and into the upper end of the scale, however.

Achieving the right balance was a key challenge because in this industry the use of temporary and contract labour was commonplace, and it was desirable to meet specific targets for permanent to temporary staff. The longstanding 70/30 split had, until recently, been hard to maintain but with the downturn in the industry's fortunes in 2001, a policy of layoffs had resulted in around 90% of staff being of permanent status. When the market recovered, as the Director of Finance indicated, the new target would be more in line with an 80/20 split, something the all-important industry analysts well understood.

At the information provider an appraisal and development system was also well established, and currently being developed into a new phase. This was described as a more sophisticated and complex performance measurement system based on new software that allowed performance reviews and personal development plans to be fed into a database. This effectively ranked skills sets, measured competence and determined development needs. Once again, the motivation contained aspects of both knowledge management and intellectual capital, and was increasingly strategic in nature, intended to promote effective (human) resourcing, identified as "ensuring that you have got the right people at the right time".

In the case of the software company extensive work had been completed on identifying the technical resources required for the performance of specific types of job. This project had evolved into a second phase, similar in nature to these latter initiatives, designed to provide some measure of the skill levels presently available within the workforce and, perhaps more importantly, identify key development needs:

> *As part of the TDP [technical development programme] process, we initiated another project which was to look at technical attributes. We identified and defined a group of about twelve technical attributes. Other attributes could then be added, including role specific attributes which were being developed by others in the company. We also developed a managers' tool kit which allowed managers to take a technical person and map that person against the technical attributes, identify gaps in their skill level and mapping those gaps against the [British Computer Society] ISM3 model … Our objective is to be able to say: 'I have a coder here, his level of software construction is 3 and it needs to be 6, measuring it against the attributes'.* (Senior Development Manager)

The ultimate intention of this exercise was to use the database of skills levels of staff to provide the manpower planning for projects. Unfortunately the introduction of this skills benchmarking approach had confirmed fears that in certain areas some supposedly senior employees were seriously deficient in skills, resulting in concern and resentment.

Relational capital

The second dimension of intellectual capital encompasses the various aspects of the relationship between a business and its customer base. Among the factors that have the consequence of keeping the customer coming back are a company's stock of products, or where relevant its brands, the level of service that it is able to deliver to its customers, as well as the information systems and databases that increasingly underpin all such relationships. These and similar marketing assets constitute the relational capital of companies. This might be compared with observations in the computer hardware company:

> *So always start at the customer. How does operations, the production facility, how does that fit into the customer experience? … The customer is concerned with price and we are concerned with margin. And so when we look internally we look at everything that generates into your margin. The overall goal of operations is CQLT. So it's looking at the* ***C****ost. We are trying to drive cost down. Customers want* ***Q****uality. We are always trying to drive quality up. We also work to reduce* ***L****ead time to our customers. Then there is* ***T****ime to market. In our industry time to bring a particular computer to market is very, very important because the competition is always out there all the time.* (Director of Finance, emphasis added).

In such companies, building up the stock of customer-based relational capital had a complex meaning. It was not simply a matter of providing value for money, rather what the customer was prepared to pay for

a "solution", together with additional services such as installation, training, maintenance and upgrading, or what was referred to as the "total cost of ownership for the customer". Quality, in turn, was not limited to the hardware itself, but to the support structure expected by the customer, and that needed to be delivered consistently in a market place where expectations are rising relentlessly. Against this background both lead time and time to market assume a far richer meaning and significance. Customers expect that they are able to access their chosen solution within relatively short time frames. Equally, enhancements to technology, perhaps more than support facilities, are also expected to be available as quickly as possible. The suggestion that once an investment has been made in a particular supplier relationship, the customer is in thrall to the supplier, has long since been dismissed.

Relational capital in this industry was also dependent on how the company managed its relationship with its own suppliers. The hardware company had developed a supplier's scorecard in order to assess the effectiveness of the interface with the supply chain:

> *What we do is that we look at something we call the total cost of ownership. What we are looking for is not just the costs we can get out of suppliers, it's really looking at things like where they are technically versus where you would want them to be … [I]t may vary dependent upon product family. So if you are talking about high end products that could be very, very important. If you are talking about some of the low end products perhaps that has less of a weighting. You are also talking about what level of support do you get from those suppliers. As well as outsourcing, we have more and more residents, resident suppliers in our facilities. We have people who basically do all the planning of those parts on our systems, so they have access to our systems, our ERP [enterprise resource planning] systems to do that. And basically we don't touch it, we audit it, but we don't touch it. They just get on with it so there's no doubling up of work.* (Materials Manager)

This assessment process was carried out on a quarterly basis to identify different suppliers by their performance, and to classify them using a simple colour code. For suppliers classed in the red category, corrective action would be put in place and they would be awarded no new business; and even for suppliers in the amber category, new business might be withheld "until they had got themselves into a fit state". These supply chain principles also influenced other parts of the business. In some of the production areas, at least in a general way, the agency supplying temporary workers was monitored using a quarterly scorecard measuring whether they supplied labour that was up to the job or had to be replaced.

In the information provider efforts to integrate the huge stock of customer information, designed to improve the quality of customer relations, were about to begin. This was regarded as much needed knowledge management and a response to the necessity to manage existing relationships better:

> *We are actually investing at the moment in a relationship marketing system, which is quite a significant investment for us. What it will do, which we don't currently have at the press of a button, is one view of a customer's relationships with [the company]. There will be one key contact for a customer, and although there will be different levels of contact, there will be just one view. People will be able to see at a glance when someone last had contact with a customer, what the sales are across all our divisions, any particular issues, together with some cash flows and debtors' information as well. We are looking at managing our customers to sort of maximise our relationships with them.* (Financial Planning Manager)

Elsewhere in our discussions this was seen as part of the promotion of a more "joined-up" approach. It was about managing the company's existing stock of information more effectively. Information had been managed effectively within divisions, but less effectively across the whole business. A joined-up approach meant a more sales-led emphasis and the ability to cross-sell and make the most of "customer relations we have got". As with the various aspects of relational or customer capital, the scope for representing the success (or otherwise) of such initiatives is extensive and readily linked to the capacity of a company to engage in on-going value creation.

Structural capital

As indicated earlier, a few respondents identified intellectual capital with intellectual property, suggesting that in their firms this particular intangible asset was a key sub-set of structural capital. In the information provider, for example, the nature of the business meant that key elements of protecting intellectual property rights - ensuring that third parties seek consent and pay for intellectual property and that certain know-how or trade secrets remain confidential - assumed great importance. In a rather different sense, in the petrochemicals company, both an Operations Manager and a Senior Business Analyst identified a critical stock of less formalised knowledge that performed the same functions. In this science-based industry, there was concern about the informal knowledge that technical and engineering staff accumulated (their "black books"), and the debriefing of retirees or exit interviews as a means of promoting knowledge management was considered. What this tacitly acknowledged was that ultimately all intellectual property originates with human capital.

More generally, the sub-elements of structural capital include infrastructural variables such as organisational culture, management structures and processes, and organisational philosophies. Some of these components assume a more tangible form, and might be possible to count and report, and in some cases place a financial value on. Others relating to the more ideational or ethereal realm are not amenable to such treatments. Yet they can be vitally important assets or enabling mechanisms. The existence of a progressive corporate outlook or culture provides the context for business practice, significantly determining success. Indeed, in an age when a growing proportion of the workforce have enjoyed a prolonged educational experience, and are regarded by companies as central to the successful pursuit of competitive advantage, it would be self-defeating to impose 'disabling' organisational cultures.

Several respondents talked at length about the centrality of their organisational cultures. In the management consultancy there were references to the "long journey" entailed in building an effective knowledge management environment. This seemed to be a never-ending journey. The end point kept receding as companies and operations globalised, and the task of managing human and structural assets expanded beyond the local environment. Nevertheless, the core characteristic of a knowledge management environment, the cultural dimension, was that of trust and the existence of a network of trust relationships:

> *Well if you look at the basis of knowledge management, it is the establishment of trust relationships that is extremely key for the re-use of content [=knowledge]. I think a lot of people focus on the development of content and getting it out there. Once it is out there it is only worth investing in if people actually leverage it … And if you are going to do that you have got to be able to look at knowledge and say: "is this good, is this rubbish, is this something we will actually re-use?" And you would only really re-use it to its fullest extent if you had a relationship of trust with the person that wrote it.* (Director of Knowledge Management)

In the petrochemicals company, health, safety and environmental issues were identified as being at the core of the organisational culture. Successfully managing such things was regarded as central to staying in business, and consequently perceived as very important when competing in the promotion stakes. It was suggested that the population from which senior management traditionally came were those middle managers who had a "very high HSE agenda". In this context, a senior HSE manager referred to a recent initiative as "safety performance learning", which effectively meant taking the learning culture to a new stage. The aim was to ensure the maximum learning possible was gained from the incidence of accidents. The objective was to move beyond recording and reporting safety incidents to identify the learning to be had from them, and to embed that learning within the organisation. Or expressed more simply, moving from measuring safety incidents to successfully managing safety.

In both the information provider and the computer software company there were common concerns about cultures of innovation being stifled by the bureaucratic attitudes that come with growth. In the information provider this amounted to a feeling of having to an extent lost a spontaneous culture of product innovation and possibly falling behind the competition; it was now important to empower people and get them engaged in the business so that ideas flowed faster. The demise of a formerly strong innovation culture seemed more serious

in the software company. Here attention was drawn to the unwillingness of many technical staff to engage in continuous skills upgrading. This was about "the culture of the company and the way individuals are committed to learning". And the cause was attributed to a classic reliance on bureaucratic process as the company had grown. They seemed to have "picked up a lot of bad things about big companies and forgotten a lot of the good things it had being the company it was". The escalating financial difficulties that this company was facing inevitably limited the investment in much need culture-building initiatives, at least in the short term.

The implementation of intellectual capital

The extent of implementation of intellectual capital and related ideas and practices varied considerably, even within such a small sample of companies. At most, only a couple of the companies could be described as being in the process of implementing these ideas in anything approaching a comprehensive way. What we encountered were some quite specific intellectual capital related initiatives being pursued within different companies, and indeed within different parts of the same company, usually under the particular company's "own label", which reflected the different dimensions of intellectual capital, as set out in Table 6.2.

Table 6.2: Implementing aspects of intellectual capital

Computer software	Initial interest only
Computer hardware	Talent appraisal process (TAP) Suppliers' scorecard Customer quality index (CQI)
Information provider	Customer relationship management system Human resource development database Performance scorecard
Financial products	Corporate leadership programme Information systems scorecard
Management consultancy	Knowledge management databases
Petrochemicals	Corporate performance scorecard Integrated performance metrics Operations Excellence programme

In the software company, as we have already noted, interest in intellectual capital and related ideas was only embryonic, and in fact as researchers we were admitted partly because of a feeling that our enquiries might catalyse further activity. This was a company that in any case had important issues of skills and training to deal with, as well as the more immediate problem of the downturn in the software market.

The hardware, information provider and financial products companies can be grouped together as, in all three, there was evidence of an active exploration of a range of initiatives normally associated with intellectual capital, coupled with a keen interest in broader knowledge-based ideas. In the hardware company the human resources function administered a formalised Talent Appraisal Process (TAP), one that could readily be incorporated into the human capital component of an intellectual capital accounting model. Additionally, the TAP attempted to capture what was referred to as the "second dimension of appraisal", namely the future potential of individual employees and their contribution to value creation. There was a recognition that evaluating such potential entailed a highly subjective process, but equally there was an awareness of the importance of this for the development needs of the company.

In addition, this company exhibited a number of well-developed procedures and data sets in both suppliers and customers. In supply chain and logistics, a suppliers' scorecard and the total cost of ownership were

monitored on a monthly and quarterly basis, and used to keep a tight rein on supplier performance. Since a large proportion of value creation came out of supply chain management, close attention was paid to this part of the business. A parallel set of arrangements was in place to furnish the information that was incorporated into an annually reported Customer Quality Index (CQI). The index was used to measure and compare the performance of the various business units, being something that "people pay attention to because it's tied to bonuses and promotions".

A similar situation prevailed in the information provider. The company had recently undertaken investment in an Oracle-based system for managing customer relations, essentially aimed at maximising cross selling. The intention was to provide an overview of the customer relationship and sales potential, together with a "sense of how we are managing our own customers". Within the human resource function, a new system for performance review and personal development planning was being rolled out. This was viewed as a significant enhancement of the existing, largely successful, appraisal and development procedures, and had in significant part been motivated by the recognition that the company might in due course face major staff retention problems.

Within one of the divisions of the information provider there were indications of a further attempt to introduce intellectual capital related ideas, *via* the development of some form of balanced scorecard. The project, again current, was being driven by the divisional Chief Operating Officer, who acted as a champion and enthusiast. It was being built around a number of "headline goals" including delivering customer satisfaction, improving productivity, and promoting innovation and knowledge sharing. These goals were themselves associated with a broader cultural change programme that was being pursued within the division in an attempt to galvanise performance, presently viewed by senior management as falling behind that of competitors. Further questioning revealed that the Financial Controller responsible for implementing this approach was uncertain as to the pursuit of similar scorecard initiatives elsewhere in the company.

In the financial products company an initiative designed to supply the company with leadership at the corporate level was in place, following a period during which the company had experienced a major merger and significant reorganisation. There was also a programme that focused on how the company was perceived by its key customer groups, which included institutional investors and financial advisers as well as individuals seeking personal financial products. A Consultant in the Information Technology division of the company also claimed that it had operated its own balanced scorecard for a number of years. This encompassed information on customers, "people", financial performance and risk. All in all, then, at the financial products firm, we found a range of developments that suggested that intellectual capital and knowledge management issues were being actively pursued, even if not referred to as such.

Moving on to the two most advanced companies, the management consultancy, like all the Big 4, operated a powerful Lotus Notes-based database that facilitated the development of an impressive form of knowledge management. These fairly well known systems codify the experience gained from projects, alongside the career histories of individual consultants (from which project teams are assembled). Impressive though such systems are, however, there are limits on the extent to which they might legitimately be regarded as constituting a broadly-based intellectual capital or knowledge management culture. The company was well apprised of various knowledge practices, including networking and communities of practice, as well as a range of coaching activities. By contrast, their efforts at the broader management of human and intellectual capital were relatively rudimentary. They regarded themselves as good at developing and coaching their staff, but less effective in maximising the scope of knowledge sharing. The audit side of the business, for example, was only making initial efforts at information sharing, which reflected the persistence of a philosophy of forming "special relationships" with audit clients.

The petrochemicals company was the case in the sample that came the closest to having a full-blown intellectual capital approach in place, complete with a well established corporate performance (or balanced) scorecard. The latter predated the introduction of a successful knowledge management programme in the mid 1990s by a couple of years. The more recent "Operations Excellence" programme had seen the two developments become more closely interrelated, as well as extending their influence on the culture of the organisation. As a

consequence, one of our respondents was fairly clear about how intellectual capital, a term beginning to gain currency within the company, could be explicitly incorporated as part of the overall scorecard.

It was also clear that he saw intellectual capital primarily in terms of human capital, describing it as something that would "hook up the people element" of the scorecard, complementing employee surveys, absenteeism figures, and a "morale index" that a consultancy already produces for them annually. It was envisaged that a small number of intellectual capital indicators could be included in the next version of the scorecard on an experimental basis, to test their success and see if they would catch on. At the same time, however, some concern was expressed about how such information would be perceived alongside the traditional technical and health, safety and environment components of the scorecard.

The challenge of measurement: intellectual capital metrics

Given the level of interest in intellectual capital and related ideas evident in the preceding sections, it will come as little surprise to learn that the companies in the sample were actively exploring how they might measure the various dimensions of intellectual capital. Table 6.3 provides an overview of the progress of the intellectual capital measurement initiatives encountered in the fieldwork.

Table 6.3: The measurement of IC

Computer software	Initial interest only
Computer hardware	Key measures developed but not aggregated
Information provider	Key measures developed and beginning to be aggregated
Financial products	Key measures developed and some scorecards in place
Management consultancy	Development of extensive knowledge databases
Petrochemicals	A mature scorecard framework in place

Progress in the case of the software company was limited. Some attempt had been made to perform a skills audit as part of a recent Technical Development Programme, with some problematic consequences. Of the next three companies in Table 6.3, the implementation of intellectual capital ideas was arguably the most widespread in the financial products company. They appeared to be close to having well-developed metrics in a number of key areas of the intellectual capital framework, with individuals in the company enthusiastic about the use of integrated performance measurement in change management. Nevertheless, there were also suggestions that change sometimes came slowly, and that new knowledge-based techniques were not always trusted.

Both the hardware company and the information provider also exhibited mixed signals as regards the prospects for intellectual capital. On the one hand, interviewees agreed that these ideas were not yet well developed or conceptualised. They saw intellectual capital in "a more down to earth way" (information provider), and although knowledge issues were talked about a lot, "very few people are actually doing it in practice" (hardware company). On the other hand, in both companies there seemed to be great potential for the development of meaningful intellectual practices. The hardware firm in particular had a well developed global context in which intellectual capital measures might take root, with various metrics becoming more standardised across the company's world-wide operations. In the information provider, the many of the advances were being made within one division, which seemed to provide fertile (or even safe) ground for intellectual capital ideas. The model was soon to be launched publicly, and in time may provide the basis of wider dissemination.

The management consultancy comes into a different category from the other case companies. Having embarked upon an initiative to promote a specific approach to knowledge management at a global level, currently little interest in intellectual capital terms or concepts was evident. In common with all large consultancies, the

company has a well-developed model of operations, built around their corporate databases. Such systems are probably well in advance of those operated by any other sector of industry. As long as these systems remain effective there is perhaps less urgency for the development of mechanisms that permit the integration of the existing metrics from the different parts of the company's operation.

Finally, in the petrochemicals company it was perhaps ironic that, in the most "advanced" company in intellectual capital terms, there were also signs of mixed messages. Although it was suggested that the workforce was "hearing more and more about intellectual capital", there were some indications that this consisted of things like brands and intellectual property. Despite it being a well-established feature, within the company broadly there were few references to or knowledge of the existence of the corporate scorecard. Instead, it was the specific metrics, or key performance indicators (KPIs), on utilisation levels, emissions, safety, and so on, that were regarded as important. Even these were mainly confined to an operational level, and were not common currency at the corporate level or in the annual report. Awareness of the scorecard was confined mainly to the individuals responsible for aggregating these data, and for whom the development of a group scorecard remained the ultimate objective.

Reporting mechanisms

Having begun to develop a variety of intellectual capital related metrics, the next challenge is how best to assemble and report such information, both internally and externally. On the evidence of this study what seems to be happening departs from those practices normally associated with the traditional model of financial reporting. There was a general absence of discussion of balance sheets or profit and loss accounts as useful mechanisms for intellectual capital reporting during interviews. Indeed, there appeared to be an implicit acceptance that conventional reporting frameworks had been designed to serve quite different purposes. As has been suggested throughout the chapter, there seemed to be a growing interest in some form of balanced scorecard approach to performance measurement and reporting. Although this is regarded as a well-established topic area within the managerial accounting literature, for many in the case companies the balanced scorecard is viewed as a promising new development.

In the case of the petrochemicals company, however, such practices are well-established. The Senior Performance Analyst responsible for producing and disseminating a scorecard commented that it had been conceived of independently of Kaplan and Norton's model, and that his division had been using the approach since the early 1990s, during which time it had been successfully cascaded down the organisation. Similar initiatives were known to be in use within the other divisions but no group scorecard existed, at least not for the moment. From the outset, the division's scorecard employed six rather than the usual four performance foci, and reported a small number of key performance measures for each. A health, safety and environmental focus was incorporated, as well as separate information on financial, customer and process data, and additional technology and people foci. The last was recognised as providing the opportunity to enhance the scorecard by incorporating an intellectual capital emphasis:

> *I've decided to hook [IC] up in the people element. The measurement of people, we have always done right from the start with the annual employees' survey, the morale indices, the support measures of absenteeism, that sort of thing … The new thing this year is intellectual capital, which I have put in the people part because it seems to fit probably there as well as with anything.*

What was envisaged was "floating" the idea of intellectual capital in the reformulation of the division's scorecard. Managers were to be asked what intellectual capital meant to them, how they were dealing with this new development, and whether any consensus around particular measures emerged. Difficulties were foreseen, however, in terms of establishing standard definitions and identifying the key performance measures that characterised the existing format of the division's scorecard. As the same respondent later commented: "Intellectual capital is not like that kind of thing".

By contrast, in a division of the information provider there was a recently initiated project to introduce a balanced scorecard approach as a key element in a culture change exercise, *ie* as a strategic tool. Four "headline goals" had been identified: motivating people to build potential; delivering customer satisfaction; improving productivity; and promoting knowledge sharing and innovation. Improved financial performance was seen as being consequent on each of these goals, rather than a goal in its own right:

> *We are hoping that by engaging people in the business, by motivating them, showing them the opportunities, by setting up processes for innovation, by setting up processes for knowledge sharing, just involving them more in what is going on, that they will perceive more ownership instead of just, you know, the programme at the end of the scale, understand a bigger picture and therefore become more enthusiastic.* (Financial Controller)

The performance measurement opportunities afforded by a scorecard were also acknowledged, and incorporated a growing range of measures of such things as new product ideas and customer relationships. So far only this division was contemplating introducing a balanced scorecard and there was no move to make this practice universal. The view was that people across the company "seem to be quite happy with the information that they are getting". Nevertheless, as the information needs of management changed in the future, signs of which were beginning to emerge, a variety of new reporting formats might need to be considered.

The same pattern of selective balanced scorecard utilisation was mentioned by the Finance Director in the hardware company:

> *[This] is a fairly large organisation. In different parts of [the company] I've used very sophisticated scorecards, in other parts I haven't. For example, I was in a shared services organisation in Australia and also in California. And basically we got: "This is shared services, this is your finance and IT and so on". So we got benchmarked for all the different activities, how much it cost, cycle times, etc. We got benchmarked, we measured these things on a regular basis and set goals for them. So that was fairly sophisticated in terms of a balanced scorecard. [Here] it's a new organisation, new reporting, new vision, so we are getting there, but we are not there yet.*

One component will probably be some form of scorecard developed within the business units to measure the performance of the company's suppliers, together with measures associated with customer and cost of ownership perspectives.

Only a very limited number of those interviewed were aware of the existence of any of the alternative intellectual capital reporting frameworks documented in chapter four. The Skandia Navigator was mentioned in passing by the Senior Performance Analyst in the petrochemicals company and the Director of Human Resources in the information provider. The Director of Knowledge Management at the management consultancy intimated some familiarity with of the work of Sveiby, mainly because of the latter's association with the firm in Australia rather than as the advocate of the Intangible Assets Monitor.

Summary

Drawing together these findings, a number of insights from the case study companies suggest themselves. First, the term intellectual capital is not, as yet at least, widely current within the discourse of UK managers. Where the term is in use, it often serves as a synonym for intellectual property, whilst for others it has a strong human resources association. By contrast knowledge management has a significantly greater currency, referring to practices that were increasingly widely subscribed to by companies within the sample, with the balanced scorecard approach to performance measurement and reporting exhibiting an intermediate status. In general, there seemed to be little understanding of the possible relationship between these three developments, with only one or two notable exceptions.

Despite this minimal level of awareness of the intellectual capital concept, there were many examples of companies exploring practices that can be readily identified in this way. To this extent, it seems that the absence

of a knowledge of intellectual capital "theory" has not totally inhibited the development of intellectual capital "practice". Interviewees were able to identify initiatives designed to increase their companies' stocks of key value creating assets. Although they were seldom able to identify these in terms of human, relational and structural capital, interviews revealed that progress was being made across all three dimensions.

This was particularly interesting in the case of the "middle" group of three companies: the information provider; the hardware company; and the financial products company. Unlike the two "advanced" companies, they did not claim any commitment to a knowledge management philosophy. Nevertheless, each was actively involved in many aspects of intellectual capital practice. A word of caution is in order, however. Many of these intellectual capital related practices had been pursued as aspects of quite distinct programmes or initiatives, and because they met the perceived needs of management. Their existence should not, therefore, be taken as an indicator that intellectual capital, by whatever name, is firmly embedded within the UK.

Moreover, any simple "scale" of adoption of intellectual capital ideas also needs to be treated with caution. Some firms had developed further than others in their use of these concepts but this did not occur across a single dimension. Thus, the computer hardware firm seemed the least advanced of the middle cluster of three firms insofar as it did not aggregate any of the metrics or practices. Yet all three firms were impressive in their use of knowledge-based ideas; and in some respects the hardware firm had significant potential for advance, if it wished to do so, because its key practices were globally standardised.

In addition, while the second-ranked firm, the management consultancy, was placed in advance of the latter group, its stock of sophisticated knowledge databases was not matched by similar progress in the measurement (and reporting) sphere. The highest-ranked company, in petrochemicals, clearly warranted its ranking in a number of respects. It had adapted the scorecard to its own operations and developed a battery of performance indicators, but was yet to deliver the necessary information in the view of some sections of management.

A number of the case companies had begun to move to the next stage, that of developing the metrics necessary to document the success, or otherwise, of their intellectual capital activities. Although once again many of these practices were both interesting and encouraging, the general absence of any sort of theoretical underpinning was showing signs of hampering such work. There was little evidence that companies were thinking about what else they might consider measuring, beyond those aspects of value creation for which they currently had their own metrics in place. The lack of knowledge about what is possible in this direction was paralleled by a very limited appreciation of the possible intellectual capital reporting mechanisms that have evolved in recent years. Unless steps are taken to address this situation, by indicating what options are available for reporting or providing an account of intellectual capital, there is a very real danger that companies will not be able to capitalise on the progress they have made to date.

Chapter Seven

Expert Opinion

In addition to the six case companies, the research design incorporated a further series of interviews with "experts". The term was intended to include a range of people who might have an interest in intellectual capital, knowledge management and intangibles. During the fieldwork discussions were conducted with twelve individuals who can usefully be allocated to three groups: cognate experts; opinion formers; and key users of financial information. The four experts in cognate areas were identified on the basis of an interest in issues like knowledge management and intellectual property. The opinion formers were two senior members of a Big 4 accountancy firm with an involvement in rolling out a business reporting framework, an influential figure in the emergent "Peoplism" movement, and a senior adviser to a Scottish public sector knowledge management initiative. The four key users were two senior bank lending officers, together with two City-based investment analysts specialising in knowledge-based enterprises. The views of each of the three groups are considered in turn below.

The cognate experts

Echoing the findings in the case companies, in the view of the cognate experts the term intellectual capital was not yet an established part of the business vocabulary. One expert (A), an independent knowledge management consultant who included intellectual capital as part of the content of one of his courses, talked of management being "light years behind" in this area, and of "seeing their eyes glazing over" when the subject was discussed.

Knowledge management was of more interest, although once again it was not widely understood. He was able to identify a growing number of companies in the process of introducing knowledge management initiatives. Equally many companies were unwilling to take such a step, arguing that they had already engaged in enough change as a consequence of embracing some aspect of business process re-engineering. On balance, he was not optimistic that knowledge management itself would be widely embraced by senior management, for while a growing number of younger, middle ranking managers were attracted to it, their own superiors were often reluctant to embrace such initiatives.

One reason was fear of the costs of installing knowledge management. Distinguishing between technology-based *versus* culture-based philosophies, he argued that to do the job properly inevitably required significant investment funds, not just in the development of the intranet, web sites and chat rooms:

> *With knowledge management it's much more all embracing and you don't actually see a lot of benefit or change until fairly late on in the process. It's a very difficult thing to sell. You need senior management who really understand it.*

Accountants were not perceived to be equipped to make the case for knowledge management investments, since these depart from their stock in trade of traditional investments. The lack of any reliable basis for establishing the likely return on intangible investments means they are being asked to make a leap of faith, one wholly at odds with their training and expertise. As if to further diminish its prospects, knowledge management has produced a new group of management specialists who have to work hard to establish themselves within the organisation, and who may face hostility from other specialists, including those in human resource management.

Cognate expert (B) identified the performance of knowledge audits as one means of introducing knowledge management to organisations. His own experience of a successful knowledge management initiative had taught

him that a necessary first step is to identify what clients already know, and how this might be codified, as a basis for exploiting valuable "knowledge assets". Again he was at pains to emphasise the need to consider "the people and the process" aspects of knowledge creation, while on his company's website another distinction is made between technology and culture, giving rise to a holistic knowledge audit methodology. Clients are helped to understand the assets available to them, and how they might be able to exploit them, with the intention of securing short term improvements in performance. The onus is very much on the client to learn the lessons of learning, something that expert A was sceptical about. In his view, such an approach was unlikely to result in senior management becoming committed to a knowledge management philosophy. On those occasions on which he had performed knowledge audits, they were conceived of as simply necessary first steps.

Cognate expert B linked the demand for his knowledge audit services with the growing interest among senior managers in valuing the knowledge assets of their companies. Because remuneration packages are increasingly being linked to the market value of the shares of quoted companies, there is pressure to ensure that the market recognises the existence of knowledge assets within the business, and values them appropriately. This presents an interesting variation on the hidden value notion, since what is being envisaged here is a gap between market values and the (enhanced) value that management wishes to place upon a company's assets.

A third expert (C) also described some due diligence work that he had been involved in with new technology companies seeking funds from venture capitalists. In his view most of these companies had little appreciation of the extent and commercial value of their stocks of intellectual assets. Among the examples identified were: brands; knowledge; experience; business methodologies; expertise; business networks; and business cultures. From his vantage point, identifying the valuable assets of a company was the easy part. He shared with expert B the view that valuing them was more difficult, a task that accountancy was presently engaged in, but for good reasons perhaps seemed not to be making much progress with.

The fourth cognate expert (D) also commented on the shortcomings of the accountancy profession in respect of the increasingly important task of valuing intellectual assets. In her experience accountants:

> *[S]eem to make endless presentations involving lots of diagrams that end up being of very little help in saying what intellectual property is worth.*

One of the problems is that it is not possible to put such values on the balance sheet, and that as a result her organisation, a large legal firm, was always looking for help in addressing these issues. Expert D, a senior partner, identified intellectual capital and intellectual assets (terms she used interchangeably) with intellectual property, something she had been specialising in for fifteen years. From her perspective, a lack of credible valuation guidelines is a source of some irritation, since she is responsible for securing the most favourable terms on behalf of her clients in contract negotiations. Taking a broader view, however, there is a danger in confusing intellectual capital with intellectual property. Without doubt, the latter is a component of the former, but it is now recognised as only one of several such components. While intellectual property may have become an increasingly important part of the jurisdiction of individuals such as expert D, it is likely that it is now of less importance within the broader taxonomy of intellectual capital than a generation ago. Its legally protected status serves to differentiate it from the other components of intellectual capital, and in some respects results in it being a more tangible form of intangible asset.

Cognate expert A was the only one of the four able to talk about intellectual capital at length. He was aware of Skandia's pioneering work in the field, and the evolution of the company's web site. In his view, intellectual capital is more focused on the measurement aspects of knowledge management and the use of non-financial metrics, an approach described as being much "too soft and fluffy" for senior management. Yet he was convinced of the necessity of reporting the stocks of "off-balance sheet assets" that provide "the soft side of the capital value of organisations". Among the things that might be measured and reported are: customer satisfaction; market penetration; brand value; employee satisfaction; staff turnover; and investment in training. Intellectual property, however, was not regarded in the same way, largely on the basis that it is already widely recognised, and that considerable progress has been made by accountants in its valuation. The view of this respondent was

that more would be gained from making some connection with developments in the environmental accounting field, as was being attempted in the Global Reporting Initiative.

On the question of how best to approach the reporting of intellectual capital, he remained an advocate of the balanced scorecard. Despite having been available for reporting purposes for a decade, it is still not widely understood, even by accountants. When it has been employed, it has not always been well received, but in his view, there are signs of a renewed interest in the approach, a view shared by expert B.

The opinion formers

The interviewees employed by the Big 4 accountancy firm were a Senior Partner who heads the European group responsible for rolling out a business reporting product that has a strong affinity with intellectual capital related developments, and a Director engaged in the same project, principally in a research role. The project itself was launched five years ago (at more or less the same time as Edvinsson's work at Skandia was first publicised) and is squarely concerned with value creation, and the possibilities of reporting the success with which companies engage in the value creation process. Whereas the intellectual capital concept emerges in the context of accounting for the hidden value that exists within companies, a key focus of this particular business reporting project is to provide the totality of information that the capital markets now require to accurately value companies.

Book values, and by implication the traditional focus of financial reporting, are therefore of only secondary interest within this project which is concerned with filling the information gaps that inhibit the efficient operation of capital markets:

> *[W]hat we have been really focusing on is trying to understand the gaps in the information that is currently being reported and that's the sort of angle we come from … [I]t is certainly critically important that you can't report information that you haven't got and you don't use to run the business. So I think that what we have done in terms of orientation is come at it from the capital markets end rather than from, you know, inside the company which other people have been looking at.*

What is freely referred to within the firm as a revolutionary approach to business reporting involves a holistic approach to reporting and, indeed, management itself. As a result, more information is required by companies (and analysts), and more information of a different type to that normally associated with financial management and reporting. This is something that progressive companies are already comfortable with.

Consistent with the origins of intellectual capital reporting, many of the best examples of holistic business reporting were identified in the Nordic countries, reflecting their tradition of interest in the value of non-financial information. One part of this new information set is a range of metrics on sources of future value creation including brands, customers, people and corporate reputation. Having established the principal drivers of sustained value creation, the focus is now on identifying how these differ in different industries, and how they might be perceived by senior management in individual companies. These softer, non financial metrics are not intended to replace those of a financial nature, since both are now required to be reported in combination.

In addition, it is necessary to provide information on a company's strategy for value creation, something that UK companies, in the view of our interviewees, only do in a superficial fashion, a further opportunity for beneficial external communication lost. Completing the framework, attention must also be paid to conditions of the market itself. Effective reporting thereon is almost viewed as a test of senior management's credibility in the eyes of the investor community. Taken together with strategy:

> *Those two elements of information are critically important to the investor community. They are badly reported on by companies today. You know, by the time you get into talking about the quality of your production process, for the investor yes it's nice to know, but if you haven't delivered on the first two elements of information it is irrelevant.*

The observation that what was being proposed was a reinvention of the balanced scorecard approach was rejected by the Research Director. The scorecard does not pay much attention to strategy, nor the market place. In most instances it is internally focused, its incorporation of a customer perspective and metrics notwithstanding, while more recent attempts to emphasise its strategic credentials are not convincing. What the balanced scorecard has done is to focus management's attention on the interrelationships associated with value creation, and the necessity for expanding the range of metrics required to manage the value creation process.

The new external reporting challenge is to develop an expanded package of metrics to deliver the necessary level of capital market approval for companies, evidenced by such things as more long term investors, lower costs of capital and reduced share price volatility. Currently the firm is engaged in benchmarking reporting and disclosure practices with the intention of commending these to clients in search of competitive advantage in the capital markets. This said, the firm is not blind to the need to extend its interest in the dynamics of value creation itself, and thereby restore the internal management accounting focus that was present at the inception of the initiative.

One of the issues discussed in relation to this site of the reporting revolution was that of the reliability of information. The Research Director commented that the historical legacy of performing the audit function resulted in the firm being constantly aware of the necessity to "report credibly on an extended range of value drivers, or an extended range of metrics". Companies interested in experimenting with such disclosures are anxious to secure the credibility that the firm is able to furnish:

> *[W]e have experience in some of the leading countries where companies come to us asking us to provide assurance on these extended metrics because the companies believe they can only be factored into the evaluation of companies if they have that external seal of approval.*

Generally, if particular metrics are well embedded within the control structures of companies, few difficulties arise. There are exceptions, however, such as market share, which companies often exaggerate across certain industries, but which analysts would tend to disregard anyway. Finally, there is the question of the sort of information that is being advocated, particularly in relation to value drivers within companies. At this time there is a preference for reporting using metrics, on the grounds that the markets like "quantified information". Greater use of narratives is not regarded as being helpful, at least not at this stage in the development of the framework. The Research Director outlined the firm's stance in the following terms:

> *Now, because we have got to be able to demonstrate a benefit [to clients], we can do that when we say: "OK, the beneficial data that you can report in a credible fashion is …", and we can demonstrate this with metrics that are going to have an influence on the type of shareholder that they wish to attract into the firm. You make that kind of relationship but if you then push them and say: "OK, we also want you to start coming up with narratives and things", I think will be channelling in the wrong direction.*

In time, however, such approaches may be of great benefit. First it is necessary to persuade significantly more companies to embrace a significantly enhanced financial reporting model, *ie* a business reporting perspective.

The third opinion former was more strident in his criticisms of the traditional reporting model. In his view the rapid pace of change in the knowledge economy has undermined its value. The balance sheet was formulated to report tangible assets whose values can disappear overnight as a result of technological advance. With the rise of what he termed "revenue investment", the profit and loss account can produce quite misleading results while being incapable of reflecting future income streams. The annual reporting cycle is also out of step with the pace of change experienced in many industries. He was equally sceptical about the use that shareholders now have for such financial information, likening them to gamblers "taking a punt", exhibiting little or no loyalty to companies and "just waiting for the end of the year share price". Given these views, it was no surprise to learn that while he is also concerned about the accountancy profession's failure to rise to the challenge of accounting for creativity and knowledge (*ie* intellectual capital) he does not seek to incorporate these within the traditional model:

The popular thing is that people should be on the balance sheet. Well they shouldn't. They are not assets in a company at all. If you must put them on the balance sheet, they should be there as a contingent liability. People are going to have more effect on the balance sheet by leaving and taking other people with them, taking their clients, so that the impact on the balance sheet would be negative rather than positive.

For this opinion former, some form of stakeholder accounting model was regarded as most appropriate nowadays. A number of stakeholders were identified, as was some of the information that they might find useful. Initially it was necessary to provide information to employees or "co-members", obvious examples being employee satisfaction, staff turnover and investment in training. The idea of publishing an average rate of salary increase was mentioned, along with information on redundancy packages. Exploring the latter issues, we were presented with a scenario of highly skilled people, building careers through medium term employment contracts, who increasingly made employment choices on the basis of such information. Customer-oriented information was also necessary, including customer satisfaction and customer turnover. This in turn overlaps with the necessity of providing information for the broader populace who are increasingly concerned with ethical issues.

People want much more information about a company. People are now saying there are so many products now, I don't want to buy X jeans because there are so many [companies] who make good jeans. Jeans are now a commodity, so I want to know about X. If I'm going to buy X jeans, they better not be made in sweat shops.

The growth in public awareness about environmental issues such as sustainability and globalisation indicates the necessity to report corporate performance in relation to these and related activities. Information to shareholders also needs to be expanded to include intellectual property, given that in many companies it greatly outstrips the value of tangible assets. Seeking to incorporate it into the balance sheet was described as "very dangerous", however, affirming earlier comments and reinforcing the case for new and different reporting models. By definition, these would need to be more broadly based than the traditional model.

Unlike the other three opinion formers, the fourth respondent was not an accountant. His sphere of competence was knowledge management, something he shared with three of the cognate experts. Like them his view was that, despite the rhetoric about the knowledge economy and the information society, the UK is only in the earliest phases of knowledge management, exceptional cases notwithstanding. In his view, there are actually two competing paradigms within the knowledge management community. One views it as being technology-driven, the other, which he himself is committed to, is culture-driven. In the former paradigm, the necessary technology is simply assembled and the outcome awaited. The determinant of success is merely the willingness to commit financial resources, and failure means not having the technology available. The culture paradigm is more consistent with a soft systems philosophy, where people rather than technology determines whether initiatives are successful. Technology exists as an enabling mechanism, a receptacle for knowledge and a means of transferring knowledge.

The culture-driven paradigm was described as exhibiting a great affinity with the intellectual capital concept. While the success, or otherwise, of a knowledge management initiative can be represented using a range of metrics, the most insightful are those of a softer nature. Documenting intranet hit rates or expenditures on technology per head of a workforce are less instructive than information on the existence of active knowledge sharing networks, special interest groups and the growth of in-house trust relationships. To the extent that such activities exist it is possible to determine how successfully knowledge management culture has been embedded within the organisation, and in turn how well equipped it is for sustained future value creation, however this might be manifested.

Users of information

The two bank lending officers specialised in management buy-outs, providing working capital or leveraged finance, from ten million pounds upwards for periods up to ten years, complementing the equity investment

activities undertaken by venture capitalists. Although such work brings them into contact with a broad range of companies, those in which intangible assets play a critical role are increasingly commonplace. In this context, it is financial information that provides the basis for lending decisions:

> *I guess the financial information, the cash flow generation, the ability of the company to service the debt that it is taking on is the most important thing.*
>
> *At the end of the day, to use a cliché, cash generation for the business is what we are concerned about.*

All such projections must be supported by analysis of the commercial environment in which the borrowing company seeks to operate. This necessitates management furnishing detailed insights on their products, markets, customers and, to some extent, their competitors. Such information is carefully scrutinised, either within the bank or by specialist agencies engaged to perform a due diligence function. Customers are regularly approached to discuss their present and prospective relationships with companies. The capacity to retain customers is in turn linked with the growing importance that the workforce, and key members in particular, has to future business performance, and cash flow generation. It is important to be able to demonstrate that staff retention does not pose a major problem to a company, and that necessary remuneration and incentive structures are in place.

It is senior management's task to communicate such information to any lender. Initially an overview is presented in documentation, often prepared with the assistance of a merchant bank or similar third party, followed by a presentation by senior management. Such encounters are approached with a degree of scepticism since "managers will tell you what they want to tell you". Nevertheless, a poor presentation does not necessarily indicate that a management team is likely to be ineffectual. Much can be learned from visiting factories or walking around the operations, getting a feel for the prevailing culture of the organisation, what systems are in place, and how these compare with the impression senior management is trying to convey. According to one interviewee, there is no formal management assessment process in place within the bank, although there are means of determining "management integrity", while obvious questions such as directly relevant experience, history of operating in association with venture capitalists or in a plc environment are invariably raised. Taken together, the various elements of the appraisal add up to a rigorous and reliable risk assessment process that continues to serve the bank well.

Recently both respondents had experienced pressure for greater consistency in lending decision making, and a move to determine and embrace elements of best practice. In an increasingly competitive market, where 2% margins are the norm, a rigorous methodology was required. A number of elements need to be considered: a company's products; its place in the market; in the event of failure, the presence of key intangible assets such as brands and reputation. First in the list, however, is the quality of management:

> *You have to be happy with the management because, you know, a bad management team can really trash a good business, and a good management team can really get a poor business through a lot.*

This meant senior management, the half dozen key people: the chief executive; finance director; marketing director; operations director; and where relevant the creative director or technical director. These are the people who make the strategy presentations, who have to convince lenders that they see how it all fits together.

What was it that indicated high quality management? Initially a proven track record and, in the case of initiatives like a management buy-out, or a buy-in, within the industry, or some form of merger, hands-on experience. Depth of quality is also necessary, so that the company is not reliant on one or two individuals, and would not be compromised by sudden departures. One way of obtaining such assurance is to "spend as much time as you can" with senior management, affirming that despite seeking to evolve a more rigorous methodology, there remains a need for good immersion in the business:

> *That's what it comes back to. I keep looking – you are always looking back – six or seven years and I don't know how many deals – thirty maybe - I don't know. See which ones are successful. You know, some guys are*

lucky, but a lot of it comes down to good management, those managers who can spot when things aren't going quite right and fix it.

When questioned about the utility of some form of balanced scorecard, neither respondent was familiar with the concept as a result of their experience in the lending function, although both were vaguely aware that balanced scorecards had recently been introduced elsewhere in the bank for performance measurement purposes. Having explained the generic model, both accepted that it might be possible to use some variant of it. At this time, however, it was likely that such a device would be regarded with a degree of suspicion as something new that those third parties who presently provided consultancy services to loan applicants had suggested they try. Reflecting the traditionally cautious culture of banking one respondent commented:

I think we would be a bit shocked if we got all the answers on day one, or a story that answered all of our questions on day one. You would be curious and perhaps you would be suspicious about that. It may seem a strange thing to say to you but it is not … Even if we were given the information, I guess we would still go through the due process.

Irrespective of its intrinsic merits, the balanced scorecard approach was presently regarded as offering an unacceptable short cut.

Two London-based investment analysts represented a second category of information users. Analyst (A) specialised in software companies, while analyst (B) produced research reports on a small group of hardware companies. Analyst (A) divided his time between appraising companies, including public companies, seeking investment funds, and advising companies seeking an initial public offering (IPO). He combined extensive knowledge of the market for the companies' products with company-specific information, much of which was provided by the companies themselves. Such information included details of the product, customers and competitors, as well as a "sales model" and financial projections. He saw it as his job to perform varying extents of due diligence on this information, and where necessary make use of the services of third parties.

Two additional information streams were also identified. First, in common with his banking counterparts, he required information on the quality of management:

You have to know do they stand a hope in hell of actually getting anywhere in this market? You would also look at the track record of the management. Do they inspire confidence? Do they have the necessary entrepreneurial, sales and marketing experience, can they oversee the development of a small company into a large company situation?

As with the bank lending officers, in order to obtain this information it was necessary to get close to the management team, with the chief executive and financial officers being identified as being particularly significant players, more so than their technical colleagues. Going out on company visits was also very instructive, allowing you to talk to more of the workforce and checking the car park for "Jags and Rollers" which might provide some indication about how motivated people will be to drive the business. Second, because of his specialisation, he found himself having to value intellectual property and research and development on a regular basis. Describing it as an "absolute minefield" and "almost impossible", he suggested that in the fall-out from Enron people might recognise the dangers of such practices and stop trying to put financial numbers on these things.

Overall, analyst (A) seemed comfortable with the methodology he employed. The information he required was available, and he believed that it was sufficiently reliable to meet the needs of his own organisation and his clients. In common with the bank lending officers discussed earlier, what was being pursued was a time-consuming, labour-intensive approach that generated a wealth of information. Consequently, our questions about the value of some form of balanced scorecard format that might streamline the presentation of information were distinctly academic. He had seen only a couple of companies making use of them during the past three years. Equally, even SWOT [strengths, weaknesses, opportunities, threats] analyses were the exception to the rule, which was a basic business plan and some set of the information listed above.

Analyst (B) described a similar painstaking methodology as underpinning the formulation of the research reports he marketed to fund managers.

> *I take my research reports which, hopefully, have the right balance of technical information, market competition information and financial information. They are all packaged together in an easily digestible form so that when I go and talk to [fund managers] about a particular company they can understand very quickly what I am talking about and where the key investment points lie.*

He described the exercise as "like telling a story", although he was clear that it was necessary that he told his own story rather than simply that which management sought to tell. Despite this comparatively progressive outlook, it was apparent that the analysis of financial information provides the foundation for his reports, and traditional metrics in particular. Both analysts regarded trying to value a company's stock of intellectual property, or other intangible assets such as brands, as a time-wasting distraction. It was necessary to report on intellectual property, but the means of doing so was by means of softer metric such as the portfolio of patents, their expiry dates, the quality of patents, what kind of international coverage exists for patents, *etc.* Immersing oneself in the culture of a company was also regarded as desirable, establishing contacts with staff at various levels, maintaining contact over time and regular visits. As a consequence, it is not possible to have a large number of companies in one's portfolio, "maybe a dozen to fifteen companies". Once again quality of management is of significance in determining the prospects of a company as a potential investment.

Like analyst (A), analyst (B) was confident that he was able to obtain and assemble the necessary information required to produce high quality reports. However, for this user the ambiguities that surrounded disclosure were significant.

> *Companies in the licensing area are talking to potential licensees all the time and they are very cautious about saying, you know: "we're talking to Toshiba" or "we're talking to Microsoft or Intel", because that can get the hopes of the market out of kilter with where the company really is, because it may only be in initial talks or exploratory talks … Companies don't want to jeopardise their own negotiation procedure.*

Making use of a balanced scorecard would do nothing to resolve this situation. In his view, the lack of popularity of such an approach to reporting – he could not recall seeing one used during a presentation throughout his career as an analyst – was linked to a perception that they resulted in too much disclosure. Companies are reluctant to provide masses of information that they are unable to subsequently retract. They also open themselves up to being required to continually track particular numbers. Nor is it possible to expect analysts to keep the information they receive hidden; if relevant they will incorporate it into their reports, and thereby put it into the public domain. Consequently his conclusion was that companies "like to keep their numbers as opaque as possible", for practical as well as political reasons:

> *It would absorb more of their time when they would much rather be running the company and generating money.*

If companies decided that they wished to disclose more information, analysts would accept the change. Unlike the picture painted by the two business reporting experts, for analyst (B) there currently seemed to be little competitive advantage to be gained by doing so.

Conclusion

According to expert opinion, the term intellectual capital is not widely used in the UK. Although it crops up in discussion, it does not currently qualify as a widely diffused concept, let alone a full-blown management fashion. By contrast, knowledge management again seems to be a more familiar idea, although this group of respondents expressed some doubts whether it has yet become firmly embedded in the UK. At the same time, however, many of the constituent elements of intellectual capital are of increasing importance within organisations. People, experience and expertise, customers and competitors, culture and organisational networks, as well as intellectual property, are all regarded as key sources of future value creation. Among the user sub-group, the *quality of management* found in organisations is regarded as being particularly important, an observation

previously reported in the 1999 ICAS study of business reporting. Taken together, their identification as vital knowledge assets affirms the close link between knowledge management and the relatively invisible intellectual capital concept.

The challenge is to measure the growth of these assets and to incorporate this information into some form of business report. While a sub set of knowledge assets might be amenable to valuation using established methodologies, it was generally accepted that such an approach was no longer viable in the case of the greater part of them. In this regard, we find support for distinction advanced in the Meritum Report (2002) between intangible assets and intangibles/intellectual capital (see chapter two). Measuring the growth of the latter drivers of sustained value creation emerges as a more instructive course of action.

The issue then becomes that of reporting this information, both internally and externally. Although a growing range of intellectual capital reporting frameworks now exists (see chapter four), they were not very familiar to this sample of experts. The balanced scorecard approach, for example, appears surrounded by ambiguity and has not become widely installed in UK companies, possibly because it is misunderstood, or alternatively because it is regarded as having limitations. On a more positive note, the analysts and the lenders were confident that their evolving methodologies were suitably robust, while the Big 4's business reporting product continues to attract the support of some leading corporations.

Chapter Eight

Summary, Discussion and Recommendations

In this concluding chapter the main findings of the two sets of interviews are initially summarised and integrated. They are then briefly compared with the reports of recent, similar research enquiries, as a preface to a discussion of how the current findings might best be interpreted. In the third section the case is made for embracing intellectual capital reporting, using an approach informed by the Danish Intellectual Capital Statement model. In the final section, this is argued to be a valuable contribution to progressing the business reporting paradigm.

Summary of empirical findings

Case companies

There was a strong consensus among the respondents in both the case companies and expert opinion that intellectual capital is not a term currently widely used among UK managers. Only a small number of those interviewed appeared comfortable using the term, and did so only rarely. In some instances it was used as a synonym for intellectual property, now generally recognised as an example of the structural capital component of intellectual capital. Alternatively, the term was used in association with human resource issues, reflecting the human capital component of intellectual capital.

There was a wider familiarity with the term knowledge management, with two of the case companies exhibiting an established form of this philosophy, and several experts claiming a competence in this area. While respondents in the former companies could, with some conviction, claim that knowledge management was becoming more widely embedded in the UK, their counterparts in the consultancy community were less convinced. This was particularly the case for a more holistic or cultural approach to knowledge management. Technology-driven initiatives were perceived to be more common, producing a less rooted form of the philosophy.

Little understanding of the relationship between intellectual capital and knowledge management was evident. Consequently, there was only a very limited discussion of ideas such as intellectual capital being identifiable as the knowledge assets that knowledge management seeks to manage. Equally, intellectual capital accounting was not recognised to be closely identified with accounting for the success (or otherwise) of knowledge management. Similarly the term intangibles was not part of the respondents' discourse, and where it was in evidence, as intangible assets, it was used in connection with examples including goodwill, brands, know how, *etc.*

Further evidence of a general lack of integrated thinking was apparent in the case of the balanced scorecard. This also seemed to be more familiar to respondents than intellectual capital, especially in the case companies, although reference was often made to "scorecarding" rather than to the balanced scorecard. Many, including some experts, gave the impression of this being a current development as opposed to one that has now been in the literature for a decade. The petrochemicals company and two of the experts aside, there seemed to be little or no appreciation that the balanced scorecard provided a ready means of accounting for intellectual capital. Lacking much if any insight on the constitution of intellectual capital, or the focus of knowledge management activities, the overlap with the three non-financial perspectives of the balanced scorecard remained unrecognised.

Despite this lack of familiarity with the basic conceptual framework of the intellectual capital topic, there was some evidence that respondents in the case companies were aware of the necessity of successfully identifying and managing the various components of intellectual capital, and the association with sustained value creation. Human capital in the form of skills, knowledge, competences, experience, expertise, *etc*, was recognised as

being something that companies had to develop and retain within the company in order to ensure long term commercial success.

Likewise, developing, enhancing and retaining relational capital was viewed as providing a sound foundation for future superior performance. Customer relationships and brand loyalty, as well as integrated customer information databases and company reputation were increasingly recognised as crucial sources of competitive advantage. This also extended to robust relationships with suppliers and reliable supply chain mechanisms, and similar business collaborations. Finally, the various elements of structural capital, ranging from various forms of intellectual property through information systems and knowledge networks to more elusive assets such as innovation and safety-awareness cultures were also increasingly being promoted.

This apparent ambivalence towards intellectual capital, *ie* its concurrent absence and presence within companies, requires some comment. The critical observation is that the motivation for these latter activities is invariably the perceived needs of the company. Despite their close affinity to the intellectual capital concept, they are not presently being managed as aspects of some carefully crafted intellectual capital strategy. Such assets are the focus of attention because they accord with the evolving strategy of the company. Consequently, the existence of such activities should not be taken to signify that intellectual capital, by whatever name, is in truth currently a major feature of the contemporary business environment.

In many instances, the need to manage these assets had also led to the development of a range of measurement metrics. These were predominantly non-financial in nature, in common with many of the examples that have been developed in association with more mature intellectual capital accounting systems. In the case of the petrochemicals company a comprehensive set of indicators had emerged over time incorporating six foci: customers; people; health, safety and environment; value; productivity; and technology. At the opposite end of the spectrum, in the computer software company little beyond simple counts of skills available and some estimates of necessary development needs had been introduced. In the case of the middle group of three companies, the pattern was one of groups of measures emerging to reflect current perceptions of key sources of value creation capacity. Although sometimes impressive, even incisive, the existence of such metrics should not be mistaken for evidence of a systematic approach to either the management of intellectual capital (or key knowledge assets) or as an exercise in accounting for it.

The absence of much evidence of purposeful attempts to report the success (or otherwise) of intellectual capital or cognate activities, even in the petrochemicals company, confirms that the UK lags far behind the Nordic countries in this sphere. A general lack of knowledge about what might be possible in terms of external reporting, coupled with a widespread acceptance of the limitations of the prevailing financial accounting and reporting framework, result in this being largely uncharted waters for most of the companies in the sample.

This lacuna is so extensive that it is questionable whether even a significant increase in interest in measuring intellectual capital related phenomena on the part of companies would necessarily be accompanied by an increase in external reporting activity. In our view, for this to happen it will be necessary for companies to have relevant reporting frameworks that promise some discernible commercial benefits available to them. Only then will management be persuaded to move on from the present situation in which an interest in intellectual capital and related ideas owes its existence to prevailing organisational programmes.

Expert opinion

The sample of expert opinion consulted in the study largely supported the conclusion that little in the way of a concerted effort, either to manage or report on intellectual capital, presently exists in the UK. There was evidence of some concern about the longer-term consequences of this oversight, and the general absence of initiatives emerging within companies to rectify the situation. In the case of the investment analysts and the bank lending officers there were indications that such groups were in the process of responding to this situation by developing ways of taking the growing importance of intellectual capital into account in their own activities. Aware of the central role played by a growing array of such assets, and in particular the quality of management, they were engaged in the development of robust appraisal models and methodologies.

The latter were some distance removed from a reliance on solely financial information, clearly labour intensive and thereby time consuming, and characteristically subjective, even qualitative in nature. Indeed there was some evidence that what was emerging was more heavily reliant on a coherent management narrative or 'story' than a plausible set of (financial) numbers. In addition, two consultants interviewed were engaged in the development (and sale) of a more comprehensive approach to business reporting, designed to meet the current requirements of the capital market. Taken together, what these experts were engaged in was some way in advance of prevailing thought on both measurement and reporting by companies. Once again, however, it is important not to view this as evidence of the emergence of a systematic approach to the issues.

Overall it seems appropriate to conclude that while management in the case companies might not have much understanding about the "theory" that is associated with intellectual capital, they did recognise *what* they should be accounting for, and *why* they should be doing so. Ultimately, however, the lack of a theoretical perspective resulted in limited thinking on *how* they should go about the tasks in a systematic way. Consequently, while they may be reasonably happy with their present level of success in managing intellectual capital, it is difficult to see how companies might begin to install the more comprehensive frameworks that have been developed, particularly in the Nordic countries. The move to a more business reporting emphasis *via* intellectual capital management is not something that looks likely. The absence of a firmly rooted emphasis on intellectual capital means that there is a strong possibility that whatever advances may have been made in this sphere could readily be replaced by the next management fashion that might come along.

The observation that, for the most part, expert opinion is similarly under-informed by theoretical insights, confirms the latter prognosis. Several of the consultants exhibited a very limited knowledge of what options already existed for prospective clients seeking to manage and account for their stocks of intellectual capital. Although the users interviewed for the study indicated that they were developing their own methodologies for such purposes, they too seemed largely uninformed by the on-going debates about intellectual capital, intangibles, knowledge management, *etc.*

Perhaps understandably, the two members of the Big 4 consultancy were the best informed by developments of a more theoretical nature. The product that they are rolling out is, of necessity, underpinned by a range of considerations and experiences not solely informed by the realms of practice. At the same time, however, it is necessary to recognise that what is being developed here is a commercial product, whose success will ultimately be determined by commercial criteria. In this context, theoretical sophistication is no guarantee of competitive advantage in the market place for products of this sort.

Discussion

Comparison with related studies

The limited findings of the two sets of interviews came as something of a surprise to the researchers who had expected to find more evidence of intellectual capital accounting activity. In terms of the case companies, the findings suggest that the situation in the UK lags significantly behind that reported for Denmark (Bukh, Larsen and Mouritsen, 2001; Mouritsen, Larsen and Bukh, 2001b; Mouritsen, Johansen, Larsen and Bukh, 2001), and Sweden (Johanson, Martensson and Skoog, 2001a, b). They were very similar to those described for a sample of large Australian companies by Guthrie and Petty (2000), although perhaps marginally more positive than in the case of Brennan's (2001) sample of Southern Irish companies.

Unlike the present study, however, Brennan observed a reasonable level of familiarity with the intellectual capital concept, something recently confirmed by Wall (2002) in a second survey of companies drawn predominantly from Southern Ireland. Overall, Wall's findings in the case of companies are almost identical to those documented in these pages:

> *[M]ost of them are already measuring certain elements of human, customer and organisational capital. But it appears that this may be occurring as part of their normal working practices and not co-ordinated within a single*

> *IC programme. The main problem seems to be that much of the work on IC is being done in isolation and is not part of an overall strategy.* (Wall, 2002, p.29).

His conclusion is that, in common with most developed countries, with the exception of Scandinavia (and to some extent North America), a "wait and see" strategy is presently in place in respect of intellectual capital. A similar interpretation might also be placed upon the present set of findings. In the next sub-section, some alternative interpretations are briefly considered.

Possible interpretations of the present findings

The existence of a significant body of theoretical insights on intellectual capital and intangibles, coupled with a growing stock of empirical studies that offer broad confirmation that there is little need for adopting such a cautious stance begs the obvious question: *why the delay?* The simple answer, supported by the general tenor of the expert opinion interviews, is that to date too few people in the UK have been sufficiently well appraised about the intellectual capital topic to bring it to the attention of those companies who have been struggling with these issues for some time. Even if management had been interested in seeking help in their individual excursions into the realms of intellectual capital management and accounting, they would have had to search long and hard for informed help and assistance.

There is a further explanation that merits consideration, however. Intellectual capital and related issues may not have been quite such a problem in the UK as they have been in the Nordic countries or North America, the origins of the principal contributions to the intellectual capital literature. It might be true that being in a position to convey to the capital markets a more accurate picture of a business's capacity to pursue sustained value creation is likely to have some consequence for the cost of any investment funds. Equally, it should not be assumed that all such markets necessarily need intellectual capital related information. If the capital market is able to take such factors into account in its absence, however, and still allocate funds in an efficient way, then there will not be the same pressure on companies to provide credible accounts of their "hidden value". Relieved of this burden, management are able to focus their attention on internal reporting and management challenges, and the development of relevant metrics and information systems, and effective management control systems.

An extreme formulation of this latter explanation of the limited familiarity with intellectual capital related ideas in the UK would be that leading edge companies have in fact found no need for them. Rather than argue that all parties have much to gain from becoming significantly more familiar with the ideas and practices described in the early chapters of this report, it should be recognised that the situation has evolved quite satisfactorily in their absence. So much so that even at this juncture there are few if any indications that the situation merits paying attention to developments that have their origins in economies not characterised by such efficient financial and accounting infrastructures. In short, although they may have proved beneficial elsewhere, the theories and methodologies that are associated with the intellectual capital topic have already been effectively discounted in the UK context.

The absence of an institutional framework

There is persuasive evidence, however, that the UK government would not subscribe to explanations that assert the superiority of the UK system. In 1999 the Innovation Policy and Standards Directorate of the Department of Trade and Industry commissioned a feasibility study of a research programme into the measurement and valuation of intangible assets (CRIC/PREST, 2000). The authors of the report contrasted the growing recognition of the contribution of intangible assets to business performance and economic competitiveness with the current "imperfect" understanding of the factors behind this development. An intensive research programme was duly recommended, focusing on measurement and valuation, and centred around four themes: the identification of useful measures; the role of intermediaries and networks; variations across firms and sectors in intangible assets; and the institutional infrastructure.

The report also acknowledged that although some work in relation to intangible assets is already underway, both in the universities and in a number of leading edge companies, comparisons with other countries, including Denmark and the Netherlands, support the need to pursue a more systematic approach. In February 2002, the Department of Trade and Industry, in association with the Economic and Social Research Council, invited funding applications in the field of the measurement and management of intangible assets as an element of the latter body's *Evolution of Business Knowledge* programme. The importance of intangible assets as determinants of innovation, competitiveness and economic growth is contrasted with:

> *[T]he current inability of financial and management reporting systems to adequately reflect the value of, or rates of return to, intangible assets [which] tends to distort the allocation of resources in a number of areas, resulting in; higher cost of capital and under-estimates of value for firms which are highly reliant on intangible assets; inefficiency in the allocation of resources within firms; and inefficiency in determining organisational boundaries for generating and appropriating the value from intangible assets, including restructuring and merger activity.* (www.esrc.ac.uk).

Knowledge-based intangible assets are viewed as being particularly influential, reflecting the knowledge management emphasis of the broader programme. It is noteworthy that while a focus on "management" appears to have displaced the previous focus on "valuation", there still seems to be little evidence that intellectual capital is recognised as a critical focus, nor the challenge of "reporting" it.

In the interim, the Department of Trade and Industry's Future and Innovation Unit also commissioned a project entitled *Creating Value from Your Intangible Assets* (DTI, 2001). As a result of a series of interviews in fifty successful companies, seven categories of intangible assets, on occasion referred to as "intangibles" although again not as intellectual capital, are identified: relationships; knowledge; leadership and communication; culture and values; reputation and trust; skills and competencies; and processes and systems. These assets are described as the "essential ingredients upon which their company's future success would be built" (p.1). They are also recognised to give rise to a number of measurement difficulties that should not be avoided, little benefit being gained from "measuring only the things that are easy to measure rather than measuring the right things" (p.3). Management's objective must be the development of a small number of key performance indicators understood and valued by everyone.

The report appears to favour the development of a similar approach to external as well as internal reporting, commenting that:

> *Financial reporting systems focus on historic balance sheets, profits and cash flow, but you don't get the right perception of the prospective value by looking at history*. (DTI, 2001, p.2).

The contribution of some form of financial valuation perspective is recognised to be limited. One of the key lessons from the companies surveyed for the report was that

> *Attempting to place a financial value on specific intangibles was seen as unreliable, potentially misleading and dangerous*. (*op cit*, p.35),

while the conclusion to the report begins with the observation that:

> *This study highlights the need for organisations to look beyond their existing financial statements to consider how a wide spectrum of excluded intangibles contribute to their current and future potential to create value*. (*ibid*, p.36).

The signal failure to provide any guidance on where it might be useful to begin looking reflects the situation that the present study indicates persists in the UK. While companies have become more aware of what they should now account for and why they should do so, they have been able to make little if any progress on the question of how to incorporate this information in their financial reporting package.

In May 2003, under the auspices of the DTI, the Task Force for Human Capital Management issued a consultation paper entitled: *Accounting for People*. The authors of the paper acknowledge the tension that exists

between the necessity for organisations to develop their own human capital performance measures and the expectations associated with any attempt to report such information externally. On the evidence reviewed by the Task Force, progress in metric development has not been matched in the sphere of external reporting, an issue to which we now turn.

Embracing intellectual capital reporting

Who needs to take action?

In chapter four a range of frameworks for reporting intellectual capital was identified and discussed. Very little of this stock of developments exhibits a UK dimension, most of it originating in either the Nordic countries or in North America. If companies are serious about extending their intellectual capital related activities beyond those that have emerged in the normal course of their activities, *ie* the measurement of key elements of intellectual capital as a pre-requisite for their effective management, combined with a modest degree of internal reporting activity, it is here that they must begin to look.

Similarly, government policy makers must recognise that it is no longer sufficient to acknowledge that other economies have made significant progress in this direction. They must identify ways of transferring useful learning to companies in order that they are better equipped to continue their own evolving intellectual capital management and accounting projects. This process should also extend to key users of financial information such as investment analysts and corporate lenders. Like their counterparts within companies, they have evolved various methodologies to fit their own perceived needs. Finally, the accountancy profession must become more receptive to ideas, approaches and procedures that depart from the certainties that their traditional reliance on hard financial information produces.

A scorecard foundation

The starting point is to recognise that a scorecard approach provides the necessary basis for intellectual capital reporting. The three variations described in chapter four: the Skandia Navigator; the Balanced Scorecard; and the Intangible Assets Monitor, all provide a means of identifying and reporting a company's own stock of intellectual capital. It must be recognised, however, that there is little to be gained by slavishly seeking to replicate any one of these three approaches. The lesson to be learned is that it is the task of a company's management to determine what its key sources of value creation are, *inter alia* its stock of intellectual capital or intangibles. Consequently, any company scorecard will inevitably incorporate both traditional assets and those with a greater contemporary role in the value creation process. One way of conceptualising this change in emphasis is to see it as reflecting a recognition of the multifaceted foundations of value creation, a dynamic process that can only be represented by a similarly dynamic, and company-specific approach to reporting.

One of the great strengths of scorecards is that they offer a means of reporting on intellectual capital both internally and externally. In the former case, the objective should be that of conveying to organisational members the success (or otherwise) of the company's efforts at developing its stock of intellectual capital, in combination with more conventional financial information. As far as possible this should be done using a limited set of indicators, thereby avoiding the pitfalls of information overload. It is important that members are motivated by the reports they receive, and that their commitment to the company is reinforced, thereby ensuring the likelihood of continued successful business performance.

In the case of external reporting, the scorecard approach provides the means of providing the sort of future oriented performance information that (historical) financial information was never designed to. The challenge here is not so much to provide the minimum level of information but to ensure that an appropriate balance of financial and non-financial information is communicated to stakeholders. Recipients of this form of report should be in a position to judge whether the company's efforts at developing their various stocks of human, relational and organisational capital, as represented in the information set provided are sufficient to

ensure continued commercial and financial success. Again, ensuring commitment to the company is a critical concern to those responsible for producing such information.

Adding depth and detail through narratives

A major limitation of the scorecard approach, as its name suggests, is that remains heavily reliant on the use of indicators, whether financial or non-financial. Such an emphasis does not permit companies wishing to be more explicit about their intellectual capital and its contribution to value creation to fully accomplish this end. In order to do so, it is necessary to make greater use of a narrative approach to reporting, something that has also become more commonplace in financial reporting in recent times, most notably in the context of the Operating and Financial Review (OFR) statement.

In chapter four the Intellectual Capital Statement approach commended by a group of Danish researchers and practitioners was identified as an example of the third wave of intellectual capital reporting frameworks (see Appendix 2; also MITR, 2002). The foundation of this approach is a knowledge narrative, in which management sets out the company's mission in respect of its customers. A crucial component of such statements is an indication of how the company intends to ensure that its products meet the needs of customers, together with the way in which it will organise its own resources in doing so. From this narrative it is possible to derive the key challenges faced by management and what actions they will take to meet these challenges. These in turn interface with the relevant performance indicators to be used in the report element of the statement.

A scorecard approach to intellectual capital reporting has the consequence of providing for a broadening out of the account that is given of intellectual capital. Rather than simply offering financial valuations that are intended to be commensurate with those already incorporated within financial statements, the value creation potential of intellectual capital is represented in ways that are no longer intended to mesh with the traditional accounting calculus. In a complementary way, embracing a narrative approach has the effect of deepening or enriching the account of intellectual capital now on offer. Providing more detail of management's thinking as it underpins value creation, it has the consequence of transforming an account into a story, a story about the knowledge management activities pursued by management.

Because management is now being called upon to formulate a detailed narrative about its own activities, a narrative approach also requires management to adopt a more reflexive or self-appraising approach to its role. The dangers involved in publishing a story that suggests that management pursues thinking that is not joined-up will act as a powerful motivation to ensure a series of smooth interfaces between the founding knowledge narrative, management challenges and actions, and the various indicators used to report performance.

Encouraging intellectual capital to speak for itself: the role of self-accounts

While the sort of narrative approaches envisaged by writers such as Mouritsen and Bukh moves intellectual capital reporting on to a new and exciting level, Roslender and Fincham (2001) advocate the development of a more progressive genre of Intellectual Capital Self-Accounts. Their reasoning is that the narratives that emerge as elements of Intellectual Capital Statements will be partial, and thereby largely reflect the views or perspectives of those who formulate them. In consequence, the greater part of human capital, *ie* the employees who provide the intellect that underpins intellectual capital, the ingenuity that manifests itself in the collective capacity to create value, and the intercourse that sustains the organisation as a social entity, remain hidden within the narratives provided on their behalf by management.

These key stakeholders must be given the opportunity to make their own views on value creation, knowledge management and related activities known, and to have them included alongside the other elements that constitute an intellectual capital report. Informed by the necessity to develop a more enabling approach to accounting, one that actively seeks to admit more voices than those traditionally associated with both internal and external reporting, self-accounts result in the formulation of more inclusive, and in this way more representative intellectual capital reports.

Combining complementary perspectives on value creation

Telling stories about personal experiences of such things as building brands, developing intellectual property or creating an innovation culture lies at the opposite end of the spectrum to providing robust financial valuations of these same elements of intellectual capital. Scorecard and management narrative approaches can be situated between them, with the former closer to valuation methodologies and the latter to self-accounts. Consequently, what should be aimed for in any intellectual capital report is a combination of all four types of information, with a leaning towards those of a narrative nature. In terms of existing examples, the way forward would seem to be the Danish Intellectual Capital Statement approach augmented with a stream of representative human capital self-accounts.

Intellectual capital reporting and the future of business reporting

The intellectual capital report commended here will be a substantial document. This is inevitable given the narrative content that is envisaged, now extended to include self-accounts. In the case of large organisations, such reports could become extremely lengthy as a consequence of the potential for adding ever more narrative content. This begs the question about the perceived status of such reports. Are they envisaged as being stand alone documents that detail a company's intellectual capital profile, strategy, activities, deliberations, projections, *etc*? If so, they could easily dwarf the existing annual report package, perhaps raising questions about its continuing role. This is in addition to being both costly to produce and, in the short term at least, largely of unproven benefit to users. More fundamentally, there is the issue of whether intellectual capital really is such an important consideration that it merits detailed attention on the scale envisaged here? Why is it of greater significance than matters of a social, environmental or ethical bearing? Will these be treated in a similar way, in the context of their own reports?

The alternative policy of seeking to incorporate a modest extent of intellectual capital reporting within the annual reporting package has an immediate appeal. It is how many companies have previously responded to growing pressures to report on their social, environmental and ethical activities, as well as on matters of corporate governance. The increased narrative content of contemporary annual reports also reflects such initiatives. Recent proposals to extend the scope of the operating review element of OFR statements provides further evidence that this is the direction in which financial reporting, as the traditional foundation of the annual report, is envisaged to be evolving (Beattie and Pratt, 2002). The outcome of such developments may be a more comprehensive, customer oriented business reporting approach. The downside, however, is that such reports are called upon to provide too much information, particularly of a non-financial sort. As a result, only the financial elements of the package will fully exhibit the coherence that users have come to expect. Despite the intention to promote change, little may truly change.

In our view, an intellectual capital report, as described above, is not to be seen as a further addition to the growing catalogue of *supplementary* reports that businesses should now consider providing. What it seeks to document, *ie* information on the principal foundations, dynamics and outcomes of the value creation process, identifies it as being quite distinct to the traditional financial report with its historical, value realisation underpinnings. In common with the concepts of value creation and value realisation themselves, these two approaches to reporting are best viewed as *complementary*. Taken together, they provide a sound basis for the continued development of the business reporting paradigm, offering a broad based platform for the integration of additional elements of reporting, while affirming the contribution of a narrative model of reporting and the promise of a self-reporting emphasis.

References

Aboody D and B Lev (1998), 'The value relevance of intangibles: the case of software capitalisation', *Journal of Accounting Research*, Vol.36(S), pp.161-19.

Aboody D and B Lev (2000), 'Information asymmetry, R&D and insider gains', *Journal of Finance*, Vol.55(6), pp.2747-2766.

AICPA (1994), *Improving business reporting – a customer focus: meeting the information needs of investors and creditors*, Report of the special committee on financial reporting, American Institute of Certified Public Accountants (chaired by E L Jenkins).

Argyris C and D Schon (1978), *Organizational learning*, Addison Wesley, Reading, Ma.

Barnes S (2002), *Knowledge management systems*, Thomson, London.

Barnes S and B Hunt (2001), *E-commerce and v-business*, Butterworth-Heinemann, Oxford.

Bassie L and D P McMurrer (1999), 'Indicators of human capital investment outcomes from the American Society for Training and Development', paper presented at the Measuring and reporting intellectual capital: experiences, issues and prospects symposium, Amsterdam.

Baum C, C Ittner, D Larcker, J Low, T Siesfeld and M S Malone (2000), 'Introducing the new value creation index', *Forbes ASAP*, April 3, www.forbes.com.

Beattie V and K Pratt (2002), *Voluntary annual report disclosures: what users want*, Institute of Chartered Accountants of Scotland, Edinburgh.

Bell D (1974), *The coming of post-industrial society*, Heinemann Educational Books, London.

Blackler F, N Crump and S McDonald (1999), 'Organizational learning and organizational forgetting', in M Easterby-Smith, M Burgoyne and L Araujo (1999), *Organizational learning and the learning organization*, Sage, London.

Brennan N (2001), 'Reporting intellectual capital in annual reports: evidence from Ireland', *Accounting, Auditing and Accountability Journal*, Vol.14(4), pp.423-436.

Broadbent J, P Ciancanelli, S Gallhofer and J Haslam (1997), 'Enabling accounting: the way forward?', *Accounting, Auditing and Accountability Journal*, Vol.10(3) pp.265-275.

Brooking A (1996), *Intellectual capital: core asset for the third millenium*, Thomson Business Press, London.

Brown J S and P Duguid (1991), 'Organizational learning and communities-of-practice: towards a unified view of working, learning and innovating', *Organization Science*, Vol.2(1), pp.40-57.

Bryman A (1988), *Quantity and quality in social research*, Routledge, London.

Bukh P N D, H T Larsen and J Mouritsen (2001), 'Constructing intellectual capital statements', *Scandinavian Journal of Management*, Vol.17(1), pp.78-108.

Cap Gemini (2000), *Measuring the future: the value creation index*, www.cbi.cgey.com.

Celemi 2000 Annual Report, p.24, www.celemi.se.

Coopey J (1995), 'The learning organization: power politics and ideology', *Management Learning* Vol.26(2), pp.193-214.

CRIC/PREST (2000), *Grasping the nettle: Final report of a feasibility study concerning a programme for research into the measurement and valuation of intangible assets*, Centre for Innovation and Competition and Policy Research in Engineering, Science and Technology, Manchester.

DATI (1999), *Developing intellectual capital accounts: experiences from 19 companies*, Danish Agency for Trade and Industry, Copenhagen.

DATI (2000), *A guideline for intellectual capital statements: a key to knowledge management*, Danish Agency for Trade and Industry, Copenhagen.

Deal T and A Kennedy (1982), *Corporate culture*, Addison Wesley, Reading, Mass.

Demarest M (1997), 'Understanding knowledge management', *Long Range Planning*, Vol.30(3), pp.374-384.

DTI (2001), *Creating value from your intangible assets: unlocking your true potential*, Department of Trade and Industry, London.

DTI (2003), *Accounting for People*, Department of Trade and Industry, London.

Dzinkowski R (1999), 'Intellectual capital: what you always wanted to know but were afraid to ask', *Accounting and Business,* Vol.2(10), pp.22-24.

Easterby-Smith M, M Burgoyne and L Araujo (1999), *Organizational learning and the learning organization*, Sage, London.

Eccles R G, R H Herz, E M Keegan and D M H Phillips (2001*), The value reporting revolution: moving beyond the earnings game*, John Wiley & Sons, Inc., New York.

Edvinsson L (1997), 'Developing intellectual capital at Skandia', *Long Range Planning*, Vol.30(3), pp.366-373.

Edvinsson L and M Malone (1997), *Intellectual capital: realising your company's true value by finding its hidden brainpower*, Harper Collins, New York.

Elkjaer B (1999), 'In search of a social learning theory', in M Easterby-Smith, M Burgoyne and L Araujo (1999), *Organizational learning and the learning organization*, Sage, London.

Fincham R and R Roslender (2001), 'Intellectual capital accounting: a review and critique of a management fashion', paper presented at the 17th EGOS Colloquium, Lyon.

Flamholtz E G (1974), *Human resource accounting*, Dickenson Publishing Company, California.

Flamholtz E G and E D Main (1999), 'Current issues, recent advancements and future directions in human resource accounting', *Journal of Human Resource Costing and Accounting*, Vol.4(1), pp.11-20.

Gallhofer S and J Haslam (1997), 'Beyond accounting: the possibilities of accounting and "critical" accounting research', *Critical Perspectives on Accounting*, Vol.8(1/2), pp.71-95.

Grojer J E and U Johanson (1998), 'Current developments in human resource accounting – reality present, researchers absent', *Accounting, Auditing and Accountability Journal*, Vol.11(4), pp.495-505.

Gu F and B Lev (2001), 'Intangible assets: measurement, drivers, usefulness', working paper on www.baruch-lev.com.

Guthrie J (2001), 'The management, measurement and reporting of intellectual capital', *Journal of Intellectual Capital*, Vol.2(2), pp.27-41.

Guthrie J and R Petty (2000), 'Intellectual capital: Australian reporting practices', *Journal of Intellectual Capital*, Vol.1(1), pp.241-251.

Guthrie J, R Petty, F Ferrier and R Wells (1999), 'There is no accounting for intellectual capital in Australia: review of annual reporting practices and the internal measurement of intangibles within Australian organisations', paper presented at the Measuring and reporting intellectual capital: experiences, issues and prospects symposium, Amsterdam.

Hekimian J S and C Jones (1967), 'Put people on your balance sheet', *Harvard Business Review*, Vol.43(2), pp.105-113.

Hermanson R H (1964), *Accounting for human assets*, Graduate School of Business, Michigan State University.

ICAS (1999), *Business reporting: the inevitable change?*, V Beattie (ed), Institute of Chartered Accountants of Scotland, Edinburgh.

Johanson U, M Martensson and M Skoog (2001a), 'Mobilising change through the management control of intangibles', *Accounting, Organizations and Society*, pp.695-713, v26, n7/8.

Johanson U, M Martensson and M Skoog (2001b), 'Measuring to understand intangible performance drivers', *European Accounting Review*, pp.407-437. v10, n3.

Johanson U and M Nilson (1996), 'The usefulness of human resource costing and accounting', *Journal of Human Resource Costing and Accounting*, Vol.1(1), pp.117-138.

Johnson H T and R S Kaplan (1987), *Relevance lost: the rise and fall of management accounting*, Harvard Business School Press, Boston.

Kanter R M (1989), *When giants learn to dance,* Simon and Schuster, London.

Kaplan R S (1983), 'Measuring manufacturing performance: a new challenge to management accounting research', *Accounting Review*, Vol.58(4), pp.686-705.

Kaplan R S (1984), 'The evolution of management accounting', *Accounting Review*, Vol.59(3), pp.390-418.

Kaplan R S and D P Norton (1992), 'The balanced scorecard: measures that drive performance', *Harvard Business Review*, Vol.70(1), pp.71-79.

Kaplan R S and D P Norton (1993), 'Putting the balanced scorecard to work', *Harvard Business Review*, Vol.71(5), pp.134-147.

Kaplan R S and D P Norton (1996a), 'Using the balanced scorecard as a strategic management system', *Harvard Business Review*, Vol.74(1), pp.75-85.

Kaplan R S and D P Norton (1996b), *The balanced scorecard: translating strategy into action*, Harvard Business School Press, Boston.

Kaplan R S and D P Norton (2001a), 'Transforming the balanced scorecard from performance measurement to strategic management: part 1', *Accounting Horizons*, Vol.15(1), pp.87-104.

Kaplan R S and D P Norton (2001b), *The strategy focused organization: how balanced scorecard companies thrive in the new business environment*, Harvard Business School Press, Boston.

Kumar K (1979), *Prophesy and progress*, Penguin, Harmondsworth.

Lev B (2000), *Intangibles: measurement, management and reporting*, pre-publication manuscript, www.baruch-lev.com.

Lev B (2001), *Intangibles: management, measurement and reporting*, Brookings Institution Press, Washington DC.

Lev B and A Schwartz (1971), 'On the use of economic concepts of human capital in financial statements, *Accounting Review*, Vol.46(1), pp.103-112.

Lev B and T Sougiannis (1996), 'The capitalization, amortization and value-relevance of R&D', *Journal of Accounting and Economics*, Vol.21(1), pp.107-138.

Likert R M (1967), *The human organization*, McGraw-Hill, New York.

Low J (2000), 'The value creation index, *Journal of Intellectual Capital*, Vol.1(3), pp.252-262.

Lyon D (1988), *The information society,* Polity Press, Cambridge.

Lynn B (1998), *The management of intellectual capital: the issues and the practice*, The Society of Management Accountants of Canada, Hamilton, Ontario.

McKinlay A (2002), 'The limits of knowledge management', *New Technology, Work and Employment*, Vol. 17(2), pp.76-88.

McLean R (1999a), 'Value creation and value realisation: a thought experiment on linking ideas and cash flow', presentation to ICM Gathering 2, San Francisco, published on cpri.matrixlinks.ca.

McLean R (1999b), 'Intellectual capital management and the creation of value', presentation to the ASTD 99 International Conference and Exposition, Atlanta, published on cpri.matrixlinks.ca.

Meer-Kooistra J and S M Zijlstra (2001), 'Reporting on intellectual capital', *Accounting, Auditing and Accountability Journal*, Vol.14(4), pp.456-476.

Meritum (2002), *Proyecto meritum: guidelines for managing and reporting on intangibles*, Madrid.

MITR (2002), *Intellectual capital statements in practice*, Ministry of Information Technology and Research, Copenhagen,

Morgan G (1997), *Images of organization* 2nd edn., Sage, Thousand Oaks, Calif.

Mouritsen J (1998), 'Driving growth: economic value added vs intellectual capital', *Management Accounting Research*, Vol.9(4), pp.461-482.

Mouritsen J, H T Larsen and P N Bukh (2001a), 'Valuing the future: intellectual capital supplements at Skandia', *Accounting, Auditing and Accountability Journal*, Vol.14(4), pp.399-422.

Mouritsen J, H T Larsen and P N Bukh (2001b), 'Intellectual capital and the 'capable firm': narrating, visualising and numbering for managing knowledge', *Accounting, Organizations and Society*, Vol.26(7/8), pp.735-762.

Mouritsen J, M R Johansen, H T Larsen, and P N Bukh (2001), 'Reading an intellectual capital statement: *de*scribing and *pre*scribing knowledge management strategies', *Journal of Intellectual Capital*, Vol.2(4), pp.359-383.

Peters T and R Waterman (1982), *In search of excellence,* Harper and Row, New York.

Pettigrew A (1985), *The awakening giant*, Blackwell, Oxford.

Petty R, U Johanson and J Guthrie (eds) (2001), 'Managing, measuring and reporting intellectual capital for the new millenium', special issue of the *Accounting, Auditing and Accountability Journal*, Vol.14(4).

Pilch T (2000), *Dynamic reporting for a dynamic economy*, Academy of Enterprise, London.

Porter M E (1985), *Competitive advantage: creating and sustaining superior performance*, The Free Press, New York.

PricewaterhouseCoopers (2001), *Value reporting forecast 2002*.

Prusak, L (1997), *Knowledge in organisations*, Butterworths-Heinemann, Oxford.

Reich R (1991), *The wealth of nations: preparing ourselves for the 21st century*, Simon and Schuster, London.

Roslender R (1997), 'Accounting for the worth of employees: is the discipline finally ready to respond to the challenge?', *Journal of Human Resource Costing and Accounting*, Vol.2(1), pp.9-26.

Roslender R (2000), 'Accounting for intellectual capital: a contemporary management accounting perspective', *Management Accounting* (UK), Vol.78(3), pp.334-37.

Roslender R and J R Dyson (1992), 'Accounting for the worth of employees: a new look at an old problem', *British Accounting Review*, Vol.24(4), pp.311-329.

Roslender R and R Fincham (2001), 'Thinking critically about intellectual capital accounting', *Accounting, Auditing and Accountability Journal*, Vol.14(4), pp.383-398.

Roy S (1999), Managing intellectual capital: the work with the navigator in the Skandia group', *Journal of Human Resource Costing and Accounting*, Vol.4(1), pp.59-67.

Saunders M, P Lewis and A Thornhill (2003), *Research Methods for Business Students*, 3e, Prentice Hall, Harlow.

Scarbrough H and J Swan (2001), 'Explaining the diffusion of knowledge management: the role of fashion', *British Journal of Management*, Vol.12(1), pp.3-12.

Senge P M (1990), *The fifth discipline: the art and practice of the learning organization*, Century Books, London.

Stewart T A (1997), *Intellectual capital: the new wealth of organisations*, Doubleday/Currency, New York.

Stewart T A (2001), 'Accounting gets radical', *Fortune*, April 16, www.fortune.com.

Sveiby K E (1997a), *The new organisational wealth: managing and measuring knowledge based assets*, Berret-Koehler, San Francisco.

Sveiby K E (1997b), 'The intangible assets monitor', *Journal of Human Resource Costing and Accounting*, Vol.2(1), pp.73-97.

TVC™, www.totalvaluecreation.com)

Upton Jnr W S (2001), *Business and financial reporting, challenges from the new economy*, Financial Accounting Standards Board, Norwalk Ct.

Wall, A P (2002), 'Mental arithmetic', *Financial Management*, December, pp.28-29.

Wallman, S M H (1996), 'The future of accounting and financial reporting part II: the colorized approach', *Accounting Horizons*, Vol.10(2), pp.138-148.

www.totalvaluecreation.com/TVCIfaq/2

Yakhlef A and M Salzer-Morling (2000), 'Intellectual capital: managing by numbers', in C Pritchard, R Hull, M Chumer and H Willmott (eds): *Managing knowledge*, Macmillan, Basingstoke.

Yin R K (1994), *Case study research: design and methods* 2e, Sage, Thousand Oaks, Ca.

APPENDIX ONE

INTELLECTUAL CAPITAL INTERVIEW SCHEDULE/TOPIC SEQUENCE

Can we begin with some questions about the business itself, its history and state of development, to provide a context for the interview?

- Main aspects of business history
- Principal business strategies
- Market strengths of the company/products
- Major recent initiatives and projects

1. The identification of IC

Financial reporting seems to be evolving towards the provision of more and different kinds of information to meet new needs and address new audiences. Does this firm's practices reflect these kinds of changes?

Some of these reporting initiatives focus on the provision of information about a firm's 'intangible assets' or its intellectual capital (IC) and this is the area we wish to concentrate on. Do you go beyond strictly financial indicators of performance into various 'intangible' areas?

Can we establish some consensus on what we mean by intellectual capital and intangible assets? Do you have any specific projects or initiatives under way to measure IC?
(Note: probe here to ascertain the firm's own 'internal label' for any IC initiative.)

What are accountants in the firm (or others) doing to address these forms of IC?
What efforts are they making to identify and understand the different elements of IC?

These forms of IC/intangibles tend to be linked with competitive advantage. What does your firm understand as its distinctive competitive advantage?
Precisely what core competence(s) has given you a competitive edge and led to your success?

What forms of knowledge or IC does the firm see as contributing to this competence?

- What is the significance of IC in this context?
- What is the contribution of IC?
- What is the competitiveness of IC?
- Is your reliance on IC increasing?

(Note: may need to interpret these Qs for knowledge management)

2. The business reporting of IC (measurement reporting)

If you can successfully identify the forms of IC for your firm, the measurement and reporting of these factors then arises.
What do you measure and how do you measure it? What kinds of intangibles get measured? *Eg:*

- HR factors
- Employee skills, retention *etc*
- Business processes
- Organisational development
- Customer factors (satisfaction *etc*)

(Note: probe to see if these relate in any systematic way to employees, processes and customers, *ie* to human, structural and relational capital)

How were the measurement routines developed? What caused you to become interested in measuring intangibles in the first place? Who were the key actors?

What specific reporting mechanisms are adopted?

- How are measures conducted (the means of gathering data, methods)?
- How regularly?

(Note: if the issue of KM software has not come up so far raise this specifically. Probe on the type of software, how it is used, how central is it, do staff still rely on traditional forms of knowledge capture as well?)

How are measures reported?

- Who do you report to? Who are the main audiences?
- What form does reporting take (brochure, annual report *etc*)
- Do you inform external audiences (investors) about intangibles?
- Is there a specific external reporting procedure?
- How accessible are reports?
- How widely used are they?

How successful has measurement and reporting been?

Are there any plans for expanding measurement and reporting of IC?

3. The management of IC

Managing intellectual capital may be regarded as additional to its measurement and reporting.

What are accountants (or others) doing about management issues. About cultivating and growing these factors? About aligning them with strategic goals? And so on.

- Differences from non-IC management
- Any specific initiatives or practices
- Who manages IC and why?
- What success has been achieved?
- What about 'growing' and developing IC?

How is learning from specific IC measures achieved?

- What is the form of follow-up?
- What is the data gathered used for?
- Is the data accumulated (in a database)?
- Is the data subject to any analysis?
- Is it related to performance?

More specifically, the management of IC often involves key things that we would like to look at:

- retaining and recruiting skills (retention values)
- identifying tacit knowledge
- applying mission statements and organisational values
- creating an IC/KM culture.

4. Broader issues

Overlaying these specific points there are broader issues that relate more generally to IC measurement/management (could be treated separately, or could be used as probes for the above questions).

- The notion of making the intangible tangible (a precondition for management and measurement) in a way is impossible, yet all assume it. How do you tackle this?
- What about the 'extreme' elements of IC, the really intangible intangibles, like culture, values and tacit knowledge? What is being done to measure or manage factors such as these?
- The question of attestation of the various types of data being produced is crucial. It also varies for internal and external audiences. What is being done to assure the validity of information?
- Business reporting (as opposed to narrower financial reporting) is inevitably an inclusive process. If it is going to be strategic and act as a catalyst for competitive advantage it needs to break down boundaries between key groups in the firm. Yet this process itself has its problems. Is accounting ready for these new interactions?

Appendix Two

Byggeplandata's Knowledge Management Strategy

Providing the client with peace of mind

PROTECTING THE CLIENT'S INTERESTS

Byggeplandata protects the client's interests from start to finish. From the very early stages where the project is merely a need, a concept or a vague idea – perhaps not even formulated yet – and until the final stage when the new building is being moved into for usage according to plan, complete with presentation and approval of the accounts.

We are known to be a competent, fair, reliable and loyal business partner, a reputation we intend to keep. Our first concern is to ensure the optimum solution or building for our clients measured by activities, functionality, quality, technology and economy.

We want our clients and business partners to have an overall positive experience from contact with our staff of accommodating, attentive and competent employees. It is important to us that our employees find Byggeplandata to be an interesting, challenging and stimulating place to work, where quality is a matter of course and there are no restrictions on the individual's wish for self-development.

PEACE OF MIND

Our clients are local authorities, organisations, institutional investors and major private undertakings, such as manufacturing or high tech companies. We relieve the client's organisation of supervision and management tasks in areas where in-house expertise is lacking.

Our services benefit not only the client's employees entrusted with the overall responsibility for the building project, but also those in charge of specialist tasks that would otherwise create a heavy burden on in-house resources. We provide peace of mind for the user by delivering expertise, loyalty and impartiality.

EXPERTISE, INTEGRATED CO-ORDINATION AND OVERVIEW

Our services include planning, management, supervision and follow-up throughout the entire process and exclude design and computation, which are the jobs of architects and consulting engineers. We do not accept assignments as contractors or sub-contractors. We are thus fully independent and able to advise clients without the bias of promoting special interests.

In this way we take over management tasks for a client in a field of expertise which may not be within his ordinary line of business. We take care of project management, legal aspects, supervision of technical quality standards as well as financial control, thus relieving the client of concerns in domains where the client's knowledge is limited. Our ambition is to provide the client with peace of mind by offering impartial, personal and competent consulting services warranting delivery on time, within budget and compliance with statutory requirements.

BUILDING, DEVELOPING AND EMBEDDING EXPERTISE

A number of important players become involved in the complex process of a building project. The client and his adviser are engaged from start to finish, while others come and go. Our tasks are co-ordinating and protecting the client's interests during all stages of the project.

Throughout the building process we draw on individual know-how from particular educational profiles as well as experience and on collective know-how about project management from organisational experience documented in project management systems and in building procedures. The gradually built up collective know-how of the organisation enables us, for example, to transfer experience from one project to another, even if employees seek new challenges elsewhere.

RELIABLE PROJECT MANAGEMENT

In order to take over the responsibility for, and coordination of, the building project we must have access to a broadly educated and experienced staff mastering the most recent knowledge within the legal, financial and technical aspects of building and construction as well as an organisation whose speciality is project management. Problem solving must be flexible and effective to relieve the client of the task and to make him realise the value of the service. This means that we must focus on the following management challenges:

- Selecting the right people for each particular project, and ensuring personal consulting on a continuous basis for the full duration of the project.
- Maintaining a staff with broad professional skills, for regular upgrading by further training as required.
- Knowledge sharing by informal collaboration and by building up formal systems for recording information and for well defined procedures.

Visualising the scope and significance of the solved problem to the client.

Management Narrative	**Management challenges**	**Actions**	**Indicators**
Providing the client with peace of mind	Project management	• Accumulating project management competencies	• Investment in project management • Supplementary training costs of project management • Proportion of projects carried out as teamwork
	Recruitment	• Recruiting experts • Developing evaluation systems/evaluation talks • Setting up supplementary training programme	• Portfolio of qualifications • Proportion of employees with development talks • Supplementary training costs per employee
	Knowledge sharing	• Intranet • Knowledge about needs • Teambuilding	• Investment in process development • Number of collaborative groups
	Visibility to the client	• Visibility to the client • Dialogue about the assignment	• Visibility to the client • Customer satisfaction

Source: MITR (2002)