

# Reporting on intellectual capital: why, what and how?

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**Abstract** Intellectual capital is an important value driver in today's organizations. Traditional financial statements do not provide the relevant information for managers or investors to understand how their resources – many of which are intangible – create value in the future. Intellectual capital statements are designed to bridge this gap by providing information about how intellectual resources create future value. Intellectual capital statements can be used as tools to communicate the knowledge-based strategy externally but it can also be used as an internal management tool. In this article we outline the reasons for reporting intellectual capital, introduce the elements of such statements, and present a case example from a Danish mobile phone design company.

**Keywords** Intellectual capital, Disclosure, Intangible assets

## Introduction

One of the characteristics of contemporary organizations is their clear ambition to develop performance management systems and practices. This agenda calls for more emphasis on the management of resources not conventionally recognized as management concerns. This includes attention to knowledge and intellectual capital (Marr *et al.*, 2003; Mouritsen and Larsen, 2004). Not only do firms recognize a need to somehow develop “integrated” performance management systems (Kaplan and Norton, 2000); so does the capital market (e.g. Amir and Lev, 1996). Both firms and capital markets realize that something has to be done to improve the control and reporting systems currently being used. They need to face the challenge to help develop, communicate, monitor and evaluate firm's strategies.

In addition, strategy is not any more only about positioning the firm *vis-à-vis* its competitors. It is concerned also with intangible assets and intellectual capital in the forms of know-how of employees and management, relationships with customers and suppliers, brand, information technology or appropriate organizational form and relevant form of empowerment – the knowledge based resources (Marr *et al.*, 2002; Mouritsen, 1998). Such resources are often difficult to replicate and thus may create extraordinary value. Some indication of this is that firms such as Microsoft or Coca Cola only report the traditional assets in their balance sheets, which account for a small fraction of their market value. This is also the case for manufacturing firms such as Honda or BP where less than 30 percent of market value is reported in financial statements. Even if such measures are debatable, they indicate that there is more to corporate growth than is currently recognized in the financial statement.

The value relevance of traditional annual reports is declining (e.g. Lev and Zarowin, 1999) and non-financial information like market size and market penetration are significantly related to market value (Amir and Lev, 1996). For external communication purposes, additional kinds of reporting may therefore be relevant. This is partly the reason why some firms, especially in the Scandinavian countries, have experimented with intellectual capital statement to disclose information about intellectual capital to external stakeholders.

The intellectual capital statement is often a supplement to the annual report, where the firm's strategy for managing knowledge and the activities initiated to pursue the strategy are documented and explained. Often such a statement discloses efforts to orchestrate, upgrade and monitor knowledge activities rather than to recognize them in financial terms. It attempts to show a firm has managed its knowledge resources and it therefore forms part of the firm's knowledge management activities.

This article outlines the reasons why it is important to report intellectual capital. It then describes a methodology, which has been developed to form the basis of intellectual capital reporting. Finally, the article illustrates the methodology using a case example of a Danish firm.

### Why disclose intellectual capital?

There is widespread and growing frustration with traditional financial reporting as is expressed in, for example, the "Jenkins Report" (AICPA, 1994), the work of the former commissioner of the Securities and Exchange Commission (SEC) Steven Wallman (Wallman, 1996, 1997), and, more recently, Accounting Standard Board (2002), the Canadian Institute of Chartered Accountants (2001), and the Chartered Institute of Management Accountants (Starovic and Marr, 2003). They all argue that the financial reporting system is incapable of explaining "new" resources such as relationships, internally generated assets and knowledge. Disclosing information on such factors is likely to lower the cost of equity capital because it decreases uncertainty about future prospects of a company and facilitates a more precise valuation of the company (Botosan, 1997). It will also enhance stock market liquidity and increase demand for companies' securities (cf. Healy and Palepu, 2001). It has been suggested that the capital market may be at a disadvantage in several ways if information on intellectual capital is not addressed (Starovic and Marr, 2003) including:

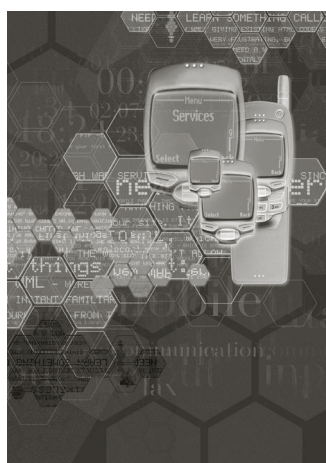
- smaller shareholders may be disadvantaged, as they usually have no access to information on intangibles often shared in private meetings with larger investors (Holland, 2001);
- insider trading may occur if managers exploit internally produced information on intangibles unknown to other investors (Aboody and Lev, 2000);
- increased volatility and the danger of incorrect valuations of firms, which leads to investors and banks placing a higher risk level to organizations; and
- increased cost of capital (Lev, 2001).

The potential advantages for firms are that in reporting their intellectual capital they not only communicate the firm's advantages; they can also attract valued resources. This can be seen from Figure 1, which presents findings from a survey among Danish firms that produced intellectual capital statements.

### Intellectual capital in the management of the firm

Information on intellectual capital is relevant to an external audience; however, it can be just as relevant as an internal management tool. Firms experimenting with the external intellectual capital statement quickly realize that the internal management of intellectual resources has to follow suit; and to do this, a management tool is required (see also Bontis *et al.*, 1999; Guthrie, 2000; Marr *et al.*, 2003). The challenge facing firms is to realize how the intellectual resources can be made manageable, and how these in turn are related to the development of the firm.

Such a tool should help managers and suppliers of resources to answer some key questions, such as: are intellectual resources increasing or decreasing? What knowledge is there? How is



**Figure 1** Proportion of companies with the following intellectual capital statement objectives



it developed? Intellectual capital statements can be seen as a tool to help organizations to better understand their intellectual resources. But how can intellectual resources become manageable?

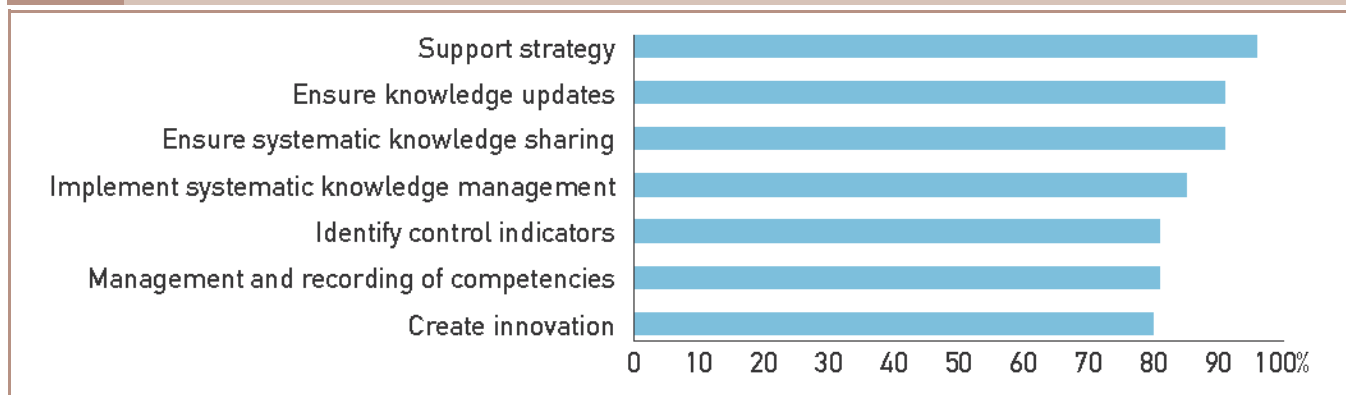
Intellectual resources comprise of the firm's knowledge. In a business context this knowledge is used to improve a firm's innovation capability, processes and performance. However, knowledge is "intangible". Therefore it has to be translated into *knowledge resources* that can be pointed at so it is possible to say "this is knowledge"! Knowledge resources can be described, developed, evaluated and combined in new ways. They can be managed, which means they can be described in an intellectual capital statement. Below we define four types of knowledge resources, i.e. employees, customers, partners, virtual infrastructure, and technologies (see also Marr and Schiuma, 2001).

1. Employees are knowledge resources with inherent attributes such as skills and personal competencies, experience, educations, motivation, commitment, or willingness to adapt. Groups of employees produce beneficial emergent qualities.
2. Knowledge resources based on customers and partners. Especially the relationships to customers, users, and other partners such as suppliers, their satisfaction and loyalty, their referral of the company, insight into users' and customers' needs and the degree of co-operation with customers and users in product and process development etc.
3. The virtual infrastructure can be a knowledge resource as it includes procedures and routines. These can be the company's innovation processes and quality procedures, management and control processes and mechanisms for handling information.
4. Technologies are knowledge based assets as they refer to the technological support of the other three knowledge resources. Focus is usually on the company's IT systems (software and hardware) such as the Intranet, IT intensity, IT competencies and IT usage.

A company's knowledge management is therefore concerned with the above knowledge resources and *their interaction*. When the interaction between these knowledge resources is understood, the firm's knowledge management *strategy* is clear (Mouritsen *et al.*, 2003; Marr *et al.*, 2004). As illustrated in Figure 2, firms using intellectual capital statements justify this from their increased understanding of their knowledge management strategy, and they point out that a connection can be established between strategy, actions and information.

The link between strategy, activities and indicators used to measure them are complex and not always easily understood. It is not always easy to develop a resource-based strategy in organizations. When organizations redefine their strategy, review their activities and align their measurement system, the firm embarks on a process where the whole of the strategy is formed

**Figure 2** Proportion of companies with the following internal intellectual capital statement objectives



as in fact the elements take part in defining each other. What companies develop is a knowledge-based strategy that explains what the firm's ambitions are, which knowledge resources it has and how they can be strengthened, and measured.

The internal and external motives for developing intellectual capital statements should not be separated as they are dependent on each other. They are mutually reinforcing as suggested by Kjaergaard (2003, p. 274) in her analysis of the use of IC statements in an electricity transmission system company, the IC statement "made it possible for the firm to work actively with its vision and values on a daily basis".

#### Existing accounting practices and intellectual capital

Traditional accounting rules have changed over the past decade in acknowledgement of the increasing importance of intellectual resources. In 1998 the ASB introduced FRS 10 as the main standard for reporting intangibles and goodwill, which defines intangibles as "non-financial fixed assets that do not have physical substance but are identifiable and controlled by the entity through custody and legal rights". In 2005, when the international reporting standards replace national rules (for companies listed on regulated markets within the EU), FRS 10 will be superseded by IAS 38. IAS 38 is therefore the proposed international standard for reporting intangible assets. Its definition of intangible assets is very similar to the one used in FRS 10, except it adds that intangible assets are held for us "in the production or supply of goods and services, for rental to others or for administrative purposes". IAS 38 specifies that a company can only recognize an asset if it is:

- identifiable;
- controlled;
- it is probable that future benefits specifically attributable to the asset will flow to the enterprise; and
- cost can be reliably measured.

These recognition criteria apply to both purchased and self-created assets. If the item does not meet the above criteria, IAS 38 requires the expenditure on this item to be recognized as expense when it is incurred. It also requires the following items to be expensed: Internally generated goodwill, start-up, pre-opening and pre-operating costs, training costs, advertising cost, relocation costs. It is clear from this list that much of what is commonly regarded as intellectual capital would not in fact pass the recognition test. Even if we accept that for the time being intangibles are unlikely to appear in published balance sheets, we are still left with a problem of how to report, measure and manage what are undoubtedly important value drivers in today's businesses.

In the UK the operating and financial review (OFR) could be a possible vehicle for identifying the importance of intangible assets. The recent Company Law Review, submitted to the Secretary of State for Trade and Industry in July 2001 and likely to be included in the updated Companies Act 2003, requires all public and very large private companies to produce an OFR. Besides traditional financial measures, the OFR requires companies to include an account of how the company's intangible assets contribute to its overall value generation and how the conflicting stakeholder interests are balanced. Below we will outline of how organizations could structure more informative statements about their intellectual resources.

### The structure of intellectual capital statements

The intellectual capital statement can be found in various forms (MERITUM 2002; Mouritsen *et al.*, 2003) and its definition is ambiguous, but there are similarities in practical situations. It can express human capital, organizational capital, and customer capital (e.g. Edvinsson and Malone, 1997; Sveiby, 1997; Roos *et al.*, 1997), and it reports disparate items of financial and non-financial information, i.e. staff turnovers and job satisfaction, in-service training, turnover split on customers, customer satisfaction, precision of supply etc. (Bukh *et al.*, 2001; Mouritsen *et al.*, 2001a). In addition, it also has a substantial narrative part where numbers and text are combined to provide explanation of the strategic direction of the firm.

A Danish research project funded by the Danish government between 1998 and 2002, led to the development of the Danish guideline for intellectual capital statements (Mouritsen *et al.*, 2003). This guideline recommends that a firm report on its value creation potential and its strategy for knowledge management, including a specification of which knowledge resources are vital value drivers, through an intellectual capital statement. Here, the intellectual capital statement consists of four elements, which together express the company's knowledge management. The four elements link users of the company's goods or services with the company's need for knowledge resources. They include the establishment of the need for knowledge management, a set of initiatives to improve knowledge management and a set of indicators to define, measure and evaluate initiatives (Mouritsen *et al.*, 2003).

The first element is a *knowledge narrative* that expresses the company's ambition to increase the value a user receives from a company's goods or services. Knowledge has to be related to a purpose. The knowledge narrative helps to define what it is that we need to know and thus how knowledge can be directed towards creating a service or a product that has a value to a user. This value can be called the use value, and a set of knowledge resources are needed to create it. The knowledge narrative shows which types of knowledge resources are required to create the use value the company wants to supply. This ambition establishes a narrative because it merges the user's and the company's knowledge resources into a whole. It is crucial to tie the narrative together by words such as "because", "therefore" and "in order to". In this way the knowledge narrative shows how knowledge is supposed to lead to improvements for a user. To identify elements of a knowledge narrative, it is useful to answer the following questions:

- What product or service does the company provide?
- How does it make a difference for the user?
- What knowledge resources are necessary to be able to supply the product or service?
- How does the constellation of knowledge resources produce the service/product?

The second element is a set of (knowledge) *management challenges* (or business model of knowledge), which highlight the knowledge resources that need to be strengthened through in-house development or through sourcing them externally. The management challenges are enduring challenges that together define the business model of knowledge. They can have different forms such as intense co-operation with innovative customers, great expertise in specific fields or insight into the company's control processes. Management challenges such as these are relatively enduring over time even if they constantly have to be developed. They usually do not change every year and they are closely linked to the knowledge narrative and



thus to the individual knowledge resources within the company. The starting point for the management challenges could be the improvement of the existing knowledge resources. But it could also be to introduce new types of knowledge resources that are currently not found within the company. To get an idea of the firm's management challenges, the following questions could be addressed:

- How are the knowledge resources related?
- Which existing knowledge resources should be strengthened?
- What new knowledge resources are needed?

The third element is a set of initiatives that will address the management challenges. The initiatives are concerned with how to compose, develop and procure knowledge resources and how to monitor their size and effects. This might include investing in IT, hiring more R&D consultants, software engineers or launching training programs in company processes and procedures. Vocational and social activities can also be introduced to increase employee satisfaction. These are all, in principle, short-term actions. Comparing one year with the next, initiatives must be seen to work, even if specific types of initiatives are repeated over several years. These are specific initiatives which specific players are responsible for. Somebody hires personnel, somebody launches training initiatives and somebody develops the required procedures and routines. To develop a set of initiatives requires answers to the following questions:

- What initiatives can be identified – actual and potential ones?
- What initiatives should be given priority?

The fourth element is a set of *indicators*, which monitors whether the initiatives have been launched or whether the management challenges are being met. Indicators allow managers to track initiatives and enable organizations to evaluate their impact. Some indicators are directly related to specific initiatives such as “training days” or “amounts invested in IT”. Others are related only indirectly to specific initiatives such as “number of R&D consultants” or “newly appointed software engineers”. Indicators can measure:

- Effects – how do activities work?
- Activities – what does the firm do to upgrade knowledge resources?
- Resource mix – what is the composition of knowledge resources?

Together, these four elements represent the analysis of the company's intellectual capital. The elements are interrelated, and their relevance becomes clear when seen in context. The indicators report on initiatives. The initiatives formalize the problems identified as management challenges. The challenges single out what has to be done if knowledge resources are to be developed. The knowledge narrative also sums up, communicates and re-orientates what the company's skills and capacity do or must do for users, and what knowledge resources are needed within the company.

#### **An example: Maxon Telecom A/S**

Maxon Telecom A/S designs and develops cutting-edge mobile telephones for its Korean parent company, which then manufactures the phones. Maxon Telecom is given the basic specification for mobile phones and takes part in an active dialogue on technical specifications and designs. Further, the firm provides competent sparring necessary for its Korean parent company to supply “communication, anytime, everywhere” to its customers.

As a sparring partner, Maxon Telecom must be able to compile and exploit the necessary knowledge resources. This can be achieved in many ways and the knowledge narrative specifies which knowledge resources Maxon Telecom considers as necessary to create use value. Highly skilled employees are seen as particularly important because they own the ability to “play” with technology and make new technologies work. These employees must also be



**Table I** A summary of the elements of Maxon Telecom's intellectual capital statement 2002

<i>Knowledge narrative</i>	<i>Management challenges</i>	<i>Initiatives</i>	<i>Indicators</i>
<ul style="list-style-type: none"> <li>■ Product or service: Maxon Telecom develops and designs mobile phones based on cutting edge technology.</li> <li>■ Use value: Competent sparring to provide "communication, anytime, anywhere".</li> <li>■ Knowledge resources: Employees' specialist knowledge and competencies, insight in users' and customers' needs, insight in existing and future technologies and the capacity to run projects.</li> </ul>	<ul style="list-style-type: none"> <li>■ Product development</li> <li>■ Improvement of personal skills</li> <li>■ Ensuring products are on-time</li> <li>■ Creating knowledge of and competencies within current and future technologies</li> </ul>	<ul style="list-style-type: none"> <li>■ Check users' expectations and satisfaction</li> <li>■ Conduct employee performance reviews</li> <li>■ Establish and implement competency development plans</li> <li>■ Implement tutor schemes</li> <li>■ Implement management training</li> <li>■ Implement CASE training</li> <li>■ Implement leadership coaching</li> <li>■ Launch Microsoft Projects training</li> <li>■ Implement project organization</li> <li>■ Implement teambuilding process</li> <li>■ Train people in new technologies</li> <li>■ Introduce roadmap</li> <li>■ Participate in conferences</li> <li>■ Being a part of operators' and development houses' networks</li> </ul>	<ul style="list-style-type: none"> <li>■ Number of satisfaction studies (and market surveys) conducted</li> <li>■ Customer satisfaction with quality</li> <li>■ Number of projects ordered in the year</li> <li>■ Absence</li> <li>■ Rate of completion of training needs outlined in the MUS conclusions</li> <li>■ Employee satisfaction with course or training initiatives</li> <li>■ Number of performance reviews held on schedule</li> <li>■ Employee satisfaction</li> <li>■ Employees' assessment of their colleagues' interpersonal skills and competencies</li> <li>■ Staff turnover</li> <li>■ Number of employees with competency development plans</li> <li>■ Number of employees on job rotation, being promoted or posted abroad</li> <li>■ Number of employees who believe they can develop in Maxon, both professionally and personally</li> <li>■ Number of employees who see their immediate superiors' as being capable of motivating them satisfactorily</li> <li>■ Number of new employees in proportion to number of tutor schemes</li> <li>■ Number of projects implemented on time</li> <li>■ Number of projects kept within the agreed budget</li> <li>■ Number of junior project managers recruited in-house</li> <li>■ Number of employees approved to work as project managers</li> <li>■ Satisfaction with distribution of responsibilities between and within departments</li> <li>■ Employees' satisfaction with the ability to act with speed</li> <li>■ Number of project groups with under 16 members</li> <li>■ Number of project groups without own project room</li> <li>■ Participation in CEBIT and Cannes</li> <li>■ Number of co-ordinating meetings a year</li> <li>■ Number of departmental managers/technology scouts in operators' networks</li> <li>■ Number of developers in external networks</li> </ul>

motivated to become involved in the company's business, as only then will customers "and users" needs be met. It requires an understanding of mobile phone users', manufacturers' and operators' needs. Maxon Telecom is a development house and therefore has to be at the cutting edge of technology and requires knowledge of future as well as existing technologies.

The mobile phone market demands that new developments can be quickly brought to the market. If this is not achieved, communication is weakened which affects the perceived value by the user. As development work is organized into independent projects, the company must be able to run projects so that they finish on time, on budget and at the required quality level. These are the knowledge resources that Maxon Telecom must strengthen through initiatives.

Some of the management challenges are about developing existing knowledge resources, such as personal knowledge and project management skills, which deliver "on-time products". Others are about acquiring knowledge that is not found within the company such as monitoring technology development and product development with respect to customers' and users' needs.

The challenges are addressed in the initiatives launched by Maxon Telecom. The initiatives are designed to establish contact with external parties through communication with end users and through networking and conferences. Initiatives also address the systematic development of the competencies identified as necessary to supply value to users; which includes, in this case, personal and specialist competencies and project management competencies (Table I).

The indicators give the company the ability to follow up on how initiatives develop, their effects, and whether Maxon Telecom is ultimately able to create the value they are working for.

## Conclusion

Experience suggests that intellectual capital statements can be used as a tool for systematizing and developing knowledge management activities. In this sense they may help formulate the firm's resource-based strategy. The purpose of the intellectual capital statement is often two-fold, as it functions as a *management tool* used internally in the firm and as a *communication tool* used to communicate how the firm works to develop its knowledge resources in order to generate value. It is interesting to note that this communication has many effects: on the one hand it may attract new resources in form of employees and partners, and in some cases it may also attract customers. In addition, it can function as a management tool, which helps to develop a resources-based or knowledge-based strategy; it can help to monitor its implementation, and therefore allows management intervention so that information (indicators) are used to develop the firm. Measurement in this situation is not a passive act of recording: measurement helps develop the firm's knowledge about its strategic progress, and it allows actions to be undertaken to change the present towards a better future.

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