FORUM: KNOWLEDGE MANAGMENT
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INTELLECTUAL CAPITAL STATEMENTS AND KNOWLEDGE MANAGEMENT: 'MEASURING', 'REPORTING', 'ACTING'

This paper discusses the relationship between intellectual capital and knowledge management. Based on five empirical examples, it suggests that intellectual capital statements are complex forms of measuring, reporting and acting at the same time. Measurement and process conflate, because there is little attempt to measure the "true" value of intellectual capital in empirical intellectual capital statements. In contrast, there is attention to a broad sense of reporting and communication, which consist not only of measures but also of stories and sketches. The "object" to be illuminated and managed via intellectual capital statements is knowledge management activities rather than knowledge itself.

The contours of the new forms of competitiveness of the modern firm are increasingly drawn around knowledge and knowledge management. This is often associated with new challenges in the areas of human resource management (HRM), information technology (IT) or research and development (R&D), all of which suggest new bases for competitive power whether in the form of "empowered people", "electronic architecture" or "product development". These new competitive bases are concerned with fostering an individual's ingenuity and with sharing knowledge and experience collectively. It is an enterprise concerned to make individuals part of a community who would share knowledge and thereby foster new ideas and novel solutions.

A knowledge era, or knowledge society, is one where knowledge is a core interest of management. Knowledge, however, is not easily accessible, particularly since for it to be productive, people have somehow to be "motivated". Sharing cannot be "commanded", it has to be motivated. Ingenuity cannot be "installed", it has to be motivated. Creativity cannot be "fabricated", it has to be motivated. In all these situations, motivation is a particular form of productivity. It is the mechanism which brings white-collar productivity. When motivation is there, people will act intelligently and creatively, achieving sensible solutions and crafting firms in the perspective of tomorrow.

Intellectual capital and intellectual capital statements are related to knowledge and knowledge management. More precisely, knowledge management activities are the object that intellectual capital statements attempt to illuminate. They do so by combining "measurement", "reporting" and "acting" which can only be separated for analytical purposes. In each act of producing and using intellectual capital statements, firms measure, report and act. The issue is what measuring, reporting and acting may mean.

In the firms we have studied, measurement is more about constructing classifications of intellectual resources to be included in an intellectual capital

statement and less about uncovering the value of intellectual resources. Reporting is less about finding a "true and fair" bottom line, but more a collage of digits, stories and sketches which together create a broad and sometimes aesthetic presentation of the firm. Last, acting is less a matter of making specific and individual decisions than of finding new organisational routines which align knowledge management with key concerns of the firm. Acting is expansive.

A BRIEF HISTORY OF INTELLECTUAL CAPITAL

The intellectual capital statement movement of the 1990s may have originated in the mid-1980s when service industry practitioners in Sweden began to suggest extended "financial" reporting. The Konrad Group, which met for the first time in 1987 and was chaired by Karl Erik Sveiby, created a template for a new annual report for "know-how" companies (Sveiby and Riebling, 1986). Such companies had highly educated employees who would approach complex problem-solving using non-standardised methods. According to the Konrad Group, there was a distinction between these know-how companies and knowledge-intensive firms — the latter were seen to depend on a different set of resources which had a more structural form such as financial strength, experience, established networks and relations with customers and suppliers. Later, however, Sveiby (1997, p. xi) generalised his ideas to cover a range of "knowledge organisations" suggesting that such firms rely fundamentally on "the professional". The Konrad Group developed the "invisible balance sheet", which was generalised to all service companies in a recommendation from the Swedish Association of Employers in Service Industries in 1993 (Tjänesteforbundet, 1993).

Together Karl Sveiby and Leif Edvinsson — and a small number of supporters, including the Swedish research and consulting firm SIFO — were largely responsible for establishing the movement. They have now been joined by some American writers, including Thomas Stewart, but even as the movement becomes global, the network of key people remains small. Academics are starting to participate in the search for the metrics that give strength to intellectual capital statements.

MEASURING: CLASSIFYING INTELLECTUAL RESOURCES

Market-to-book

Many commentators say that intellectual capital is important because market-to-book ratios have been increasing dramatically on most stock exchanges throughout the 1990s. Stewart (1997, p. 33), for example, points to the huge differences between the market value and the book value of so-called knowledge-intensive firms such as Microsoft, Astra, Rentokil and Oracle. The argument is that since the financial accounts represent the material assets, the rest must be due to non-material assets such as intellectual capital (Edvinsson 1997, p. 367; Edvinsson and Malone 1997, pp. 2-3; Sveiby 1997, ch. 1; Roos and Roos 1997, p. 413). Put differently, IC = MV – BV, where IC is intellectual capital, MV is market value and BV is book value. Such a metric may be interesting in a study of how capital markets work but in relation to the specific firm, the market-to-book argument should not be taken too seriously. There are at least two reasons for this.

First, it is an obvious problem that intellectual capital is defined in terms of what it is not. It is not market value and it is not book value. On reflection this actually means that intellectual capital is a function, albeit possibly a complex one, of the financial accounting rules. As there is some scope in the application of accounting and auditing standards to define book values, intellectual capital would by implication be affected in various ways. It is alarming from an accounting perspective that a change in accounting rules would produce a different intellectual capital value. This would happen, for example, if the items that could be capitalised in the balance sheet changed or if the depreciation of fixed assets were accelerated, leading to a different accounting result. In other words, if we accept intellectual capital as such a residual, we would also have to accept it as a function of the accounting rules used to construct book value. This is obviously absurd, as intellectual capital is argued to be separate from financial capital.

Second, the formula is dubious because it assumes that intellectual capital "fills out" the gap between market value and book value. If intellectual capital is used only to explain market values, how could it be of value? If the market already knows the right market value, why bother to compute intellectual capital? For information to be of value it has to be able to inform in a new and better way. If intellectual capital therefore is of value, it would have to influence the market values. In such a situation, intellectual capital cannot be subordinated to market values. It must be the other way around.

Therefore, intellectual capital has to be defined on its own terms. In what sense does intellectual capital exist alone, and why do firms report on it? We propose that intellectual capital statements are about knowledge management activities. They are not about knowledge, which is a difficult and ambiguous concept, but about the activities that management puts into motion in the name of knowledge management. Knowledge is not interesting for what it is. It is interesting for what it does, how it works, what managers can do to identify, transport and evaluate it, and how it can be communicated, say, to the capital market so that it can be acted on. That is, knowledge does not have to be true to count; it just has to work (eg, Austin, 1962). But to let it work, we must investigate

how it is being put to work. Hence the focus on knowledge management activities.

Interestingly, this is also what Stewart, Edvinsson, Sveiby and others do when they get beyond the rhetoric in their books. They all — after just a few pages — discuss the actions that intellectual capital is supposed to influence. They do that through paying attention to the classification of measurement systems.

Classifying intellectual resources

There has been remarkable little concern about detailed measurement in the intellectual capital literature. When presented, all metrics and numbers are said to be examples. And in none of the intellectual capital statements that have been produced in Scandinavia has there been a serious discussion of the numbers or their relationships. Rather, the discussion has been on the classification of intellectual resources. This is not measurement; it may be "meta-measurement".

There are various models and classifications of intellectual resources in the literature, but most are versions of what could be termed the Sveiby-Edvinsson-Stewart model, which suggests — even if the words differ between these writers — that there are three types of intellectual resources. Sveiby (1997) offers employee competence, internal structure, and external structure. Stewart (1997) identifies human capital, structural capital and customer capital. Edvinsson's main distinction is between human capital and structural capital (which then can be divided into organisational capital and customer capital).

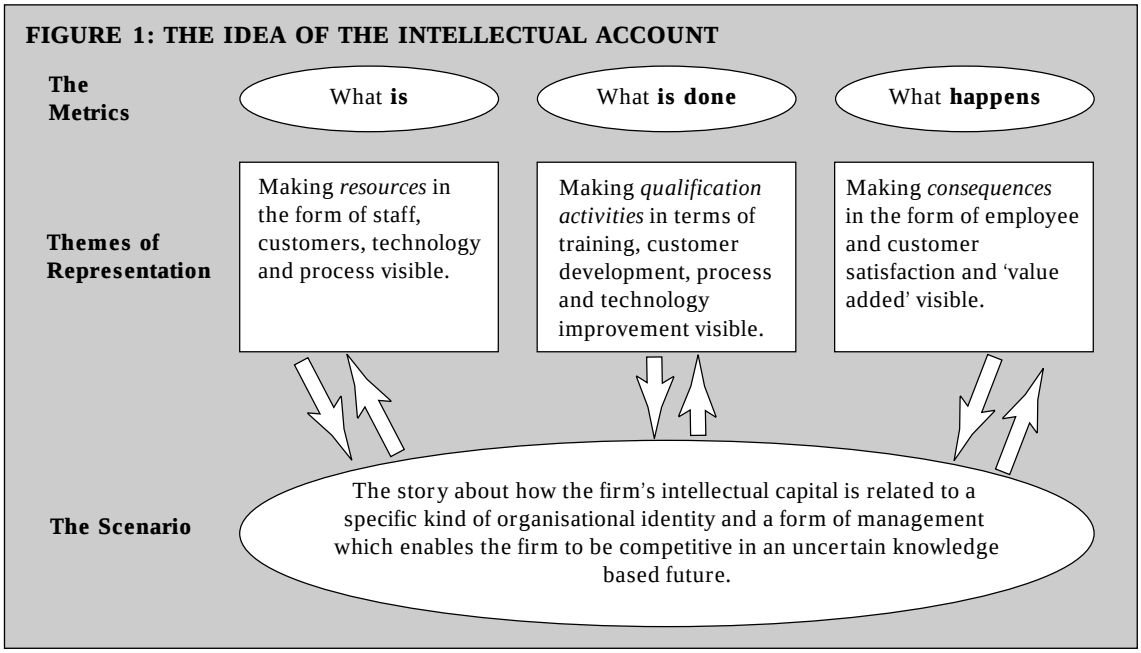
These distinctions tend to say the same things. Some assets are related to employees (employee competence, human capital, human-centred assets) and are presented as difficult to manage because they can neither be owned nor prevented from going home at 5 pm. Internal structure, structural capital, organisational capital and infrastructure assets all relate to the processes and procedures which are still in after 5 pm, such as databases, organisational routines and the like. External structure, customer capital and market assets are about relationships with customers. Table 1 is a selection of researchers' remarks about this issue.

Table 1 shows a common concern to depict an area for reporting and for managing which is beyond the realm of financial management. These classifications look for areas which the financial accounting statement rarely visits. The measures cannot be constructed easily as bottom-line indicators. Indeed, they all have open-ended definitions and are explained in examples rather than by mathematical logic as in the case of the double-

TABLE 1: DEFINITIONS OF INTELLECTUAL RESOURCES

	Human capital	**Organisational capital**	**Customer capital**
Sveiby, 1997	"involves capacity to act in a wide variety of situations to create both tangible and intangible assets"	"Internal structure includes patents, concepts, models, and computer and administrative systems"	"The external structure includes relationships with customers and suppliers. It also encompasses brand names, trademarks, and the company's reputation or image"
Stewart, 1997	"Money talks, but it does not think; machines perform, often better than any human being can, but do not invent . . . [the] primary purpose of human capital is innovation — whether of new products and services, or of improving in business processes"	"knowledge that doesn't go home at night . . . it belongs to the organization as a whole. It can be reproduced and shared . . . technologies, inventions, data, publications, . . . [and] strategy and culture, structures and systems, organizational routines and procedures"	is "the value of its franchise, its ongoing relationships with the people or organizations to which it sells . . . [like] market share, customer retention and defection rates, and per customer profitability"
Edvinsson, 1997	"combined knowledge, skill, innovativeness and ability of the company's individual employees . . . it also includes the company's values, culture, and philosophy. The company cannot own human capital"	"hardware, software, databases, organizational structure, patents, trademarks, and everything else of organizational capability that supports those employees' productivity . . . [It is] everything left at the office when the employees go home . . . Unlike human capital, structural capital can be owned and thereby traded"	

FIGURE 1: THE IDEA OF THE INTELLECTUAL ACCOUNT



entry book-keeping system. Commenting on their system, Edvinsson and Malone (1997, p.185) state: "Is this a definitive list? Hardly." There is no set formula for the inclusion of measures. This is why measures can only be examples. They never constitute an integrated model. Sveiby (1997, p. 150) says this clearly: "The measurement system that I propose does not present a full and comprehensive picture of a company's intangible assets; such a system is not possible." An intellectual capital statement is a possible model, but it is not a set calculation that arrives at a number for the worth of a firm's intellectual capital. Its headings (employees, organisation and customers) for extended reporting of a firm's situation beyond the narrowly financial have to be applied uniquely in each situation and filled in with often non-financial numbers.

We now turn to some empirical examples of reporting practices by Scandinavian firms to illustrate the complexities involved in producing an intellectual capital statement.

REPORTING: MAKING INTELLECTUAL CAPITAL VISIBLE

Intellectual capital statements, then, do not have a set model. Firms mobilise their own presentation and management models. The former is often a sketch which defines the themes around which metrics are organised while the latter contains the set of the knowledge management activities that act as "objects" for the intellectual capital statement. Even if there are differences between firms, it is possible to construct a more generic model of the structure of intellectual capital statements[1]. Figure 1 illustrates how the *metrics* are defined and connected with a set of *management arenas*, and how they in turn together connect with a *scenario* which makes them relevant. These three elements are tightly coupled, although in different ways in different firms.

Following Figure 1, intellectual capital statements connect between metrics, themes represented by these metrics, and the broad story that makes intellectual capital productive. There are three kinds of expressions which relate to three kinds of fundamental questions. Through "What is" statistical information, the question addressed is: "Do we have the right portfolio of resources?" Through the "What is done" ratios, the question "Do managers undertake the right qualifying activities?" is mobilised, and the "What happens" ratios are concerned with the broad question "Does what we do work?"

These metrics are indicators in a performance management system organised typically around employees, customers/partners, technology and processes. Statements on employees are people-related metrics such as formal qualifications ("What is"), on-the-job and formal training and education ("What is done") and employee satisfaction ("What happens"). Likewise, statements on customers are reported, for example, as number of large customers ("What is"), marketing efforts per customer ("What is done") and customer satisfaction ("What happens"). Statements on technology may be concerned with IT investments ("What is"), IT availability and quality, for example investments to upgrade IT ("What is done") and IT certificates ("What happens"). Last, statements on processes may show resources per process ("What is"), quality activities ("What is done") and throughput and waiting time ("What happens").

These indicators suggest that many types of metrics are possible. They are equally important in empirical intellectual capital statements. Some firms focus on a selected set of metrics while others have a much broader scope. For all metrics, relevance is determined by their ability to allow the firm's identity story to be continued and the specific form of management

that allows the scenario to be addressed. Therefore, "What is" statistical information is in principle just as important as "What is done" and "What happens" metrics. They are all part of the same attempt to realise the ideals of the scenario. As a consequence, metrics (Table 2) in intellectual capital statements are varied.

It is noteworthy that most of these indicators are labelled "non-financial" even if in a technical sense they are not. Market share information is financial, cost information is financial, and often what makes these indicators "non-financial" is that they are mediated by information outside the financial database rather than that they lack reference to financial information. Other types of information, however, are more clearly "non-financial", such as metrics of satisfaction or time, quality and training.

But there is much more to an intellectual capital statement than the metrics and themes of representation. More important, there is also an interpretation which connects the themes of representation to a story line, because *per se* there is little connection to the metrics presented. They are made relevant not because they are logical in a strict mathematical sense (as is the case with financial key ratio analysis) but because they can be made to support and not be in conflict with a broad story about the identity of the firm. It is seen to thrive when the collectivity is supported by new or strengthened relationships among employees, customers, technologies and processes, and when people's "psychic energy" or "motivation" is directed to identifying and solving the firm's problems at large. There is, in the discourse on intellectual capital statements, a scenario of an organisational identity where some measure of "empowerment" is in place because new markets and more heterogeneous customers have to be served. There is talk about an increasingly "individualised firm" (Bartlett and Ghoshal, 1997).

Therefore, the intellectual capital statement is not only a set of metrics. There are also sketches/visualisations and stories/narratives. Together, metrics, sketches/visualisations and stories/narratives form a network which constitutes the report. The metrics show that management is serious about intellectual capital and can be held accountable for its words and aspirations. The sketches/visualisations construct a certain "wholeness" in the organisation of digits, while the story/narrative suggests how the legitimacy of the intellectual capital statement is formed. Five examples of this network will illustrate how it works.

Case 1 concerns Skandia, a Swedish insurance company known for its pioneering work with intellectual capital. Leif Edvinsson, intellectual capital director, is prominent in this field. The case study illustrates the three-way network, which is constituted by a story, a sketch and a set of metrics.

TABLE 2: METRICS IN INTELLECTUAL CAPITAL STATEMENTS

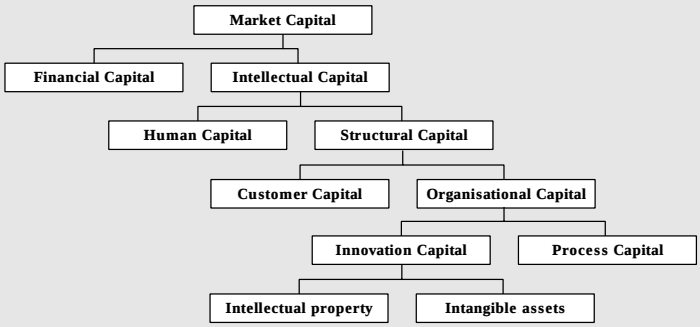
	'What is': Statistical information	**'What is done': Internal key indicators**	**'What happens': Effect measure**
Staff	• Number of employees • Distribution of sex • Length of employment • Formal education and training	• Number of employees with personal development plan • Expenses for training and education • Number of training days per employee • Expenses for training and education per employee	• Employee satisfaction • Employee turnaround ratio • Human resource accounting • Value added per employee
Customers	• Sector and market turnover • Number of customers per employee • Distribution of revenues on markets and products	• Marketing expenses • Marketing expenses per $ revenue • Administration expenses per $ marketing expense	• Customer satisfaction • Customer loyalty • Percentage of long-term customers • Company reputation
Technology	• PCs per employee • Portable PCs per employee • Share of internal to external IT customers	• IT investments • Computer expenses per employee	• IT qualifications • IT licences
Processes	• Expenses per process • Distribution of staff on processes	• Investments in R&D and infrastructure • Expertise development cost • Quality improvement cost	• Errors • Waiting time • Quality • Throughput time • Product development time • Telephone availability

The metrics, which are configured mainly around "What Is" and "What Happens" indicators, are designed broadly to underscore a story of a tree. It is a story about growth, and the parameters to secure growth in a long-run perspective. It is a metaphor for explaining the "difficult-to-put-into-words" connections between the past, present and future. The story substitutes for detailed knowledge of the specific activities in the company, and it focuses attention on the roots and the trunk, from where future "fruits" will show themselves. To explain the relevance and completeness of this story and the associated metrics, the Skandia system of capitals illustrates connectivity between the elements of the tree. The story is one where a benevolent gardener minds his garden. In each of Skandia's seven intellectual capital statements (Visualising Intellectual Capital, Renewal and Development, Value-Creating Processes, Power of Innovation, Intelligent Enterprising, Customer Value, and Operating Environment Focus) a different box in the Skandia sketch is discussed. For example, in 1996, the Skandia intellectual capital statement discussed customer value and in 1997 the theme was intelligent enterprising.

The sketch thus serves as an agenda from which a set of issues is taken out for special treatment in the individual intellectual capital statement. Here, of about 25 pages, two to four pages are metrics that are presented in time-series over the years, while the rest are small examples of how the firm puts activities in place to become future-oriented. That is, the continuity between the intellectual capital statements is weak because the

CASE 1: SKANDIA'S SYSTEM OF CAPITALS

A firm is like a tree. Part of it is visible — its fruits — and part of it is hidden — the roots. If you only concentrate on the fruits and ignore the roots, the tree will die. For a tree to be able to grow and continue producing, one has to see to that the roots get their nourishment.



Category/form	'What is': Statistical information	'What is done': Internal key indicators	'What happens': Effect measure
Human resources			• Employee satisfaction • Turnover per employee • Management index • Motivation index • Empowerment index • Market share • Rate of lost customers
Customers	• Number of customers • Number of contacts • Agreements per employee	• Marketing costs per customer • Marketing costs per turnover $	• Rate of continuing policies • Customer satisfaction
Technology	• IT capacity • Number of internal IT customers • Number of external IT customers • PCs per employee • Portable PCs per employee	• IT costs per administrative cost	• IT skills
Processes	• Funds assets per employee	• Development costs per employee • R&D costs per administrative cost	• Process time • Error rate • Telephone availability • Bad costs per turnover $ • Administrative costs per asset $ • Administrative costs per turnover $

focus of the reports is not the metrics but the examples that allow the story of the tree to be relevant.

In Case 2, Rambøll (a Danish engineering company) tells a story of a "family" that will work on the basis of a "joyful . . . humanistic and musical tone". This again shows a concern to create trust and openness, which — according to the accompanying sketch — will bring the firm from vision and management, via people, technologies and products, to customers and results.

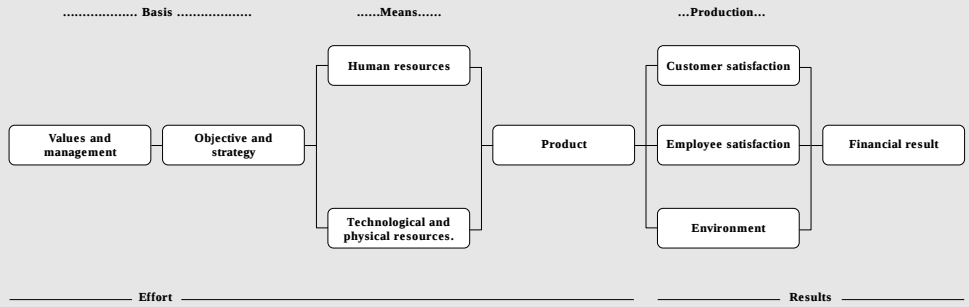
Rambøll's story is backed up by a set of metrics which to some degree focus on what is done and its effects. They show a model of a large-scale integration of managerial, technical, organisational and human aspects of corporate life. The model shows management potency, employee involvement and customer satisfaction. Rambøll's intellectual capital statement embodies a much larger sense of continuity from year to year than Skandia's. In Rambøll's statement, the sketch is filled in with metrics annually, and a time-series is in place, just as the commentaries provided are concerned to lay out the numbers *vis-à-vis* the sketch and the overall story.

Likewise, in Case 3, SparNord (a Danish regional bank), there is a story line of a firm committed to a sharing culture. It is concerned to "invite interpretation and discussion". The metrics here are constructed through discussions with internal and external stakeholders (employees, shareholders, customers, local politicians etc.) who define what has to be reported. This format is decided on before data is collected. All metrics are about "What happens" effect ratios, and thus about the results of SparNord's interactions with its stakeholders.

SparNord also introduces a sketch consisting of two triangles: a golden triangle and a sorry triangle. Profitability, employee satisfaction and customer satisfaction are represented as a triangle in which each corner is located between one and five units from the point of origin[2]. Here, there is a balance between the three sets of concern visualised as largely an aesthetic issue: the golden triangle is appropriate because it is beautiful, as it has legs of equal length. This is the sense of balance and symmetry that provides a sense of force and coherence. In contrast, the sorry triangle is to be scorned because it is a cripple; it does not

CASE 2: RAMBØLL'S HOLISTIC ACCOUNTING STATEMENT

All employees will work as independently as possible, have the opportunities that make ideas flow constantly, and they should have all the competence they can carry. In addition, we have to support each other in business activities as well as in personal relations. Trust and openness between individuals, departments, sectors, districts and subsidiaries should characterise the RAMBØLL family, and internally as well as externally it would be joyful for the firm if a humanistic and musical tone sounds in its character.



Category/form	'What is': Statistical information	'What is done': Internal key indicators	'What happens': Effect measure
Human resources	• Number of employees • Distribution by sex	• Management development • Supplementary training	• Management evaluation • Ability to cooperate • Employee satisfaction • Employee well-being • Management evaluation of social accounts • Customer satisfaction
Customers	• Sector and market turnover		
Technology		• IT investments	
Processes		• Implementation ratio of quality management system • Expertise development costs	

have the beauty of the golden triangle; it does not speak with the voice of aesthetics and therefore the firm's position is not in balance. It is by means of a visual representation that complex relations between profitability, employees and customers across time and space are rendered simple and communicable. It is the visualisation that strengthens the diagram's normative implications.

Case 4 is about Sparbanken (a Swedish regional bank), whose "Tools for the Future" is a statement of the relationship capitals accruing in interdependencies between employees and customers. The wheel is a more explicit production function than is found in the other cases as it states what customers and employees demand when they "meet" the firm.

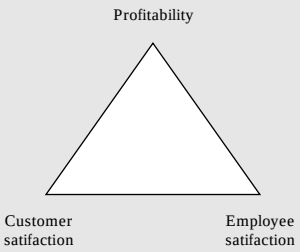
Sparbanken's reported metrics are almost exclusively effect ratios ("What happens"). It is concerned to show people that results in their different forms are always achieved in the service encounter, where the employee and the customer meet. Part of this presentation is statistical. Sparbanken can document via statistical analyses how employee satisfaction, customer satisfaction and profitability are related. This is part of the story of the value of intellectual resources.

ABB (a Swedish/Swiss industrial conglomerate) uses intellectual capital in the context of a grand organisational change program to craft "decentralisa-

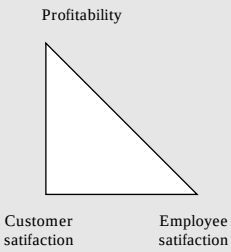
CASE 3: SPARNORD'S 'ETHICAL ACCOUNTING'

It is no weakness that our Ethical Accounting Statement invites interpretation and discussion. It is strength. If there were but one correct interpretation, dialogue would stop. The Ethical Accounting Statement has to open discussion and show possible conflicts. Conflicts have to be used constructively. It is often via discussion and conflict that the organisation moves ahead.

The Golden Triangle



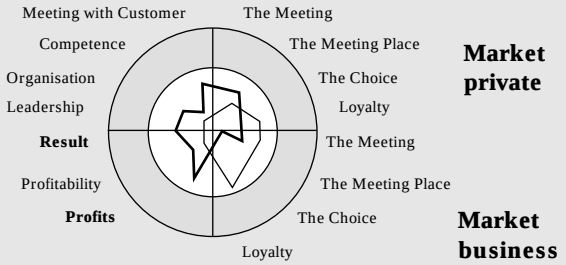
The Sorry Triangle



Category/form	'What is': Statistical information	'What is done': Internal key indicators	'What happens': Effect measure
Human resources			• Welfare • Customer service • Independence • Appreciation • Personal development • Commitment • Community/unity • Security • Communication • Competence of the employees
Customers/ partners/ community			**Customers and non-customers** • Mutual trust • Communication • Commitment/unity in community • Human respect • Satisfaction with meetings between company and customer • Achievement of reputation values (ethics) **Shareholders' opinion:** • Finances and results • Commitment/unity in community • Confidence • Openness/co-operation • Quality and competence

CASE 4: SPARBANKEN'S 'TOOLS FOR THE FUTURE'

'Tools for the Future' shows how responsible managers and employees in highly decentralised firms can — and must — take responsibility for the development of their own units (human capital) in relations with customers (market capital). Real change is only achieved when a change of behaviour is realised via new evaluation methods, capabilities, experiences, insights, tools and products.



Category/form	'What is': Statistical information	'What is done': Internal key indicators	'What happens': Effect measure
Human resources		• Investment in education	• Employee satisfaction Competence Leadership Organisation
Customers			• Customer satisfaction The meeting The meeting place The choice • Customer loyalty
Technology		• IT investments	

tion, development of competence and improvements". Drawing on six perspectives in the intellectual capital statements ("stolen with pride among other things from balanced scorecard", as it was suggested), ABB wants to create a tight sense of the couplings between the metrics that go into intellectual capital.

This is a firm which relies heavily on "What is done" metrics. This is understandable, given the aspiration to change the role of the shop-floor workers in the firm. Here, there is an attempt to change blue-collar work into white-collar work, including redecorating work-cells on the production floor so that they more resemble an office space. Cleanliness of the physical surroundings and a highly empowered work-situation (some layers of management were taken out) was supported by human resource mechanisms which would help transform "blue work" into "white work" with its associated connotations of responsibility, organisation, self-motivation and drive. A huge corporate culture change program was put in place.

In all, these five cases suggest that the concrete configurations of metrics vary greatly. The reporting of intellectual capital does not follow a set model. Firms assemble their own configurations of themes and metrics. This is why it is necessary to accompany each set of measures with an interpretation, and this is accomplished by the stories and sketches. The three elements of the intellectual capital network go together and constitute what intellectual capital is about in the individual firm.

ACTING: KNOWLEDGE MANAGEMENT AND INTELLECTUAL CAPITAL

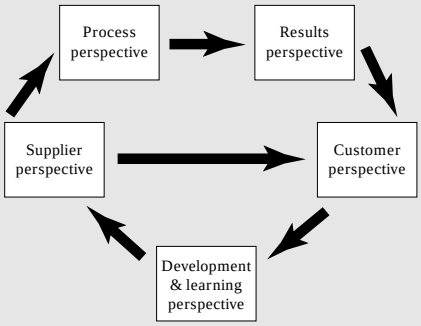
The relationship between intellectual capital and knowledge management is intimate. In empirical intellectual capital statements, knowledge management activities — rather than knowledge — are made visible. This insight is not presented in a bottom-line form based on the digitisation of the market-to-book value but rather as a set of loosely coupled "non-financial" indicators that do not add up to any grand conclusion. They digitise various aspects related to the activities that managers put in motion to mobilise and leverage "knowledge". But what is knowledge management?

A distinction between Nonaka's (1994) and Prahalad and Hamel's (1990) view of organisational knowledge/competence is a starting point for looking at different possible conceptions of what knowledge management may be. Nonaka (1994, p. 97) suggests that "creating new knowledge . . . depends on tapping the tacit and often highly subjective insights, intuitions, and hunches of individual employees and making those insights available for testing and use by the company as a whole. The key to this process is personal commitment, the employees' sense of identity with the enterprise and its mission."

Here, knowledge creation is a result of the heroic contribution of the committed employee. The locus of knowledge is the individual, and it is tacit or implicit. Management cannot govern knowledge development

CASE 5: ABB'S EVITA

Since the start of the change program T50, development of competence, decentralisation, and shorter cycle times have been three foundational pillars. Decentralisation and faster cycle times required increased competence for everyone, and this increased competence in turn has led to even more and crucial improvements in our way of working in ABB



Category/form	'What is': Statistical information	'What is done': Internal key indicators	'What happens': Effect measure
Human resources	• Staff turnover • Share of female employees • Staff costs as a % of total costs • Staff costs per employee	• Share of employees with appraisal interviews • Share of employees with career paths • Education time per employee • Share of companies with competence matrix • Participation in the work with the development of the company • Education expenses per employee • Education expenses as a % of the turnover	• Employee satisfaction • Absence due to sickness • Statement of human resources • Annual evaluation of manager profile • Value-added per human resource
Technology		• Investments in offices and workshops	
Processes		• Total quality costs	• Extent of services • Product development time • Lead time • Timeliness • Reliability of supply • Availability

and creation by a command and control structure but only by crafting metaphors, allegories and models to encourage lateral thinking. Here, the organisation is empowered, highly decentralised and individualised (see also Bartlett and Ghoshal, 1997). This form of knowledge management strategy is a "person-centred" one; individual human capital is in place.

In contrast, Hamel and Prahalad (1994) suggest that competencies — "stocks" of organisational knowledge — be the medium and outcome of collective action: "A competence is a bundle of skills and technologies rather than a single discrete skill or technology . . . A core competence represents the sum of learning across individual skill sets and individual organizational units. Thus, a core competence is very unlikely to reside in its entirety in a single individual or small team" (p. 223) and: "In the long run, competitiveness derives from an ability to build, at lower cost and more speedily than competitors, the core competencies that spawn unanticipated products. The real sources of advantage are to be found in management's ability to consolidate corporatewide technologies and skills into competencies that empower individual businesses to adapt quickly to changing opportunities" (Prahalad and Hamel 1990, p. 81)

Here, corporate competence is the ability — or knowledge — to consolidate bundles of interpersonal technologies and skills, which are integrated in competencies or capabilities emanating from the combination or coordination of technologies and skills, and therefore the locus of knowledge in this perspective is collective. Organisation is concerned with the mechanisms that integrate various organisational places, skills and technologies. The mode of knowledge management is not person-centred but centred on processes and procedures. It is concerned to see the firm from the perspective of collectivity. Organisational capital appears to be central.

These two possible perspectives from which knowledge management can be mobilised point to two different types of knowledge management activities. The

"person-centred" strategy focuses on human resource mechanisms and shows itself in policies for recruitment, training and development and career planning. It is a mode of knowledge management, which makes the managers' job one of constructing portfolios of people with different technical and social skills. In contrast, the "collectivity-centred" strategy focuses on a diverse set of IT applications, organisational forms and project-structuring activities that management can undertake to craft relationships between people and technologies.

If these are the forms of knowledge management that serve as referent for intellectual capital statements, do they then convey a statement of such activities? This is where the interpretation of the reported metrics, sketches and stories has to be addressed anew. First, behind the stories it is possible to identify loosely a set of management activities which would make them plausible. They point at different sets of "knowledge in work". In Skandia, for example, attention is directed to the roots and bark, which "protect" humans and guide them in the production of financial results. It is a knowledge management story about recombination and modularisation through IT. It is a story of structural, organisational capital. In Rambøll, the story points to an intensive human resource program where individuals are re-qualified to be able to invent and develop relations with customers and technologies. Here, knowledge management is oriented to the "competent" individual — or towards human capital.

In SparNord the focus is on organisational development and the deployment of communication routines. Indeed, here management installs review meetings with and between internal and external stakeholders where they agree on what kind of information needs to be collected and published. It is a mode of functioning based on systems of talk and metric and the focus is organisational capital. In Sparbanken there is less emphasis on talk and much more emphasis on the specific modelling of employee-customer relations, and thus a specific visualisation of the success of the interaction between the parties. Here, knowledge management is concerned with the continual and piecemeal discussion of operations and their effectiveness from the perspective of customer capital. And in ABB, the focus of knowledge management appears to be set on empowerment procedures and routines which allocate responsibility and power to lower organisational positions.

In these five cases, the "referent" of knowledge management is the activities that managers perform in its name. These actions range from changes in IT systems, human resource programs, organisational review mechanisms and installing detailed operating systems for empowerment and decentralisation. Therefore the object of knowledge management varies. Intellectual capital statements offer a means to check and monitor whether knowledge management programs are actually being pursued. The statements are stories of how firms implement competence strategies. These stories are always on test through the sketches and metrics. The stories, sketches and metrics do not exist merely to measure intellectual capital; they are there to follow and support a movement which transforms value. Since strategy — competence strategy rather than competitive strategy *per se* — varies considerably between firms, it is no surprise that stories, sketches and metrics vary greatly as well.

CONCLUSION

As illustrated by the five examples from Scandinavian firms' intellectual capital statements, there is no set model for these statements, and they do not provide a bottom-line indicator of the value of intellectual capital. Intellectual capital statements are situational, and they are mobilised by firms to help implement strategies rather than to describe historical results. They are not concerned merely with metrics, but always also with the change activities that are made visible and legitimised by sketches and stories. Measurement and process cannot be separated because together they make the language and practices of intellectual capital go on.

The intellectual capital statements do not disclose the value of the firm's intellectual resources. Instead, they disclose aspects of the firm's knowledge management activities. Metrics, stories and sketches on one side and knowledge management activities on the other are integral parts of the intellectual capital statements. They do not just "measure" — they also "report" and "act".

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NOTES

1. This discussion is based on a study of 10 Scandinavian firms that published intellectual capital statements. Through interviews with the managers in charge of the statements, we investigated their content, role and effects (see Mouritsen, 1998).
2. Based on questionnaires sent to customers and employees, an index covering multiple questions is created and presented on a scale of 1 to 5. This is a piece of mathematical work but it is fragile because Likert scales do not lend themselves easily to averaging, which is what is done here. In addition, the underlying questions are compiled by inspiration more than by models and taxonomies.

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